



February 20, 2024

Governor Gavin Newsom
California State Capitol
Sacramento, CA 95814

Liane Randolph, Chair
Members of the Board
Dr. Steven Cliff, Executive Officer
California Air Resources Board
1001 "I" Street
Sacramento, CA 95814

Submitted electronically via

https://www.arb.ca.gov/lispub/comm/iframe_bcsbform.php?listname=lcfs2024

Re: Notice of Public Hearing to Consider Proposed Low Carbon Fuel Standard Amendments (lcfs2024)

To Esteemed Responsible Officials:

Our organization Biofuelwatch appreciates the opportunity to submit this brief letter to the California Air Resources Board (CARB) as comment on the Notice of Public Hearing to Consider Proposed Low Carbon Fuel Standard Amendments (LCFS Rulemaking)¹. Biofuelwatch² is an international organization that works to increase public understanding and civic engagement on the land-use implications of climate policy. We have a particular focus on the environmental harms and social inequities of large-scale industrial bioenergy projects, and we work extensively on addressing the negative ecological and social outcomes of policy and actions that are justified as being beneficial to the global climate, yet carry with them risks and threats to public health and safety, economic stability and natural resources. Due to circumstance, more than an innate desire, we have developed extensive experience with the negative real-world outcomes due to the Low Carbon Fuel Standard (LCFS). In particular, over the last nearly four years our organization has been deeply engaged on what we assess to be the extremely irregular governance of the conversion of two refineries in the San Francisco Bay Area to manufacturing liquid biofuels, the Phillips 66 Rodeo Renewed Project (Phillips 66 Project)³ being one of those controversial refinery conversion projects and the Marathon-Neste biofuel refinery joint venture in Martinez (Marathon-Neste Project)⁴ being the other.

The California Air Resources Board (CARB) has unfortunately played a key role in the irregular governance of the refinery conversions, not only as a regulator but as a political player. For all intents and purposes

¹ <https://ww2.arb.ca.gov/rulemaking/2024/lcfs2024>

² <http://www.biofuelwatch.org.uk/>

³ <https://www.contracosta.ca.gov/RodeoRenewed>

⁴ <https://www.marathonmartinezrenewables.com/>

CARB has acted to protect the stranded assets of large transnational energy corporations, and has put aside local community and global climate justice concerns about the refinery conversions. Our organization has arrived at the harsh conclusion that in doubling down on climate false solutions like liquid biofuels CARB is failing in the objective of reforming the LCFS in order that the mechanism effectively be a tool for mitigating climate change. Unfortunately, there are numerous and severe harms arising from the LCFS mechanism that CARB staff have refused to recognize throughout the discussions regarding the current LCFS Rulemaking effort.

Though the postponement of the scheduled March 21 board hearing on the LCFS Rulemaking may have been in response to public concern about the LCFS in concept and deed, not the least of which are the inadequate current amendments to the LCFS requirements, we are attentive to how the agency may be once again working to dilute public participation in a significant rulemaking process.

We hope that the board will hear what has been shared over the last several years of workshops and processes around the LCFS. We also know that the board heard a great deal about the problems with the LCFS as the 2022 Scoping Plan was developed, and that current deliberations around cap-and-trade have also exposed major problems with the incentive mechanism. The unfortunate truth is that fatal flaws are embedded within the LCFS. The current amendments do not address these fatal flaws. For our organization and for the communities we work with around the state, the nation and around the world, it is horrifying to us that a high-profile markets-based mechanism, one that California authorities celebrate as an example of global climate leadership to be emulated by other jurisdictions, is in many instances not actually helping, and is instead making the climate situation worse faster.

Purpose and Rationale for LCFS Amendments Addressing the Evidence That Increased Production of Crop-based Liquid Biofuels Presents to Global Forests Fails to Meet the Moment

This comment letter will remain within the relatively limited handrails of the nexus between forests and bioenergy. This can include many topics related to the LCFS, but for the most part this letter will address **liquid biofuels**, and the related LCFS credit pathways currently in effect, such as the Phillips 66 pathway for making ‘renewable diesel’ specifically with a feedstock of soy oil from Argentina that is imported by ocean tanker to their refinery in Rodeo, California.

It is obvious to anyone with experience in the manufacture of liquid biofuels that these energy products present serious threats to forest ecosystems and the communities dependent on them. It has long been understood that any increase in demand for high deforestation risk commodities for use in feed, food, or for fuel will drive deforestation. This most certainly includes liquid biofuels.

Actually, CARB goes so far as to admit that these types of concerns need to be addressed. In the description of the Purpose and Rationale of Proposed Amendments⁵, staff go so far as to emphasize the need to “mitigate the concerns regarding deforestation and other unintended environmental impacts.”

This is not the only effort of CARB staff to try to assuage the concerns about the well-known fact that increasing demand for high deforestation risk feedstocks such as soy to make liquid biofuels is a driver of land use change, biodiversity loss and environmental degradation. The Purpose and Rationale goes on to explain that “(T)he growing demand for crop- and forest-based feedstocks for use in the LCFS program produce an increasing risk of deforestation and use of land with a high biodiversity value to meet this

⁵ https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/lcfs_appe.pdf

demand. It is vital that the LCFS program limit deforestation and land use change as a result of feedstock production as much as possible.”

Though some might be relieved to see that CARB is showing so much concern about these critical matters, the problem is that CARB is out of touch with current understanding of the imperative to stop deforestation. Limiting deforestation is simply not enough. CARB is so completely out of touch with global efforts on these matters that this failing needs to be addressed in this comment letter.

For instance, even though the statement is considered anodyne and toothless by many experts with experience addressing the drivers of deforestation and working to halt the loss of primary forest globally, the Glasgow Leaders Declaration on Forest and Land Use⁶ that was signed during COP 26 in Scotland in 2021 is explicit in describing the need to “**halt and reverse forest loss and land degradation**.” The objective is not to ‘limit’ deforestation. This is not just a semantical difference. Halting and reversing forest loss is the global standard, whereas simply aspiring to limit deforestation and land use change is by simple definition allowing for the loss of forest to continue. Earth living systems cannot afford more forest loss.

Thus, from the outset CARB has failed global forests with the description of these matters in the Purpose and Rationale for the amendments. This is inexcusable for an agency that has in many instances claimed to have expertise over tropical forest-based climate mitigation strategies, even though California is not host to tropical forests.

Prohibiting Palm Oil Based Fuels Is Long Overdue and Is Simply Not Enough

Our organization noted that CARB has finally taken steps to more explicitly prohibit the use of palm oil or palm derivative fuels in the LCFS program. However, we still take issue with the assignment of higher Carbon Intensity (CI) scores as a disincentive. First and foremost, the reliance of the LCFS on CI is essentially a case study in the manner in which CARB obfuscates climate science, as the concept of CI ignores the climate science fundamental that emissions are cumulative. Just like with cap-and-trade CARB embarks upon technocratic carbon accounting formulas that fail to take into account the most basic underpinnings of the climate problem: that emissions are cumulative and that we are working with a rapidly diminishing carbon budget. The LCFS still fails to pass the climate science smell test.

That said, CARB has long relied on disincentives in the market-based mechanism. It is actually quite remarkable that after all this time CARB is offering to clearly ban palm oil and palm derivative based fuels. Congratulations! However, this is not enough. The global policy debate has already moved on from palm to discuss the imperative of also banning soy as a feedstock for making liquid biofuels. As it can be said, *soy is the new palm*. But CARB is as behind the times on this matter, just as it is in aspiring to ‘limit’ deforestation as opposed to rising to the global standard to ‘halt and reverse deforestation.’ The prohibition of palm oil-based liquid biofuels is long overdue, and it is simply not enough.

Sustainability Certification Systems Are Proven Ineffective

In answer to concerns about the LCFS incentivizing global deforestation by incentivizing demand for high deforestation risk feedstocks, CARB decides to play a card from several decades ago: require certification to guarantee ‘sustainability.’ Unfortunately, CARB has apparently failed to look at what is happening with certification standards globally, much less at home in California.

⁶ <https://webarchive.nationalarchives.gov.uk/ukgwa/20230418175226/https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/>

The fact is that certification has not helped companies meet commitments to keep deforestation out of their supply chains.

As a window into this dynamic regarding the failures of certification schemes to guarantee sustainability, which is not a new phenomenon, Greenpeace International published a report in March 2021, nearly three years ago now, titled Destruction: Certified⁷.

The purpose of the report is to assess the effectiveness of certification for land-based commodities as an instrument to address deforestation, land degradation and other ecosystem conversion and human rights abuses. **The analysis in the report shows that certification is a weak tool to address global forest and ecosystem destruction.**

Among the certification schemes evaluated in the report are the International Sustainability and Carbon Certification, the Round Table on Responsible Soy, and the Forest Stewardship Council (FSC). Though CARB does not name any of these specific schemes, experienced stakeholders can predict exactly where this proposal for certification will lead. This without even beginning to address the total lack of regulation of the certifying entities that would be responsible for the implementation of any certification scheme.

With decades of experience working on the development and implementation of certification schemes our organization is adamant in our position that the plan to require certification of high deforestation risk commodities for qualification for the LCFS is not only inadequate, it is bound to fail.

Forest Stewardship Council Weakened Standards to Certify Clearcutting in the Redwoods as Sustainable

As an example of why certification standards have failed as an instrument for addressing sustainability challenges with land-based commodities one has to travel no further than the redwood temperate rainforest ecosystem, Northern California's own globally important forest. In 2012, the FSC, in the face of strong community opposition, and after weakening their standards to allow clearcutting, certified Green Diamond Resource Company (GDRC). Interestingly enough, the GDRC clearcuts are visible from space.



This image above is of the southern boundary of the Redwood National and State Park system and the clearcut holdings of Green Diamond Resource Company in Humboldt County. The National Park, to the

⁷ <https://www.greenpeace.org/international/publication/46812/destruction-certified/>

right side of the frame in dark green, is a UNESCO World Heritage site, ostensibly subject to the management protocols of the Man and Biosphere framework, which would normally include a significant buffer zone between the industrially managed holdings and the globally relevant protected area. Yet, as can be seen with the review of the image, the clearcutting is happening right up to the boundary of the Redwood National Park/World Heritage site. Despite a rhetorical emphasis on the importance of protecting forests as a climate mitigation tool CARB has remained silent about the intensive logging right up to the boundary of a World Heritage site in California. FSC certifies this logging as ‘sustainable.’

Another set of maps, ‘before and after,’ from the California Forest Observatory⁸, focused on Green Diamond Resource Company holdings to the north of the Redwood National Park, shows how clearcut logging can be certified sustainable. You can see the circle in the 2016 map below, highlighting an area of mostly intact second growth forest that is/was in the immediate vicinity of the Redwood National and State Park matrix. There can be no questioning the biological and climate value of this forest.



Unfortunately, as the 2020 map below shows, this area was aggressively logged by GDRC in the space of five years, leaving clearcuts visible from space. The products from this logging were certified and marketed as ‘sustainable’ by FSC. This is not the first time that CARB staff have received this evidence. CARB arguments that certification is a solution for avoiding forest loss and ecosystem degradation ignore reality.



⁸ <https://forestobservatory.com/>

The Carbon Intensity, Environmental Repercussions and Climate Impacts of the Soy Oil Feedstock from Argentina Specified in the Phillips 66 Credit Pathway Are Grossly Underestimated

It is unfortunate that when the imperative of halting global deforestation has become more acute than ever that such a grossly inadequate fuel pathway Life Cycle Analysis⁹ was submitted with the Phillips 66 Application for an LCFS credit pathway for making ‘renewable diesel’ from soy imported from Argentina.

The assessment of Indirect Land Use Change (ILUC)¹⁰ tried to apply a methodology from the Midwest United States to Argentina, though the quality of the assessment is so poor it is hard to discern exactly how the methodology was applied. This assessment of Indirect Land Use Change failed completely to address the most contemporary science when it comes to calculating ILUC.

The conclusion in the Application materials that deforestation from the expansion of the agriculture frontier is no longer an issue of concern for the soy sector in Argentina flies in the face of common knowledge. Indeed, this facile conclusion is refuted by simple and easy to find studies¹¹ from the Environment Ministry of the Government of Argentina that make it clear that the expansion of soy agriculture, which is closely related to the cattle industry, remains one of the major drivers of deforestation in the country. The assessments of the feedstock climate impacts as provided in the Application were woefully deficient.

Considering the urgency of the situation, an item that would serve CARB staff and leadership to take into consideration is the recently published report from the European organization Transport and Environment titled “Halt Deforestation-Driving Soy Biofuels Before it is Too Late.”¹²

In this report clear arguments are made that soy must be considered a high-ILUC risk feedstock (something that the recent LCFS Rulemaking fails to do) and that **in order to protect global forests an aggressive phase out of palm and soy-based biofuels is needed immediately**. There are many lessons to be learned from the European experience on these matters of global deforestation and biofuels, and CARB staff and leadership need to take measures to update the approach to assessing the climate impacts from high deforestation risk feedstocks like soy.

Much more research and analysis need to be done about the viability and environmental repercussions of granting a special climate value to making liquid biofuels from soy. The available evidence shows that this is not a climate solution. By rushing forward with these credit pathways for making liquid biofuels from commodities like soy CARB is running the risk of elevating California climate policy to become a driver of global deforestation.

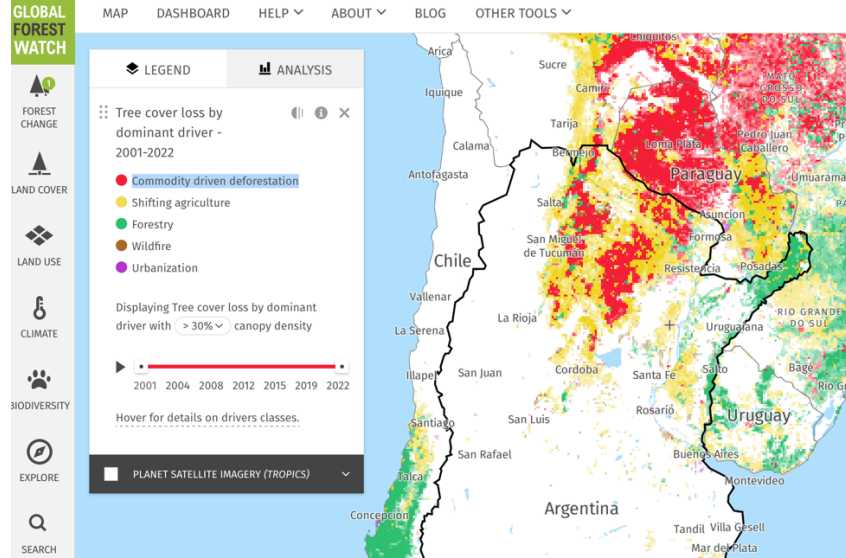
⁹ https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/b0520_report.pdf

¹⁰ https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/b0520_attachment_b.pdf

¹¹ https://www.argentina.gob.ar/sites/default/files/desmontes_y_alternativas-julio27.pdf

¹² <https://www.transportenvironment.org/wp-content/uploads/2023/12/Halt-deforestation-driving-soy-biofuels-before-it-is-too-late.pdf>

Global Forest Watch Data Describes Commodity Driven Deforestation in Argentina

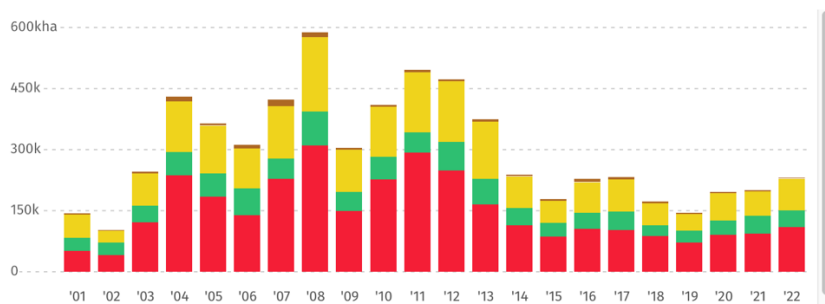


This data is easily accessible from the Global Forest Watch portal¹³. The map image above shows in red the tree cover loss attributable to ‘commodity driven deforestation since the year 2001 until 2022, the last year for which data is currently available. In the graph below commodity driven deforestation is again shown in red. The year 2022 saw the greatest amount of annual deforestation in Argentina since 2013.

ANNUAL TREE COVER LOSS BY DOMINANT DRIVER IN ARGENTINA



In **Argentina** from **2001** to **2022**, **50%** of tree cover loss occurred in areas where the dominant drivers of loss resulted in deforestation.



The methods behind this data have changed over time. Be cautious comparing old and new data, especially before/after 2015. [Read more here.](#)

2000 tree cover extent | >30% tree canopy | these estimates do not take tree cover gain into account

Clearly the issue of deforestation in Argentina remains acute, despite the facile treatment of the matter by CARB in the Phillips 66 LCFS credit pathway application. The recently proposed amendments are also completely inadequate. The hard and sad truth is that by falsely characterizing liquid biofuels as a climate solution California climate policy is contributing to the market dynamics that drive global deforestation.

¹³ <https://www.globalforestwatch.org/dashboards/country/ARG/>

The Public Health Disaster Resulting from the Expansion of the Soy Agroindustry Is Being Ignored

Over the last decades the soy agroindustry has expanded in Argentina at a breathtaking rate. This expansion has extended throughout Southern South America more broadly, especially in the region reaching north from Argentina into Paraguay, Bolivia and Brazil. This industrial monoculture model has relied almost exclusively on varieties of soy that are genetically modified organisms that are engineered to be resistant to pesticides, namely the “Round Up Ready” varieties, which are engineered to confer tolerance to glyphosate and dicamba, both of which are associated with a host of serious human health hazards and environmental risks. Unprecedented amounts of these pesticides have been applied across the region, sprayed by hand, by vehicle and by airplane. This has resulted in a tragic and intensifying public health crisis across the area that has hosted this exponential expansion of the soy agroindustry model.

The situation has gotten so desperate that communities that self-identify as “*los pueblos fumigados*” – the fumigated peoples – have begun to organize to address the indiscriminate use of toxic pesticides across the region, and to free themselves from an industrial model that is poisoning their families and their environment¹⁴. This public health crisis is totally ignored by the LCFS and the formulas used to give a CI value to different feedstocks. The LCFS design discriminates against affected communities; in the rush to put a price on carbon and to protect the stranded assets of multi-billion-dollar transnational energy corporations, California is embracing known false solutions like liquid biofuels. The externalities of these resource intensive high emissions feedstocks are thrust on rural and indigenous communities, which are forced to shoulder the burden of a climate mechanism that fails to take their well-being into account.

Once again it is marginalized communities that are paying the price of California’s climate hubris.

Why is this happening? Is it disinterest? Or ignorance? Why is the State of California doubling down on the promotion of liquid biofuels as a climate solution? The status quo is untenable and the expansion of the production and use of these energy products is climate suicide.

The board of directors of CARB must take responsibility for the monster they are unleashing on the world. To turn a blind eye to the evidence that is being presented regarding the real-world impacts of these crop-based liquid biofuel products, whether it be ‘*sustainable aviation fuel*’ or ‘*renewable diesel*,’ is immoral. Doubling down on a poorly designed incentive mechanism to avoid publicly having to admit to the defects of these failed technologies would be worse than irresponsible. The time to correct course is now.

We demand extensive reformulation and redesign of California’s failing markets-based approach to climate, the LCFS being first up for review, revision and reframing. We remain available to meet with board members that are looking for more information about these matters of global relevance and local significance.

Sincerely,



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¹⁴ <https://agenciaterraviva.com.ar/encuentro-de-pueblos-fumigados-por-un-pais-y-un-continente-con-soberania-alimentaria/>