



August 29, 2019

Via electronic portal at <https://www.arb.ca.gov/lispub/comm/bclist.php>

Mary Nichols, Chair
California Air Resources Board
1001 I St, Sacramento, CA 95814

Re: The California Tropical Forest Standard

Dear Chair Nichols and members of the California Air Resources Board:

Please accept these comments on behalf of the Center for Biological Diversity regarding the California Tropical Forest Standard (“TFS”) and accompanying Environmental Analysis (“EA”). The Center for Biological Diversity is a non-profit organization with more than 1.6 million members and online activists, including over 150,000 members and supporters in California.

Given the shortcomings of the TFS, and the failure of the EA to acknowledge that the TFS could have substantial negative impacts, we must respectfully urge the Board to reject endorsement of the proposed Tropical Forest Standard and to focus instead on developing policies that address the drivers of tropical deforestation.

We appreciate the attention that the California Air Resources Board (“ARB”) has given to the serious problem of tropical deforestation and we strongly agree that this is an urgent issue. Halting and reversing tropical deforestation is critical to preserving tropical ecosystems, as critical components of the world's weather systems, and as substantial carbon stores, as well as for the people and amazing wildlife that live there. However, we have serious concerns with the proposed TFS as a method for addressing deforestation and securing climate benefits.

In addition to the problems outlined below, the updated TFS does not address the concerns and objections from environmental justice and indigenous rights groups; runs contrary to the explicit recommendations of ARB’s Environmental Justice Advisory Committee which has explicitly urged the state not to pursue international forest offsets; and fails to respond to the concerns raised by the coalition of environmental justice organizations, indigenous rights groups, and other leaders who have objected to ARB’s development of an international forest offsets program (comments submitted on May 13, 2016).

We have no objections to the specific amendments in the updated TFS. These amendments all appear to be positive. However, these changes do not respond to our primary concerns regarding the TFS. Those issues were described in our comments submitted to the previous proposal (letter dated October 29, 2018), which are submitted here again as an attachment to this letter. In particular, the amendments do not address the following issues:

1. Under the TFS one way to address the risk of leakage is for the partner state to identify those commodities that are driving deforestation locally and to increase the production of those same commodities in non-forest areas. However, neither the TFS nor the EA acknowledges the potential that intensification of agricultural and other activities outside of the forest could result in substantial land use changes and significant negative impacts for the environment, society, and economy. In addition, the TFS fails to account for greenhouse gas emissions associated with intensified activities outside the forest, or to ensure that the resulting greenhouse gas increases are deducted from the carbon offset credits.

2. Because the TFS takes a purely jurisdictional approach to leakage, it focuses primarily on the economic drivers of deforestation within the partner state, and contains no mechanism to control for leakage outside the jurisdiction or account for that leakage when it occurs. Should the TFS result in the leakage of deforesting operations across the state lines into an adjacent state (potentially within the same forest) there is no provision to identify that such leakage is occurring, nor is there any mechanism to account for the carbon impacts of that leakage. Regional monitoring of deforesting activities, in the context of the markets for deforestation-linked commodities, is critical to determining the full ecological and climate impacts of TFS projects.

3. The TFS does not provide monitoring adequate to identify negative impacts should they occur as a result of the TFS within the partner state or in neighboring states. In their June 17, 2019, letter to ARB, Assemblymembers Garcia, Bloom, Kalra, and Reyes indicated that their support for ARB moving to endorse the TFS was explicitly tied to an assumption of “vigorous and proactive monitoring.” The legislators recognized the “uncertainty on whether the TFS will be successful in protecting forests and the people who inhabit them” and stated that “[ARB] must consider its endorsement in tandem with its ability to commit to such monitoring work moving forward.” A monitoring program is particularly important given that California has no authority in international jurisdictions, and ARB has no expertise in international rural development projects, a key component of the TFS. However, the proposed TFS does not include such a monitoring plan.

4. Neither the TFS nor the EA addresses the risk that endorsing the TFS—and the subsequent development of the offset market—could have negative impacts in jurisdictions where landowners and governments move to secure control of forest lands in the anticipation of developing forest carbon projects for the TFS. It may be that such actions would ultimately disqualify those jurisdictions from participating in the TFS but, in the absence of an international program to monitor and address such actions, substantial and irreversible damage could be done to local and indigenous communities.

5. Given the potential for negative impacts within and beyond the TFS jurisdictions, the TFS must contain a mechanism for halting and rescinding the offset program that adoption of the TFS is intended to induce, and should identify specific criteria for taking such action. Otherwise, California would have no way of curtailing ongoing damage if their adoption of the TFS results in unexpected or outsized negative impacts.

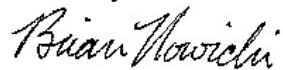
Given the shortcomings of the TFS, and the failure of the EA to acknowledge that the TFS could

have substantial negative impacts, the Center for Biological Diversity respectfully urges the Board to reject endorsement of the proposed Tropical Forest Standard.

We urge ARB to focus instead on developing policies that address the drivers of tropical deforestation, commodities such as crude oil, palm oil, beef and timber from the Amazon. California is by far the largest importer, refiner, and consumer of Amazon crude in the United States, and California processes half of all crude exports from the Amazon basin. Holding California importers accountable for the full climate impacts of that crude (not to mention the ecological impacts) is one way to decrease the profitability of deforestation activities. Also, as the fifth largest economy in the world, California has an ability to influence the market for deforestation-linked commodities like palm oil, both through the purchasing power of the state government and by holding individual consumer products accountable for their supply chains.

Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in cursive script that reads "Brian Nowicki".

Brian Nowicki
Center for Biological Diversity
(916) 201-6938
bnowicki@biologicaldiversity.org



Submitted via online portal at:

https://www.arb.ca.gov/lispub/comm/bcsubform.php?listname=dfs2018&comm_period=N

October 29, 2018

Jason Gray
Cap-and-Trade Program, Branch Chief
California Air Resources Board
Sacramento, CA

Re: 2018 Proposed Tropical Forest Carbon Standard

Dear Mr. Gray:

The Center for Biological Diversity (“Center”), Friends of the Earth (“FOE”), and Indigenous Environmental Network (“IEN”) respectfully submit the following comments on the Draft Tropical Forest Standard (“TFS”) and accompanying Draft Environmental Analysis (“Draft EA”).

The Center is a non-profit organization with more than one million members and online activists, including over 150,000 members and supporters in California. The Center’s mission is to ensure the preservation, protection and restoration of biodiversity, native species, ecosystems, public lands and waters, and public health. In furtherance of these goals, the Center’s Climate Law Institute seeks to reduce U.S. greenhouse gas emissions and other air pollution to protect biological diversity, the environment, and human health and welfare. Specific objectives include securing protections for species threatened by global warming, ensuring compliance with applicable law in order to reduce greenhouse gas emissions and other air pollution, and educating and mobilizing the public on global warming and air quality issues.

Friends of the Earth-United States (FOE) is a non-profit advocacy organization with offices in Washington D.C., Berkeley, California, and Raleigh-Durham, North Carolina, with more than one-and-a-half million members and online activists, and over 100,000 supporters in California. Friends of the Earth has been active in environmental advocacy in California for decades; notable efforts have included successful public campaigns to remove nuclear power from the state’s energy portfolio; advocacy to reduce the climate footprint of school lunch programs; and advocacy against offshore oil extraction and the expansion of the state’s oil refineries. In 2018 we successfully worked with the California Public Employees’ Retirement

System to revise the agency’s Sustainability and Governance Principles to recognize deforestation, biodiversity loss, land rights risks, and Indigenous Peoples’ rights to Free, Prior and Informed Consent as significant issues for investment management, in an effort to reduce California’s role in driving deforestation and ecosystem degradation both within and beyond our state’s borders. As a member of Friends of the Earth International, a federation of environmental organizations in 74 countries, FOE-US has an extensive history working across borders and jurisdictions; our approach is deeply informed by our close partnerships with member groups in tropical forest countries.

Indigenous Environmental Network (IEN) is an alliance of Indigenous Peoples whose Shared **Mission** is to **Protect the Sacredness of Earth Mother** from contamination & exploitation by Respecting and Adhering to **Indigenous Knowledge** and **Natural Law**.

The Center, FOE, and IEN request that CARB *reject* the TFS. We agree with the California Air Resources Board (“CARB”) that tropical deforestation is a serious problem. Halting and reversing tropical deforestation is critical to preserving tropical ecosystems, as critical components of the world's weather systems, and as substantial carbon stores, as well as for the people and amazing wildlife that live there. Also, California, as the world's fifth largest economy and with our own state's history of deforestation, development, and greenhouse gas emissions, is responsible for a substantial portion of current and historic climate pollution and ecological degradation.

It is troubling, however, that CARB is continuing to push an international forest offsets program, which ignores the well-documented concerns and objections from environmental justice and indigenous rights groups, and the extensive evidence on harms in the peer-reviewed academic literature. CARB’s Environmental Justice Advisory Committee (EJAC) has explicitly and repeatedly urged the state not to pursue or include REDD offsets in California’s cap-and-trade program.¹ A coalition of 21 environmental justice organizations, indigenous rights groups, and other leaders has objected to an international forest offsets program in comments submitted on May 13, 2016. Moreover, California does not have the same expertise as the UN for effective implementation of rural development projects, and it is troubling that CARB assumes that it can perform better with a challenging international development dynamic than the UN.

In addition and in particular, CARB should reject the TFS for the reasons explained below. These include, but are not limited to:

- Tropical forest offsetting would exacerbate the dislocation of co-benefits from California, and would exacerbate environmental burdens, particularly in disadvantaged communities. It could harm California communities by allowing polluters in California to produce more greenhouse gas (“GHG”)—and co-pollutants—by purportedly offsetting their GHG emissions elsewhere.

¹ California Air Resources Board Environmental Justice Advisory Committee. “Comments on the Proposed AB 32 Scoping Plan.” April 11, 2014; California Air Resources Board – 2017 Scoping Plan, Appendix A, AB 32 Environmental Justice Advisory Committee (EJAC) Recommendations, November 2017 (“Do not pursue or include reducing emissions from deforestation and forest degradation (REDD) international offsets in the Scoping Plan.”).

- Tropical forest offsetting does not work to decrease GHG emissions or prevent tropical deforestation. Such programs fail to ensure additionality, are vulnerable to leakage, and threaten forest ecosystems by failing to address the drivers of deforestation.² They further pose serious threats to indigenous rights. The TFS does not provide enforceable measures to prevent these harms, especially as CARB sees it being adopted by other jurisdictions, many of which either may not have high environmental standards or strong enforcement mechanisms.
- Tropical forest offsetting detracts from the necessary work of preventing emissions from their largest source: extraction and burning of fossil fuels.

Specifically with regard to the last point, we are perplexed that California continues to allow extraction and refining of dirty fossil fuels within its jurisdiction—especially in and near communities of color—while it spends its time tweaking a program that is inefficient at best, and destructive at worst, and which exacerbates harms to California communities.

A recent 2018 report from the Intergovernmental Panel on Climate Change (IPCC) highlights the necessity of limiting warming to 1.5°C, rather than the Paris Agreement’s 2°C, to avoid catastrophic impacts to people and life on Earth.³ According to the IPCC’s analysis, the damages that would occur at 2°C warming compared with 1.5°C include more deadly heatwaves, drought and flooding; 10 centimeters of additional sea level rise within this century, exposing 10 million more people to flooding; a greater risk of triggering the collapse of the Greenland and Antarctic ice sheets with resulting multi-meter sea level rise; dramatically increased species extinction risk, including a doubling of the number of vertebrate and plant species losing more than half their range, and the virtual elimination of coral reefs; 1.5 to 2.5 million more square kilometers of thawing permafrost area with the associated release of methane, a potent greenhouse gas; a tenfold increase in the probability of ice-free Arctic summers; a higher risk of heat-related and ozone-related deaths and the increased spread of mosquito-borne diseases such as malaria and dengue fever; reduced yields and lower nutritional value of staple crops like corn, rice, and wheat; a doubling of the number of people exposed to climate-change induced increases in water stress; and up to several hundred million more people exposed to climate-related risks and susceptible to poverty by 2050.⁴ In order to avoid these catastrophic consequences, the 2018 IPCC report provided a carbon budget for a 66 percent probability of limiting warming to 1.5°C, estimated at 420 GtCO₂ and 570 GtCO₂ depending on the temperature dataset used, from January 2018 onwards.⁵ At the current emissions rate, this carbon budget would be expended in just *10 to*

² As Dr. Barbara Haya of the Berkeley Energy & Climate Institute has explained in a previous rulemaking, there are many factors that affect deforestation rates, many of which are beyond the scope of an international forest offsets program, such as soy and beef moratoriums, changes in global commodity prices, and jurisdictional policy regardless of an offsetting program. Barbara Haya, Research Fellow, Berkeley Energy & Climate Institute, University of California, Berkeley. Comments on California’s proposed REDD program and linkage with Acre, Brazil, submitted June 4, 2016, at 4. Available at <https://www.arb.ca.gov/lists/com-attach/34-sectorbased4-ws-UDgGYVwkWGoLUgBj.pdf>. (Hereinafter, “Haya, June 4, 2016.”)

³ IPCC [Intergovernmental Panel on Climate Change], *Global Warming of 1.5°C*, an IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (October 6, 2018), available at <http://www.ipcc.ch/report/sr15/>.

⁴ *Id.* at Summary for Policymakers.

⁵ IPCC [Intergovernmental Panel on Climate Change], *Global Warming of 1.5°C*, an IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission

14 years, underscoring the urgent need for immediate, transformative global action for a just transition from fossil fuel use to clean energy.⁶ Simply put, CARB should be focusing on immediate, comprehensive measures that will end fossil fuel extraction and combustion *in California*, which is critical for staying below 1.5°C of warming and avoiding the worst damages from climate change.

Moreover, CARB should reject the TFS because it is not supported by an adequate or informative environmental analysis. The Draft Environmental Analysis (“EA” or “Draft EA”) should be prepared to inform CARB’s decision-making on this matter, regardless of whether CARB believes it was “required” by this project. Once CARB endorses this standard, it foresees it being used for airline offsetting, by emissions trading programs in other jurisdictions, and/or by linking to California’s cap-and-trade program; however, the Draft EA either barely touches on these contingencies or ignores them completely. Even if a public process must occur before these future events, a) there is no guarantee all of them will include their own environmental analyses, and b) CARB should not move forward with endorsing a standard without a comprehensive understanding of its potential impacts. Indeed, it is clear that CARB is unsure of what type of “rulemaking” it is currently undertaking, including whether it even merits an EA, which means this process and the TFS’ implications and impacts are even more confusing and concerning to the public.

Thus, for the reasons set forth herein, CARB should reject the TFS, and focus its time and effort on immediate, proven, and comprehensive measures and programs that will end fossil fuel emissions and keep global warming under 1.5°C.

I. The TFS Should be Rejected Because It Fails to Meet Many of Its Primary Objectives.

a. The Project Fails to Fulfill its Objective to Incentivize Reductions of GHG Emissions from Tropical Deforestation.

The Draft EA states that a primary objective of the TFS is to incentivize reductions of GHG emissions from tropical deforestation.⁷ However, the goal of protecting tropical forests is fundamentally different from the primary goal of a carbon offset market, which is to reduce the cost to industrial polluters for complying with the requirements of California’s greenhouse gas pollution laws. Importantly, research shows that market-based international forest offset trading programs have not proven to be an effective way to reduce GHG emissions from deforestation, and the TFS does not overcome these short-comings.

Evidence from existing REDD programs indicates that they are not effective in reducing deforestation. A 2017 meta-analysis of deforestation rates that analyzed 23 subnational REDD+ initiatives in Brazil, Peru, Cameroon, Tanzania, Indonesia and Vietnam concluded that REDD programs were not effective in reducing deforestation: “we find overall minimal impact of

pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (October 6, 2018), <http://www.ipcc.ch/report/sr15/>.

⁶ *Id.*

⁷ Draft EA at 10.

REDD+ in reducing deforestation on the ground thus far.”⁸ Similarly, an analysis of REDD+ programs in Indonesia found only “mixed” results for carbon sequestration.⁹

A key reason that offset programs such as REDD are not effective is because they fail to address the main drivers of deforestation, such as large-scale commercial agriculture, cattle ranching, timber harvesting, and conflicts over land and resources.¹⁰ As summarized by ethnographic research by Milne et al. (2018), “many REDD+ schemes appear to have fueled social conflict while having limited success in addressing the drivers of forest loss and degradation,” finding that “REDD+ in the course of implementation maps onto local power structures and political economies, rendering it blunt as tool for change.”¹¹

b. The Project Fails to Fulfill its Objective to “Establish Robust Criteria for Emissions Trading Systems to Assess, and Potentially Include, Jurisdiction-Scale Programs that Reduce GHG Emissions from Tropical Deforestation.”

As detailed below, the TFS fails to fulfil its objective to “establish robust criteria” for “emissions trading systems to assess, and potentially include, jurisdiction-scale programs that reduce GHG emissions from tropical deforestation.”¹² The TFS criteria will not prevent leakage or ensure additionality and permanence.

i. The International Forest Offsets Program Proposed by the TFS is Highly Vulnerable to Leakage, Particularly Interstate Leakage Within the Same Country and International Leakage to Other Tropical Forest Regions.

The International Forest Offsets program proposed by the TFS is vulnerable to leakage of forest-destroying activities both within and beyond partner jurisdictions. Leakage – which refers to the increase of deforestation activities outside the partner jurisdiction in response to reductions within the partner jurisdiction, including both activity shifting leakage and market shifting leakage – is very difficult to monitor and mitigate. The Draft EA acknowledges that leakage could result in the TFS failing to “lead to real reductions or sequestration from the perspective of the atmosphere.”¹³ However, the TFS’s requirements are inadequate to monitor or prevent leakage, particularly interstate leakage within the same country and international leakage to other tropical forest regions.

The TFS’s mechanisms for detecting, managing and mitigating leakage are vague, and include a single requirement that is focused within partner jurisdiction boundaries: “a demonstration that drivers, agents, and causes of deforestation are directly addressed by the

⁸ Bos, A.B. et al., Comparing methods for assessing the effectiveness of subnational REDD+ initiatives, 12 Environmental Research Letters 074007 (2017).

⁹ Enrici, A.M. & K. Hubacek, Challenges for REDD+ in Indonesia: a case study of three project sites, 23 Ecology and Society 7 (2018).

¹⁰ Osborne, T. et al., Indigenous Peoples and REDD+: A Critical Perspective, Indigenous People’s Bicultural Climate Change Assessment Initiative, November 2014.

¹¹ Milne, S. et al., Learning from ‘Actually Existing’ REDD+: A Synthesis of Ethnographic Findings, Conservation and Society (2018).

¹² Draft EA at 10.

¹³ Draft EA at 11.

program *within the implementing jurisdiction's geographic boundaries,*" with two suggested options for fulfilling this requirement: demonstrating (1) business-as-usual or accelerated production of crops and livestock (two of the commodities that can drive deforestation) within the partner jurisdiction, or (2) no increase in production of extractive industry within the partner jurisdiction, accompanied by lower deforestation and forest degradation rates.¹⁴

However, simply showing business-as-usual or increased production of crops and livestock within a partner jurisdiction (or alternately no increase in extractive industry production within a partner jurisdiction) does not prove that leakage is not occurring beyond that jurisdiction. The displacement of forest-destroying activities from inside to outside implementing jurisdictions could still be occurring, where "farmers, ranchers, agribusinesses, developers or logging companies that face restrictions on access to forest land through a REDD+ program in one state tend to seek land in neighboring states, or elsewhere in the nation where the REDD+ program is operating, because of their familiarity with the laws, institutions, and culture of that nation."¹⁵

Furthermore, encouraging the intensification (i.e., "accelerated" rate of production) of agriculture and livestock on cleared lands could have substantial negative social and environmental implications for local communities and the surrounding forest. In the Brazilian Amazon and elsewhere, the intensification of agricultural land use due to tightened regulation of deforestation and agronomic practices had led the expansion of land areas being cleared for crops and livestock, including forest clearing in neighboring jurisdictions: "Common to all analyses is the evidence that intensification of profitable land uses tends to enhance its spread rather than to confine it spatially, regardless of the mix of drivers (Hecht 2005; Morton et al. 2008; Rudel et al. 2009; DeFries, Rudel, and Hansen 2010)."¹⁶

To prevent this, it would surely not be sufficient in many jurisdictions to simply require that local environmental laws not be violated, as states where substantial deforestation is occurring generally do not have either high environmental standards or strong enforcement mechanisms.¹⁷ In addition, it would be extremely difficult to monitor such non-forest activities outside of forest project boundaries, across the partner state's economy.

ii. The International Forest Offsets Program Proposed by the TFS Carries a High Risk of Crediting Non-Additional Activities.

The baseline level of deforestation, or "reference level," must guarantee that credits generated by reducing deforestation and degradation relative to that baseline are additional to what would have occurred in the absence of an offsets program. However, setting baseline "reference levels" for crediting is problematic because there are many factors that affect deforestation rates. Evidence indicates that past deforestation rates do not accurately indicate

¹⁴ TFS at 15-16.

¹⁵ ROW at 34.

¹⁶ Oliveira, G. & S. Hecht, Sacred groves, sacrifice zones and soy production: globalization, intensification and neo-nature in South America, 43 *Journal of Peasant Studies* 251 (2016).

¹⁷ Milne, S. et al., Learning from 'Actually Existing' REDD+: A Synthesis of Ethnographic Findings, *Conservation and Society* (2018).

current and future deforestation rates, which are influenced by many different social and economic factors within the jurisdiction, by the larger market for goods driving deforestation, and by national and state-level policies and efforts. Moreover, a recent single year with an exceptionally high rate of deforestation could dramatically lower the baseline, allowing partner jurisdictions to produce forest offsets of no real carbon benefit.

In comments submitted to ARB in June 2016 on the proposed REDD program and linkage with Acre, Dr. Barbara Haya of the Berkeley Energy & Climate Institute presented the results of an analysis of ARB's proposal to set the crediting baseline at 10% below the average rate of deforestation within a state during the previous ten years¹⁸—the approach that has been adopted by the TFS.¹⁹ Haya compared the ten-year average deforestation rate (2001-2010) to the period from 2011-2015. Of the 102 jurisdictions that Haya assessed, thirteen showed a drop in deforestation rates by greater than 10%, meaning that an international forest offsets program hypothetically initiated in 2011 with a crediting baseline equal to 10% below the average rates during the previous 10 years would have generated credits without any further action, resulting in non-additional crediting. In Acre, average deforestation rates during the 2011-2015 period were 15% lower than the 2001-2010 average, meaning, again, that linkage with Acre over this period would have generated offsets that had no real carbon benefit. To reiterate this point, a ten-year historical average does not represent current trends under recently implemented deforestation programs within the Brazilian state of Acre, which is being considered for linking in CA-REDD. As Haya describes in her comments:

For example, in Brazil, reductions have been affected by the soy and beef moratoriums catalyzed by international NGOs, national Brazil policy, state-level policy and programs, and changes in global commodity prices... It is difficult to assess the extent to which deforestation rates were affected by any one of these factors. Second, the Brazilian government and Acre have decided to make forest protection a priority for a range of reasons, not just for the global climate benefits. Brazil has also committed to reducing its deforestation rate as a part of its commitments under the UN Paris climate accords (in their INDC). They are also receiving funds from governments internationally to help pay for these efforts, including from Norway as mentioned above. An effective REDD program is hard to carry out and requires substantial political will to be successful. The sale of REDD credits can help pay for, and provide legitimacy for, a government to carry out a program they wish to carry out. But if those payments are the main motivation for a REDD program, that REDD program is bound to fail; the political will would not likely be sufficient for an effective REDD program that preserves forests for the long run rather than just lowering emissions for a short period of time. For all of these reasons, *REDD credits would not be considered additional as offset credits.*"

Other analyses have similarly shown that the baseline “reference level” varies significantly depending on the reference time period that is chosen, and can lead to non-additionality. For example, Mertz et al. (2018) found that forest reference levels are highly

¹⁸ Haya, June 4, 2016.

¹⁹ TFS at 12-14.

sensitive to the reference period chosen, and therefore “demonstrating additionality of REDD+ in fast developing areas is difficult.”²⁰ Another study found that “depending upon the baseline approach used, the total credited emissions avoided ranged over two orders of magnitude for the same quantity of actual emissions reductions.”²¹ These studies show that the reference levels proposed by the TFS do not provide sufficient certainty to deliver robust and additional carbon credits for compliance purposes.

iii. The International Forest Offsets Program Proposed by the TFS Does Not Guarantee Permanence In Carbon Emissions Reductions.

In the TFS, “permanence” means that emissions reductions from “efforts to reduce tropical deforestation and/or degradation must not be reversed and must endure for at least 100 years.”²² This is problematic in several regards. First, to stay within the carbon budget for avoiding the worst damages from climate change, projects with truly permanent carbon emissions reductions should be prioritized. Instead, tropical forest offset programs exchange *certain, permanent* carbon benefits that would be achieved by avoided fossil fuel emissions for hoped-for uncertain, temporary carbon sequestration in speculative international forest projects.²³

Second, there is nothing to demonstrate that CARB or partner jurisdictions have the capacity to monitor and manage an array of international forest offset projects over the course of an entire century, particularly given the extreme social, political and environmental disruption that is projected under even best-case global warming scenarios.

Third, it is unlikely that revenues from California offset credit sales can compete over time with the opportunity values of many non-forest land uses. Rising agricultural land values and commodity prices – a plausible result of growing global land and food scarcity – could easily swamp regulatory efforts, such as the TFS, that depend on markets in greenhouse-gas offsets.

Finally, the TFS’s proposed response to the permanence problem is inadequate. A buffer pool of credits would reduce total revenues from credit sales and could quickly become insufficient under many scenarios, such as an increase in commodity prices from competing land uses (for crops, livestock, timber, etc), economic changes, and political changes and upheaval.

c. The TFS Fails to “Ensure Rigorous Social and Environmental Safeguards.”

The Draft EA states that the TFS will “ensure rigorous social and environmental safeguards” through its “minimum social and environmental safeguards requirements.”²⁴ However, as detailed below, there is extensive evidence that, in practice, tropical forest offset programs, like that proposed by the TFS, repeatedly fail to safeguard Indigenous Peoples and

²⁰ Mertz, O. et al., Uncertainty in establishing forest reference levels and predicting future forest-based carbon stocks for REDD+, 13 *Journal of Land Use Science* 1 (2018).

²¹ Griscom B, et al., Sensitivity of amount and distribution of tropical forest carbon credits depending on baseline rules, 12 *Environ Sci Policy* 897 (2009).

²² TFS at 7.

²³ Mackey, B. et al., Untangling the confusion around land carbon science and climate change mitigation policy, 3 *Nature Climate Change* 552 (2013).

²⁴ Draft EA at 12.

have resulted in a disturbing history of human rights violations, even when social safeguards are reportedly in place. Furthermore, the TFS's requirements do nothing to protect California communities, particularly low-income communities and communities of color, who will be harmed by the implementation of an international offset program that allows California's big polluters to release more air pollution into their communities. The TFS also provides no real protections for forest biodiversity.

i. Harms to Indigenous Communities: Threats of Human Rights Violations Against Indigenous Peoples from the Proposed International Forest Offset Programs.

CARB asserts that the TFS will “ensure rigorous social and environmental safeguards” for indigenous peoples through the minimum requirements outlined in Chapter 10.²⁵ While these requirements may sound good on paper, CARB ignores the extensive evidence that REDD programs do not safeguard Indigenous Peoples in practice and have led to human rights violations, even when social safeguards are reportedly in place.

CARB must confront the vast body of evidence showing that REDD programs have an extensively documented history of human rights violations of Indigenous and forest-dependent communities, including land grabs; exclusion from forests and restrictions on resource access; coercion; institutional violence; lack of meaningful participation including failure to obtain Free, Prior, Informed Consent; forced decision-making; lack of equitable benefit-sharing; and imprisonment for continuing cultural practices on the land. Indigenous Peoples are put at risk of displacement and loss of control of their forests, their way of life, cultures, food security, and sovereignty. This is not surprisingly given that the market linkages proposed by CARB subject Indigenous Peoples to inequitable power structures.

These widespread human rights violations clearly show that there are inherent inadequacies in the social safeguards of REDD+SES and that the social safeguard framework of the TFS is insufficient. The remote location of many potential projects makes verification, monitoring and enforcement of the projects extremely difficult and unlikely to succeed. This means even if a project claims to meet all of CARB's social safeguards, there is no way to ensure human rights violations are not happening on the ground. In short, no amount of fine-tuning by CARB staff will arrive at a version that will provide assurances that the TFS will be immune to human rights violations.

CARB must not approve the TFS without confronting the evidence from numerous reports and studies documenting harms to indigenous communities from market-based REDD-type forest offsets programs, including but not limited to:

- A World Rainforest Movement report examining 14 REDD and PES projects around the world which documented extensive human rights abuses to forest-dwelling peoples: “In many cases communities were never asked whether they consented to the forest carbon project... Where REDD project plans were presented to communities... what the villagers

²⁵ TFS at 18-19.

got in return was mainly harassment, restrictions on land use, and blame for deforestation and climate change.”²⁶

- A comprehensive report from the Indigenous People’s Biocultural Climate Change Assessment Initiative (IPCCA), with case studies in seven countries, showing that market-based approaches can neither fully respect and protect human rights nor conserve forests over the long term.²⁷
- A report from the Brazilian Platform for Human, Economic, Social, Cultural and Environmental Rights describing Acre as a state suffering extreme inequality, deepened by a lack of information about green economy projects, which results in communities being coerced to accept "top-down" proposals as substitutes for a lack of public policies to address basic needs.²⁸
- A 2016 study from Madagascar showing that existing social safeguards are not being fulfilled: “This research shows that existing safeguard commitments are not always being fulfilled and those implementing social safeguards in REDD+ should not continue with business as usual.”²⁹
- Recent research showing that REDD programs do not increase the well-being or income sufficiency of indigenous groups:
 - A comprehensive review by Sunderlin et al. (2017) on the degree of success in meeting well-being and income goals examined in six countries (Brazil, Peru, Cameroon, Tanzania, Indonesia, Vietnam) at 22 initiatives, 149 villages, and approximately 4000 households, finding that “ REDD+ has not contributed significantly to perceived well-being and income sufficiency.”³⁰
 - A study by Shrestha et al. (2017) in Nepal concluding that “economic contribution of the REDD+ payment to the household economy is very nominal and is insufficient to invest in livelihood enhancement activities.”³¹
- Recent research showing that REDD programs typically fail to obtain meaningful Free, Prior, Informed Consent, and do not allow meaningful participation in planning or implementation:

²⁶ World Rainforest Movement, REDD: A Collection of Conflicts, Contradictions and Lies, February 2015.

²⁷ Osborne, T. et al., Indigenous Peoples and REDD+: A Critical Perspective, Indigenous People’s Bicultural Climate Change Assessment Initiative, November 2014.

²⁸ DHESCA Brasil, The Green Economy, Forest Peoples and Territories: Rights Violations in the State of Acre (2014).

²⁹ Poudyal, M. et al., Can REDD+ social safeguards reach the ‘right’ people? Lessons from Madagascar, 37 Global Environmental Change 31 (2016).

³⁰ Sunderlin, W.D. et al., REDD+ contribution to well-being and income is marginal: the perspectives of local stakeholders, 8 Forests 125 (2017).

³¹ Shrestha, S. et al., Contribution of REDD+ payments to the economy of rural households in Nepal, 88 Applied Geography 151 (2017).

- Research by Samndong et al. (2018) in the Democratic Republic of Congo finding that community participation was “characterized as ‘tokenism’ whereby the communities were consulted and informed, but never achieved managerial power or influence over the REDD+ pilot project. The decision for the communities to join REDD+ was not democratic and the information provided during the process of introducing REDD+ was not sufficient for the communities to make an informed decision to join or not.”³²
- Research by Spiric et al. (2017) finding that Mexico’s REDD+ readiness process had “low level of input legitimacy in so far as that the federal government environment agencies concentrate most decision-making power and key land-use sectors and local people’s representatives are absent in decision-making forums.” The study also found that REDD policy documents were dominated by the positions of government agencies and international conservation organizations, while the positions of civil society organizations and academics were partly or not at all reflected.³³
- Research documenting violence to Indigenous Peoples: A study by Howson (2018) in Kalimantan, Indonesia, concluding that “REDD+ is accelerating the very violence and environmentally destructive behaviours it claims to discourage.”³⁴

ii. Harms to California Communities: An International Forest Offset Program Will Exacerbate Environmental Justice Problems in California.

An international forest offset program would enable California refineries and other industrial polluters to continue to emit harmful greenhouse gases and co-pollutants into neighboring communities – predominantly low-income communities and communities of color – which would worsen California’s health and environmental justice crisis. The TFS does nothing to address or minimize these unacceptable harms to California’s communities that would result from the proposed project.

In California, studies have documented that industrial facilities with heavy emissions such as refineries, cement factories, gas and electricity production facilities are disproportionately located in communities of color and lower-income communities, and that these communities bear disproportionate air pollution burdens.³⁵ With an international forest offset program, some industrial polluters will emit more greenhouse gas pollution and co-pollutants, and for longer, than they would otherwise be allowed to in the absence of those offsets. Already overburdened communities living in some of the most polluted air basins in California would face added harms from this additional pollution. Harmful pollutants emitted by California refineries that cause serious health harms include known cancer-causing chemicals

³² Samndong, R.A., The participation illusion: Questioning community participation in a REDD+ pilot project in the Democratic Republic of Congo, 20 *International Forestry Review* 390 (2018).

³³ Spiric, J. et al., A dominant voice amidst not enough people: analyzing the legitimacy of Mexico’s REDD+ readiness process, 7 *Forests* 313 (2017).

³⁴ Howson, P., Slippery violence in the REDD+ forests of Central Kalimantan, Indonesia, 16 *Conservation and Society* 136 (2018).

³⁵ Pastor, M., et al., Minding the climate gap: what’s at stake if California’s climate law isn’t done right and right away, Program for Environmental and Regional Equity, University of Southern California, Los Angeles (2010).

like benzene, formaldehyde, and arsenic; smog-forming chemicals like nitrogen oxides, carbon monoxide, and volatile organic compounds; and particulate matter that causes lung and heart problems.³⁶

CARB must consider the harms from an international offsets program to California communities who will bear the burden. This is particularly critical in light of new research by Cushing et al. (2018) confirming that California's cap and trade program is perpetuating environmental health inequities in the state because it is incentivizing carbon offsets instead of local emissions reductions at the regulated facilities:

Our results indicate that, thus far, California's cap-and-trade program has not yielded improvements in environmental equity with respect to health-damaging co-pollutant emissions.³⁷

Notably, the study found that the majority of regulated facilities reported higher annual average local GHG emissions since the initiation of carbon trading over the 2011-2015 study period when data were available, and that communities of color and low-income communities were more likely to experience increases in greenhouse gases and co-pollutants from regulated facilities:

We found that facilities regulated under California's cap-and-trade program are disproportionately located in economically disadvantaged neighborhoods with higher proportions of residents of color, and that the quantities of co-pollutant emissions from these facilities were correlated with GHG emissions through time. Moreover, the majority (52%) of regulated facilities reported higher annual average local (in-state) GHG emissions since the initiation of trading. Neighborhoods that experienced increases in annual average GHG and co-pollutant emissions from regulated facilities nearby after trading began had higher proportions of people of color and poor, less educated, and linguistically isolated residents, compared to neighborhoods that experienced decreases in GHGs.

Importantly, the study recommended policies that incentivize local emissions reduction, rather than carbon offset projects which perpetuate the environmental justice crisis:

The incorporation of additional policy and regulatory elements that incentivize more local emission reductions in disadvantaged communities could enhance the local air quality and environmental equity benefits of California's climate change mitigation efforts.

³⁶ Office of Environmental Health Hazard Assessment, Analysis of Refinery Chemical Emissions and Health Effects, (Draft September 2017), <https://oehha.ca.gov/air/analysis-refinery-chemical-emissions-and-health-effects>; <https://oehha.ca.gov/media/downloads/faqs/refinerychemicalsreport092717.pdf>

³⁷ Cushing, L. et al., Carbon trading, co-pollutants, and environmental equity: Evidence from California's cap and trade program (2011-2015), 15 PLoS Med e1002604 (2018) ("Cushing, 2018").

iii. Harms to Tropical Forests: The TFS Does Not Reduce the Drivers of Deforestation or Include Adequate Safeguards for Forest Biodiversity.

The TFS does not include robust criteria for environmental safeguards to protect tropical forests and their biodiversity. As detailed above, the TFS does not reduce demand for the commodities that drive deforestation and forest degradation, such as palm, soy, wood, pulp, and cattle, and REDD+ programs to date have not been effective in reducing deforestation. Furthermore, revenues from carbon offsets would not necessarily be directed to fund programs that directly counteract deforestation, as the distribution of revenue is at the discretion of the partner jurisdiction, presumably with the consent of the participating communities.

The TFS program does not include robust criteria for protecting biodiversity such as quantitative requirements for the maintenance of species diversity, forest structure, and canopy cover, nor mechanisms to ensure these criteria will be enforced in practice. This is particularly troubling because a 2016 review found that REDD programs have not been effective in implementing biodiversity safeguards, resulting in potentially poor outcomes for biodiversity: “Our review suggests that the current lack of guidance on how to implement the UNFCCC biodiversity safeguards in REDD+ could lead to mixed and potentially poor performance from national REDD+ initiatives.”³⁸ In this review, Panfil et al. (2016) examined how 80 existing REDD+ projects are addressing biodiversity issues, and found that projects lacked specific goals and logical links between goals, project interventions, and monitoring, suggesting “that the projects will have difficulty achieving and measuring biodiversity impacts.” The study concluded that “in practice, REDD+ is likely to have variable outcomes for biodiversity, depending on how biodiversity goals are articulated, implemented, and monitored.”

d. The TFS Fails to Fulfill its Objective to Meet Long-Term Climate Objectives.

CARB asserts that a tropical forest offsets program will help the state meet its long-term climate objectives.³⁹ However, subnational REDD initiatives financed through offsets have proven to be ineffective and inefficient at reducing GHG emissions. Carbon offset programs are a poor use of state staff time and financial resources and a dangerous distraction from the strategies that do work: ending fossil fuel production and use. Given the urgency for immediate, effective action to reduce carbon emissions from fossil fuels, as underscored by dire warnings of the recently released IPCC report on *Global Warming of 1.5°C*, CARB should show its commitment to meeting the state’s climate goals by implementing stronger emissions reductions in our own state that really matter, specifically, phasing out the state’s fossil fuel production, a rapid transition to zero-emission vehicles, and a just transition to 100% clean energy.⁴⁰ These measures would protect the health and wellbeing of all Californians, especially members of already over-burdened communities.

³⁸ Panfil, S. N. & C.A. Harvey, REDD+ and Biodiversity Conservation: A Review of the Biodiversity Goals, Monitoring Methods, and Impacts of 80 REDD+ Projects, 9 Conservation Letters 143 (2016).

³⁹ Draft EA at 12.

⁴⁰ Oil Change International, *The Sky’s Limit California: Why the Paris Climate Goals Demand That California Lead in a Managed Decline of Oil Extraction* (May 2018); Center for Biological Diversity, *Oil Stain: How Dirty Crude Undercuts California’s Climate Progress* (Nov. 2017).

II. The TFS Should Be Rejected Because the EA is Inadequate and Fails to Inform This Decision-making or Provide a Model for Other Programs.

a. The EA Ignores Potential Compliance Responses or Programs That May Incorporate the TFS or Use It as a Model.

CARB states that it intends for this standard to be used as a model for “other GHG emissions mitigation programs such as the International Civil Aviation Organization’s (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) and other emerging programs.”⁴¹ It could also be used as a model for “other emission mitigation programs and emission trading systems that are seeking to assess and potentially include jurisdiction-scale programs that reduce emissions from tropical deforestation and thereby incentivize substantial greenhouse gas (GHG) emission reductions caused by tropical deforestation.”⁴² Furthermore, while this proceeding does not formally incorporate the TFS into the state’s cap-and-trade program, it is clear that CARB anticipates this could happen in the near future.⁴³

All of these are reasonably foreseeable results of CARB endorsing the TFS, yet the Draft EA fails to analyze their potential environmental consequences. The EA must address not only a project’s direct effects, but also the reasonably foreseeable indirect effects, and the effects of foreseeable activities that will occur as a result of the project.⁴⁴ The EA must identify and analyze both direct effects of a project and the “indirect or secondary effects” – those effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable.⁴⁵ This is particularly true since CARB anticipates that *other* jurisdictions potentially without environmental review requirements may adopt the TFS—and even may rely on this EA to determine the environmental consequences of doing so.⁴⁶ Thus, CARB must analyze the foreseeable environmental impacts of the very compliance responses it anticipates may happen (including use by ICAO for aviation offsets, use by other emission trading systems, linkage to cap-and-trade, and so on) *before* deciding whether to endorse the standard. Otherwise, the EA essentially becomes a make-work exercise that fails to inform this and future decision-making, and CARB will be endorsing a standard without fully understanding its implications.⁴⁷ For this reason, CARB should now reject the TFS; it simply does not have enough information on which to base its decision.

⁴¹ Draft EA at 2.

⁴² *Id.* at 1.

⁴³ *Id.* at 2. See also, CARB, Proposed Scoping Plan at 29, fn 40: “ARB staff identified the jurisdictional program in Acre, Brazil, as a program that is ready to be considered for linkage with California, and has committed to proposing regulatory standards for assessing tropical forestry programs and to proposing linkage with the program in Acre as part of a future rulemaking process.” Available at: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf.

⁴⁴ Public Resources Code § 21065; Cal. Code Regs., tit. 14, § 15378, subd. (a) (“CEQA Guidelines”).

⁴⁵ CEQA Guidelines, §§ 15358, subd. (a)(2); 15126.2, subd. (a); 15064, subd. (d)(2), (3); *Laurel Heights Improvement Ass’n v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 396 (“*Laurel Heights*”).

⁴⁶ See Draft EA at 19, stating that one reason for preparing the EA is precisely because CARB knows the TFS will be used by other jurisdictions. Even if other jurisdictions must go through a public process for creating crediting programs (TFS, ch. 3(b), (c)), it is unclear how this will be enforced, or that these processes will necessarily include robust environmental review processes at all.

⁴⁷ The consequence of failing to comply with CEQA’s substantive mandates that foreseeable impacts be analyzed and mitigated is not only that the environment is left at risk, but also that Californians are denied the benefits of informed self-government. (*Laurel Heights*, 47 Cal.3d at p. 392.)

Furthermore, the EA should analyze the impacts—even if on a programmatic level—of these foreseeable actions, even if the TFS would only be used in some cases after a future rulemaking with a separate EA, such as with respect to linkage with cap-and-trade. CARB states that this EA provides a “programmatic” level of analysis,⁴⁸ indicating that a future, project-specific EA may rely on, or tier from, this programmatic EA.⁴⁹ However, given the EA’s failure to include foreseeable compliance responses, and its cursory and inadequate analysis as described below, CARB must not rely on this EA in any future rulemakings. Indeed, what this frustrating two-stage process (endorsement of the TFS, then adopting into regulation such as cap-and-trade) appears to do is to submerge or hide environmental impacts “by chopping a large project into many little ones—each with a minimal potential impact on the environment—which cumulatively may have disastrous consequences.”⁵⁰ CEQA does not allow this.

Because CARB is proposing to endorse a TFS that it anticipates will be used as a model for future trading programs—in this or other jurisdictions—without having a real understanding of the potential impacts, and because—as explained in Section I above—there *are* significant unanalyzed impacts, CARB should reject the TFS.

b. The EA Provides a Superficial and Internally Inconsistent Analysis of Impacts and Therefore Fails to Propose Mitigation Measures for Those Impacts.

i. The Draft EA Fails to Analyze or Mitigate Impacts in California.

The Draft EA specifically declines to analyze impacts in California. Indeed, the EA states: “essentially all impacts that could result from the Proposed Project would take place outside the United States. . . .”⁵¹ This assertion is not accurate. For instance, there will be significant impacts to the air quality of California communities, particularly disadvantaged communities already suffering from disproportionate amounts of air pollution under the state’s current cap-and-trade program, from the use of an offset program that allows California industrial facilities to continue polluting by purchasing emissions offsets created elsewhere. Cushing et al. (2018) found that rather than investing in green projects within the state, an astounding seventy-five percent of offset credits went towards projects outside of California.⁵² Meanwhile, from 2011-2015, disadvantaged communities within California experienced *increases in both GHG emissions and co-pollutant emissions* from regulated facilities disproportionately located in their neighborhoods.⁵³ Incentivizing out-of-state projects while actively harming California’s disadvantaged communities undermines the intent of AB 398.⁵⁴ The EA’s failure to discuss these impacts renders it inadequate to support the TFS.

⁴⁸ See e.g., Draft EA at 6.

⁴⁹ Public Resources Code §§ 21068.5, 21094, subd. (a), (b).

⁵⁰ *Bozung v. Local Agency Formation Comm.* (1975) 13 Cal.3d 263, 284; see also *Orinda Ass’n v. Board of Supervisors* (1986) 182 Cal.App.3d 1145, 1171 quoting *Topanga Beach Renters Assn. v. Department of General Services* (1976) 58 Cal.App.3d 188, 195-196; Guidelines, §§ 15126.2, subd. (a); 15378, subd. (a).

⁵¹ Draft EA at 5.

⁵² Cushing, 2018.

⁵³ *Ibid.*

⁵⁴ Note that the Office of the Senate Floor Analyses stated its understanding that, of the offset credits allowed, AB 398 “[r]equires 50% of all offsets to be *in* California.” See Senate Floor Analysis for AB 398 at 5 (emphasis added).

ii. The EA's Cumulative Impacts Analysis is Inadequate.

CARB's cumulative impacts analysis for the TFS is apparently taken from the EA for California's 2017 Scoping Plan. This is bizarre for several reasons, and serves to highlight further contradictions and inadequacies in the rest of the impacts analysis.

The 2017 Scoping Plan EA looked at U.S. (and Canada) forest offset programs and impacts, but not at (other) international programs or impacts. Therefore, the Scoping Plan EA cannot substitute for a cumulative impacts analysis on the TFS project in this (TFS) EA. Despite the TFS EA's statement to the contrary,⁵⁵ the Scoping Plan EA does not provide any analysis on which the TFS EA can rely. Moreover, the *specific* impacts analysis in the TFS EA looks only at *international* impacts, as explained above. By "relying" on the Scoping Plan EA, which only looked at *domestic* impacts, for its *cumulative* impacts analysis, the TFS EA makes entirely opposite and contradictory assumptions about where impacts will occur.

Further highlighting the incongruity between the cumulative and specific impacts analyses, none of the compliance responses listed in the TFS EA cumulative impacts section (from the Scoping Plan EA)⁵⁶ are evaluated in the Draft EA's specific impacts analysis. Further, the TFS EA does not provide any context for evaluating the impacts of this particular decision on the TFS in relation to (or in addition to) those compliance responses in the cumulative impacts section. It simply regurgitates some of the generalized impacts identified in the Scoping Plan EA, and nothing more. Because of lack of any analysis of the TFS's impacts in conjunction with other compliance responses in the cumulative impacts analysis, the Draft EA's purported cumulative impacts analysis is of no use in determining whether CARB should endorse the TFS.

iii. The EA's Impacts Analysis and Therefore Mitigations Measures are Inadequate.

The EA's analysis of impacts—and proposed mitigation measures—is hardly an analysis at all. Each sector cuts and pastes identical assumptions that are provided without support. For instance, every single sector relies on the same word-for-word assumption that:

Implementation of the Proposed Project could result in planning efforts and implementation of actions within external jurisdictions that reduce deforestation. The reasonably foreseeable changes to land uses would effectively limit degradation of the existing environment and would be intended to result in: forest protection, forest management and forest production processing and marketing, and increased sustainable agriculture, ranching, silviculture, and agroforestry activities associated with the restoration of degraded areas, so as to value forests and reduce pressure for deforestation of new areas.

⁵⁵ "The 2017 Scoping Plan EA, which referenced the potential development of a jurisdictional sector-based crediting approach to address emissions from tropical deforestation, provided a program level review of significant adverse impacts associated with the reasonably foreseeable compliance responses that appeared most likely to occur because of implementing the recommended measures." (Draft EA, p. 34.)

⁵⁶ Draft EA at 34 et seq.

The EA lacks substantial evidence—or any evidence—to support these assertions. Rather, as explained in Section I above, there is significant evidence that undermines them—demonstrating that a REDD-type offset program could in fact harm forest ecosystems. The Draft EA entirely ignores such evidence.

The resulting superficial and unsupported analysis results in similarly superficial and unhelpful conclusions about potential impacts and suggested mitigation. For instance, the assumption that the TFS will stem deforestation results in the meaningless conclusion that land use and planning impacts are potentially significant because, in order to avoid the impact, local jurisdictions would need to have in place land use plans “adopted for the purpose of avoiding or mitigating an environmental effect,” but “it is not certain [the jurisdictions] would do so.” The mitigation measure is of little help since “CARB lacks jurisdiction to ensure [an acceptable land use plan] is implemented.” Instead of preparing a Draft EA that provides no actual insight, CARB could have prepared one that looked at the existing conditions, plans, and impacts in areas it anticipates this TFS will be used, such as in the airline sector, Acre, Brazil, and California’s own cap-and-trade program. Such an analysis, for instance one that looks at existing land use and deforestation plans in Brazil, would have been significantly more useful to CARB’s decision-making.

Furthermore, the EA fails to acknowledge or analyze well-known impacts likely to arise from the TFS, given numerous examples and information on problems with applying REDD standards internationally, as described in Section I above. These include, among many others, harms to indigenous communities, failures of forest offset programs to guarantee GHG reductions, and harm to forest ecosystems from leakage and other drivers.

Overall, the internally inconsistent assumptions in the EA’s impacts analysis, the lack of any substantial evidence supporting various assertions that impacts will not be significant, the lack of analysis of many foreseeable compliance responses or harms to California communities, the lack of enforceability of mitigation measures, and the boilerplate descriptions of the benefits of the program to forests despite evidence to the contrary, cause this EA to be wholly inadequate to support a decision adopting a TFS. CARB must reject it.

c. The EA Alternatives Analysis Fails to Provide a Meaningful Evaluation.

The alternatives analysis is the “the core of an EIR.”⁵⁷ An agency “may not approve a proposed project if feasible alternatives exist that would substantially lessen its significant effects.”⁵⁸ Therefore, lead agencies must examine a reasonable range of alternatives that feasibly meet most of the project’s basic objectives while avoiding or substantially reducing the significant effects of the project, even if these alternatives “would impede to some degree the attainment of the project objectives, or would be more costly.”⁵⁹ The examination of alternatives

⁵⁷ *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d. 553, 564.

⁵⁸ *Save Panoche Valley v. San Benito County*, 217 Cal. App. 4th 503, 521 (2013) (citations omitted); *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 730-31, 733 (“A major function of the EIR is to ensure thorough assessment of all reasonable alternatives to proposed projects by those responsible for the decision” (citation omitted)).

⁵⁹ CEQA Guidelines, § 15126.6(a), (b).

must “include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.”⁶⁰ “An inadequate discussion of alternatives constitutes an abuse of discretion.”⁶¹

Here, the alternatives analysis fails to provide a meaningful analysis of the alternatives. As with the impacts analysis, it provides no support for its assertions of the benefits and harms of each alternative. For example, CARB states that its “no project” alternative would result in deforestation without providing any basis for making that assumption. To the contrary, as provided in sections I.b.2 and I.c.3 above, there are many examples that show that REDD programs are not necessarily additional to existing programs within countries to reduce deforestation, and that REDD programs fails to address the drivers of deforestation. CARB confronts none of these examples or studies in its EA, instead relying on broad conjectures without evidence.

Additionally, the EA is supposed to provide a reasonable range of alternatives that meet most of the project’s objectives, yet the analysis includes an alternative that on its face fails to meet five of the six objectives: endorse a standard that does not seek to disincentivize mineral extraction (Alternative 3). Five of the six objectives relate to reducing GHG emissions, climate change, and increasing social and environmental safeguards. At the same time, mineral extraction is one of the primary sources and drivers of GHG emissions, climate change, and social and environmental injuries. A 2016 global analysis found that the carbon emissions that would be emitted from burning the oil, gas, and coal in the world’s *currently operating* fields and mines would fully exhaust and exceed the carbon budgets consistent with staying below 1.5°C or 2°C.⁶² Further, the reserves in currently operating oil and gas fields alone, even excluding coal mines, would lead to warming beyond 1.5°C. An important conclusion of the analysis is that *most* of the existing oil and gas fields and coal mines will need to be closed before their reserves are fully extracted in order to limit warming to 1.5 degrees.⁶³ Some existing fields and mines will need to be closed to limit warming to 2 degrees.⁶⁴ In short, there is no room in the carbon budget for *new* fossil fuel extraction *anywhere*.⁶⁵ Additionally, most of the world’s existing oil and gas fields and coal mines will need to be closed before their reserves are fully extracted to meet a 1.5°C target. There is, therefore, no justification for CARB to advance a climate change standard alternative that would not disincentivize mineral extraction.

⁶⁰ CEQA Guidelines, § 15126.6(d).

⁶¹ *Kings County Farm Bureau*, 221 Cal.App.3d at 731, citing *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.App.3d 376, 404-406.

⁶² Oil Change International, *The Sky’s Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production* (September 2016), available at <http://priceofoil.org/2016/09/22/the-skys-limit-report/>.

⁶³ Oil Change International, *The Sky’s Limit California: Why the Paris Climate Goals Demand That California Lead in a Managed Decline of Oil Extraction*, May 2018, at 7, 13, available at <http://priceofoil.org/ca-skys-limit>.

⁶⁴ Oil Change International, *The Sky’s Limit: Why the Paris Climate Goals Require a Managed Decline of Fossil Fuel Production* (September 2016) at 5, 7.

⁶⁵ This conclusion was reinforced by the IPCC Fifth Assessment Report which estimated that global fossil fuel reserves exceed the remaining carbon budget (from 2011 onward) for staying below 2°C (a target incompatible with the Paris Agreement) by 4 to 7 times, while fossil fuel resources exceed the carbon budget for 2°C by 31 to 50 times. See Bruckner, Thomas et al., 2014: Energy Systems. In: *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press (2014), http://ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_chapter7.pdf at Table 7.2.

d. The CEQA Exemption for Regulatory Action Taken to Protect the Environment Does Not Apply.

CARB states that “even if viewed as a ‘project’ under a conservative lens, [the TFS] is appropriately considered exempt from CEQA as an action taken by a regulatory agency for protection of the environment. (See 14 CCR Section 15308.)”⁶⁶ Where there is a reasonable possibility that a project or activity may have a significant effect on the environment, an exemption is improper.⁶⁷ CARB’s assertions that its TFS will have a beneficial effect on forests and on the climate are little more than speculation, with no substantial evidence to support them. To the contrary, as described in Section I above, there is ample evidence that REDD-type programs fail to protect forest ecosystems and do little to stem GHG emissions. CARB must engage with these studies and examples, and cannot simply claim an exemption without any evidence that its action will, in fact, protect the environment.

Conclusion

In general, the TFS remains deeply problematic, and CARB’s proposal to endorse the TFS without having fully addressed the many pitfalls raised herein, by indigenous rights groups, and by environmental justice communities is troubling. We request that CARB reject the TFS, and focus instead on crafting regulations that will end fossil fuel extraction and combustion, reduce California’s deforestation footprint, provide direct benefits to California communities, and deliver the large-scale, rapid GHG reductions needed to avoid the worst climate catastrophes.

Please do not hesitate to contact us with any questions.

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⁶⁶ Draft EA at 5.

⁶⁷ *Wildlife Alive v. Chickering*, (1976) 18 Cal. 3d 190.

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