SUMMARY OF COMMENTS AND VERRA RESPONSES: PUBLIC CONSULTATION ON THE USE OF NON-NATIVE MONOCULTURES IN THE VCS PROGRAM

MARCH 21, 2024

1 INTRODUCTION

This document summarizes the feedback and input from comments received during the October 24 – November 26, 2023, public consultation on including non-native monocultures in the Verified Carbon Standard (VCS) Program. It provides a summary of the conclusions Verra drew from the comments, and it also publishes the comments received in full below.

Verra received 603 comments from 90 stakeholders in this consultation representing a broad selection of sectors and regions. We sincerely appreciate all the feedback submitted.

During the consultation, Verra invited stakeholders to provide feedback on how using non-native monocultures in the VCS Program afforestation, reforestation, and revegetation (ARR) and wetland restoration and conservation (WRC) activities may achieve additional emissions reductions and removals without harming communities or the environment.

Verra analyzed the feedback received and drew conclusions on the most common sentiments expressed by stakeholders, summarized in the sections below.

2 SUMMARY OF CONSULTATION ANALYSIS

None of the updates proposed by Verra in the consultation achieved a consensus. Stakeholders shared various opinions on the thresholds, qualifiers, and definitions we proposed.

The input was valuable for future updates to the VCS Program, including differentiating between different ARR activities and providing guidance on demonstrating assessment of risks to ecosystems. We received actionable recommendations related to the following:

- accessibility
- data and transparency
- guidance
- labels
- methodology review
- potential new methodologies

- safeguards
- stakeholder engagement project financing
- VCS Program principles
- VCS Program scope
- Verra Registry
- Validation/verification body management

As part of our work on the VCS Program Version 5, we will address the other topics that arose during consideration of the non-native monocultures issue. Specifically, we will explore a mechanism to differentiate between credits generated from plantation, agroforestry, and restoration activities.

3 SUMMARY OF COMMENTS RECEIVED BY QUESTION

The summary of comments below highlights the main feedback received in the consultation.

Question 1: In your opinion, should non-native monocultures be an eligible activity for generating carbon credits? Please justify your response.

- 65 percent of respondents indicated that they thought non-native monoculture should be allowed in some circumstances and with safeguards.
- 20 percent of respondents thought non-native monocultures should be allowed without additional conditions.
- 12 percent of respondents said non-native monocultures should not be allowed as an ARR or WRC activity.

We considered the feedback from stakeholders and will accept the use of non-native monocultures by projects provided they meet all VCS Program requirements, including those in the *VCS Standard, v4.6,* Section 3.19.29. This section has been clarified to eliminate the use of terms not defined in the *VCS Program Definitions;* special consideration has been given to conversion and the term "degraded ecosystem." Verra acknowledges that using non-native monocultures may cause significant environmental harm; it can also generate urgently needed climate benefits.

Question 2: The area limit intends to allow smallholders to undertake projects that include non-native monocultures, as these projects are unlikely to have significant negative ecosystem impacts. Is 100 ha an appropriate limit for project activity instances that use non-native monocultures? If not, is a smaller area more appropriate? Please justify.

- 45 percent of respondents indicated that a size limit was unimportant and that monocultures should be eligible under the VCS Program.
- 21 percent of respondents felt that the 100ha size was appropriate but differed on whether it should be at the instance or project level.

- 17 percent of the respondents said a size limit was appropriate, but the area limit should be smaller.
- 10 percent of the respondents said a size limit was appropriate, but the area limit should be larger.
- 7 percent of respondents said a size limit is not important, and no non-native monocultures should be allowed in the VCS Program.

The greatest number of responses indicated that non-native monocultures should be permitted with no size limitation. While the extent of the area in which non-native monocultures are planted may be a key factor in a plantation's environmental impact, there are no guarantees that a small-scale plantation would have less negative impact than a large-scale plantation.

Given these inputs and others received outside the consultation, Verra decided not to rely on an area threshold to address the potential impacts of non-native monocultures.

Question 3: To be eligible to plant non-native monocultures, should a project need to meet both conditions (1)[1] and (2)[2] in the proposed 3.19.28? Please justify why or why not.

[1] At least 30 percent of the project area is designated for native ecosystem restoration to be carried out by the project proponent during project activities.

[2] The area of the project to be populated by non-native monoculture(s) either:
a) Is classified in scientific literature or by national or local governments as degraded or
b) Has been used for intensive agriculture in the past ten years.

- 45 percent of respondents said that projects must meet both conditions to be eligible but had a few recommendations on how to amend the conditions, either to be more strict or lenient.
- 24 percent of respondents said that neither should be met.
- 4 percent of respondents said that only condition (1) should be met.
- 14 percent of respondents said only condition (2) should be met.
- 13 percent of respondents said one or the other conditions should be met.

Requiring projects using non-native monocultures to designate land for ecosystem restoration and to plant only on degraded land was strongly supported. A substantial minority rejected the proposal.

As a result of the consultation and other inputs, Verra concluded that our ecosystem health safeguards are enough that it is unnecessary to require a restoration component for projects that use non-native monocultures; requiring restoration activities could cause undue burden. The *VCS Standard, v4.6,* Section 3.19.29 requires that ecosystem conversion activities occur only in degraded ecosystems.

Question 4: We propose that at least 30 percent of the project area be dedicated to native ecosystem restoration. In your opinion, is this an appropriate minimum restoration threshold? If not,

what percentage of land should be dedicated to native ecosystem restoration? Please provide your rationale for the suggested amount.

- 40 percent of respondents suggested that this requirement should be more location- and/or scale-dependent and needs to set a contextually appropriate area of the project that should be dedicated to restoration.
- 21 percent of respondents said the percentage of the project area required for restoration should decrease, with most of these respondents suggesting that the Forest Stewardship Council's requirements for conservation should be used.
- 12 percent of respondents said the area for restoration should increase. Of these respondents, most said 95 percent of the project area (which would align with the thresholds for natural forest management included in the Climate Action Reserve and California Air Resources Board protocols) should be dedicated to native ecosystem restoration.

Responses to this question varied greatly. The most respondents suggested that mandatory restoration should be location- and/or scale-specific, adding to the complexity of creating a globally applicable requirement. As a result of the consultation and other inputs, Verra concluded that our ecosystem health safeguards are strong enough that it is unnecessary to require a restoration component for projects that use non-native monocultures; requiring restoration activities could cause undue burden.

Many stakeholders (in responses not only to this question) suggested that Verra defer to the Forest Stewardship Council's or other programs' requirements around conservation and restoration. However, Verra prefers to avoid deferring to standards and programs outside our control.

Question 5: Should legally mandated conservation land be counted toward the 30 percent requirement for native ecosystem restoration? Explain your rationale.

- 51 percent of respondents suggested that mandated conservation land should be counted toward the native ecosystem restoration requirements.
- 24 percent of respondents said that mandated conservation land should not be counted, primarily because it would not be additional.
- 13 percent of respondents said it should be location-dependent.

This question aimed to assess the additionality of implementing Verra-required native ecosystem restoration work on land legally mandated for conservation (e.g., in Brazil, where the Forest Code requires a minimum of 35 percent of Amazon landholdings to be maintained under native vegetation). Where restoration activities are conducted as part of a VCS ARR project, the case for additionality must be clearly demonstrated.

However, due to the consultation and other inputs, Verra concluded that our ecosystem health safeguards are strong enough that it is unnecessary to require a restoration component for projects that use non-native monocultures; requiring restoration activities could cause undue burden.

Question 6: What data sources for land classification (e.g., government data, peer-reviewed scientific literature) should be allowed to demonstrate that projects occur on lands considered degraded or under intensive agriculture?

- 75 percent of respondents said that Verra should allow a combination of sources for land classification, given that regions have different access to data.
- 15 percent of respondents suggested that remote sensing, LandSat, and other versions of satellite imagery should be the only data sources used.

Verra's final proposal does not include the term intensive agriculture.

'Degraded ecosystem' is defined in the *VCS Program Definitions, v4.4* as demonstrated by peer-reviewed literature or expert judgment. Since the majority of respondents supported demonstration methods similar to those we currently use, and degradation can be challenging to detect via satellite imagery, we decided to maintain the more encompassing nature of the current definition of 'degraded ecosystem.'

Question 7: Is the definition of "intensive agriculture" appropriate, or is there another definition that would be more appropriate? Please explain your suggestion. Is there another threshold, test, or condition in which introducing non-native monoculture(s) would be appropriate in the context of ARR and WRC projects in the VCS Program to ensure ecosystem health is protected?

- 50 percent of respondents suggested improving the definition of 'intensive agriculture.' Many respondents said the definition should specifically include pasture lands or lands affected by livestock grazing.
- 21 percent of respondents agreed with the use and definition of 'intensive agriculture.'
- 9 percent of respondents disagreed with the use and definition of 'intensive agriculture.'

Verra opted not to include a definition of 'intensive agriculture;' we will refer to these responses if we develop one in the future.

4 FULL LIST OF COMMENTS RECEIVED

1) In your opinion, should using non-native monocultures be an eligible activity for generating carbon credits? Please justify your response.				
#	Name	Organization	Country	Comment
1	ANONYMOUS #1	N/A	N/A	No, these plantations cause negative environmental impacts in both terrestrial and aquatic ecosystems, and in most cases are associated with the use of chemicals that are likely to negatively impact water quality and have adverse community impacts that may not be protected in other parts of the standard. These plantations and are likely not financially additional. Further, monoculture plantations are usually associated with timber production which would risk long term permanence of the project.
2	ANONYMOUS #2	N/A	N/A	No, obviously. As you correctly identified the first time around, non-native monoculture don't present the same benefit as an actual forest, and are more susceptible to sudden reversals, like fires or a change of activity on the land. People can plant non-native monoculture, and maximize their profit at the detriment of the local environment. But that shouldn't be _encouraged_ by given them carbon credits on top of that. By allowing this, you'd shift a bunch of projects that would have been mixed, native forest to non-native monoculture. Unless you can demonstrate that this will allow enough new projects to start to compensate for that (at multiple points in time, not just in the short term), it's complete nonsense. And even then, what's the incentive in the future to convert those monocultures into improved forms of forestry?

3	Luiz G. De Oliveira Filho	Tiete Agricola Ltda	Brazil	Yes, due to the fact that its better to have non natives than degraded áreas.
4	Laszlo balog	Bloomair Zrt	Hungary	Absolutely eligible! A drowning person cannot choose between helping hands, they must accept anything that will save them from drowning. If it has not yet dawned on anyone that climate change can only be stopped by economic interests, and obviously not by stuck-up ideas, this has now become a barrier to a solution. And the potential economic benefits of monocultures motivate the creation of projects that are not viable with the native flora, so carbon sequestration does not take place. Monoculture clearly helps to reduce atmospheric carbon dioxide concentrations, because we are talking about plants. A possible local loss of biodiversity would not be too high a price to pay to achieve significantly higher carbon sequestration. If we cannot control warming, biodiversity will rapidly decline globally without the establishment of monocultures. If we clench our hands convulsively, letting nothing go, it may all get out of hand.
5	Michael Spandern	freelance	Germany	Yes, because a) native, traditional or autochthon species may not/no longer be suitable due to the effects of climate change (temperature, precipitation, diseases), b) the effect of forestry practice (soil preparation, irrigation, chemical, intercropping) is larger than the selection of species c) any models must also be commercially viable (production costs, yields, marketable produce) d) the effects of carbon sequestration (blow ground C-org) is correlated to yields (annual above ground biomass production).
6	Mads Asprem	NewAfrica Bioenergy Ltd	United Kingdom	The key question is what is the purpose of carbon credits? Presumably, it is to finance projects that mitigate climate change? Non-native monocultures, including pines, eucalyptus and teak are the most efficient ways of mitigating climate change in many locations. These species, when planted properly, have a great positive effect on biodiversity, providing sancturies for animal life, regrowth of natural habitats, etc, as plenty of evidence shows. These woods are also an efficient way of providing feedstock for the circular economy and long term carbon storage. Biochar and bioenergy are key parts of the energy transition, but there will be no transition without effectively supplied biomass. Sustainably grown biomass is also required as a replacement source of energy for charcoal and firewood collected from native forests. Even more important, effective and commercial ARR will generate huge positive development impacts in remote

				rural areas, benefiting some of the most disadvantaged people in the most remote parts of the world's poorest countries.
7	Satinder Mohan Singh	Sequoia Plantation	Gabon	The success of Africa Monoculture Plantation Forestry Projects often hinges on the availability of financial resources and incentives. One such crucial incentive is the utilization of Voluntary Carbon Units (VCUs), which play a pivotal role in ensuring the viability and impact of these projects, particularly in the high-risk and uncertain macroeconomic environment of Africa. 1. Financial Viability and Sustainability: Africa Monoculture Projects frequently entail substantial upfront capital expenditures (capex) for land acquisition, plantation establishment, and ongoing maintenance. The sale of VCUs offers a consistent and sustainable source of revenue, making these projects financially viable. It bridges the gap between the significant initial investment and long-term returns, enhancing the overall sustainability of such initiatives. 2. Attracting a Diverse Pool of Investors: VCUs provide a tangible and attractive financial incentive for a wide range of investors, both domestic and international. The potential for financial returns through VCUs attracts not only impact investors interested in sustainable development but also those keen on diversifying their portfolios. As a result, VCUs broaden the investor base, ensuring that adequate funding is available for Africa Monoculture Projects. 3. Scale and Environmental Impact: The proceeds from VCUs not only enable the establishment of larger-scale monoculture plantations but release vital cash flow to run ESG projects to promote and further the United Nations Sustainable Development Goals (UNSDGs). Large-scale projects have a more substantial impact on carbon sequestration, effectively mitigating climate change by sequestering significant volumes of carbon dioxide. This scalability is particularly significant in the fight against global climate change. 4. Climate Change Mitigation and International Commitments: Africa, like many other regions, faces the consequences of climate change, including extreme weather events, reduced agricultural yields, and environmental degradation. Monoculture projects that sequester carbon contribute directly to mitigating climate change and reducing greenhouse gas emissions. Selling VCUs aligns with international climate agreements and demonstrates Africa's active participation in global efforts to combat climate change. 5. Economic Growth and Community Benefits: The financial viability of Africa Monoculture Projects

				through VCUs also translates into economic growth and development. These projects create employment opportunities, stimulate local economies, and have a positive impact on nearby communities. Beyond environmental benefits, they contribute to broader socio-economic development.
8	ANONYMOUS #3	N/A	N/A	Absolutely yes. In areas fit for rapid biomass growth, the absorption capacity of CO2 by large-scale monocultural forests is many times over that of native species in the same region. Provided that there is no conflict between the said monoculture and the efforts to recover/restore and maintain native footprints in concurrent environments, the utilization of non-natives is not only crucial for the global effort of removing CO2 but it should be promoted as such.
9	ANONYMOUS #4	N/A	N/A	No, not for extensive plantations. Such monocultures' only value is commercial timber or ag production, otherwise ARR activities should aim for ecosystem restoration while sequestering carbon. They are more vulnerable to pests, disease, and climate change and pose risks to surrounding natural ecosystems from invasion and or other disruptions to ecological processes. They also provide nearly no value to biodiversity and may cause harm. I would not include in this category agroforestry projects where other ag crops/activities occur below the tree canopy such as coffee or grazing.
10	R. Sanjay Mishr	Callirius AG	Switzerland	(a) We at Callirius believe that the introduction of non-native monocultures for the generation of carbon credits should not be an eligible activity. The use of non-native species, even under controlled conditions, can lead to unintended ecological consequences, such as the displacement of native biodiversity, alteration of soil properties, and potential invasiveness. The focus should remain on planting mixture of native species that support the integrity of local ecosystems and provide a habitat for native wildlife. (https://www.sciencedirect.com/science/article/abs/pii/S0921800923001489) (b) As more countries commit to forest creation, but mainly plant single species forests, an international team of researchers has examined how carbon stocks in mixed forests and monocultures compare. They found that mixed forests store more carbon, and that out of the forests assessed those with four species had the highest carbon stocks relative to monocultures. The researchers also found that mixed forests had 77% higher carbon stocks than commercial monocultures, made up of species bred to be particularly high yielding. “Diverse planted forests store more carbon than monocultures – upwards of 70%,” said Dr Emily Warner, a postdoctoral researcher in ecology and biodiversity science at the Department of Biology, University of Oxford, and first author of the study published in Frontiers in Forests and Global Change.

				"We also found the greatest increase in carbon storage relative to monocultures in four-species mixtures." (https://blog.frontiersin.org/2023/11/09/multiple-tree-species-effective-carbon-sinks/)
11	Vitor Vannozzi Brito	hummingbirds	France	Disclaimer: More important than any of the questions raised by VCS regarding monoculture, it is paramount to define what a non-native monoculture is. Currently, the VCS Program Definitions, v4.4 defines it as "a crop or a population of a single species". This definition is very generalist and brings two questions: - It is important to define non-native monocultures. If we plant one row of native species every 100 rows of non-native species, would this be considered a non-native monoculture? How do you define the threshold of monoculture within a plot and within the project? - How do we deal with mixed non-native forest plantations? Let's think of an example in which we plant patches of the following exotic species in South America Eucalyptus grandis, Eucalyptus urophylla, Acacia mangium, Pinus caribaea and Acacia auriculiformis. If we read the methodology, it won't be considered as a monoculture according to the definition. However, its effect on local biodiversity would still be similar to a single non-native species monoculture. Based on these 2 points, we propose: - Having an approach at project-level. A certain percentage of the project area (in our proposal 50%) should be focused on the use of native species. Imagine a 10,000-ha project area. If we decide to plant a 5,000-ha patch of Eucalyptus and dedicate 5,000-ha for native restoration, it should be fine. Another possibility would be having 10,000 ha of mixed plantations, using 1 row of Eucalyptus and 1 row of native species, for example. - By suggesting this first approach, the whole discussion would not be about non-native monocultures, but about the use of non-native species. The methodology should determine that 50% of the project area should be focused on the establishment of native species, no matter in which setting. This is particularly important because it prevents project developers from cheating the system by planting 2 exotic species (e.g., Eucalyptus grandis and E. urophylla) and claiming it is not a monoculture. Now answerting to question number 1: Yes, non-native monocultures should be considered eligible for generating carbon credits, but only in the case that they fit some pre-requirements as proposed in the current draft. First, the species to be planted should not be invasive or harmful to the native species of the area. Moreover, it would be advisable to implement a management strategy suitable for biodiversity by increasing variety of habitats for different plants and animals and aiming at minimizing/avoiding the

				use of pesticides and inorganic fertilizers. On top of that, it is very important that the projects are additional. For example, in areas where planting monocultures is a common practice in the region, the project should not be considered additional. hummingbirds' view on the topic is that planting non-native monocultures can be a way to decrease pressure from the native forests in terms of wood production, while creating a revenue stream for local communities when carried out properly. When involving local communities in the projects, there is a huge positive impact in terms of supporting the creation of jobs and building capacity in the areas.
12	Guy Pinjuv	Pachama	United States	Planting non-native monocultures should not be considered an eligible activity for generating carbon credits. Non-native monocultures are likely to result in negative environmental impacts, may undermine the case for financial additionality, and may also pose threats to permanence. which are further described below: Pachama believes that climate mitigation using nature-based solutions in forests is an opportunity to take action on both the climate crisis and reduce threats to biodiversity. We believe that climate solutions that cause trade-offs by creating negative environmental impacts are avoidable and that many "shared solutions" that create beneficial outcomes for climate and nature should be prioritized for climate finance. So, our primary objection to non-native monocultures is that they often cause environmental harm, but we also observe that these projects often have questionable additionality and reduced permanence because they are usually subject to extensive timber harvest during and after crediting. Non-native monocultures of commercial tree species are usually planted in a carbon project to generate wood products and associated revenue during and after the crediting period. Such an activity is likely to be profitable without carbon finance for project implementation, and thus may not pass requirements for financial additionality in many VCS methodologies and tools including VT0001 Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities. Further, non-native monocultures might also disrupt local ecosystems by outcompeting native species, altering soil composition and water cycling, and affecting biodiversity. Especially when monocultures replace native vegetation they also lead directly to habitat loss. Some non-native species are also invasive, spreading beyond the intended area and causing ecological damage. Monocultures, especially non-native ones, also lack resilience against pests, diseases, and changing environmental

				conditions, leading to risk of reversal. Non-native commercial plantations also threaten the permanence of the credits generated because they tend to be harvested for wood products after the crediting period. While there could be exceptional situations where these adverse consequences may not manifest, establishing specific acceptance thresholds for each of these scenarios can be subjective and could create opportunities for manipulating methodologies. From the standpoint of project development and audit simplicity, it is more practical to prohibit these monocultures entirely due to the potential for adverse impacts.
13	Otto Beukes	ClimatePartner Impact GmbH	Germany	Non-native monocultures should be allowed under the VCS program conditionally. Many non-native species are suitable for alternate and sustainable land-use and provide substantial natural resources not accessible through the use of indigenous/endemic species or traditional land-use practices. Some examples of conditions that may be applicable should include for example: 1. The species is a recorded, naturalized species under a regional/national registry. 2. The species is non-invasive, substantiated by peer-reviewed literature locally or under sympatric biogeographic climatic conditions. 3. The species does not pose a threat to native ecosystems or biodiversity. 4. The species has demonstrated positive ecological impacts, such as soil improvement or erosion control. 5. The species has economic value or contributes to local livelihoods. 6. The species is managed sustainably to prevent negative consequences. 7. The activity promotes the conservation of proximal intact ecosystems or elsewhere. 8. Native species restoration is prohibitive due to financial, ecological or knowledge-based factors.
14	Marcelo Schmid	Arvor Business Advisory	Brazil	Talking about Brazil, yes, indeed. Non-native monocultures are known as a sustainable activity as our legislation prevents native forest deforestation to introduce monoculture, besides the fact that 80% of the non-native monocultures in Brazil are FSC and PEFC certified. Non-native monoculture can be used as an inteligent tool to restore degraded lands and keep the carbon fixed for decades, as our species rotation cicle is shorter than norther emisphere, however, we replant several times after clear cutting, keeping the a permanent carbon stock in the vegetation.

15	ANONYMOUS #6	N/A	N/A	I would say yes. There are 3 reasons why I say yes. No:1. Pulp and paper and Plywood wood industries in developing countries such as India are depend on the non native or erstwhile introduced species only. They are the massive planters and contributing more than 10 % expansion of forest in India. We don't have any alternative species which are ready to replace these highly productive, fast growing and easy processing species in hand. these fast growing species are sequest more carbon than the natives, slow growing species . There should be a clear vision of research on natives species which are eligible to suitable for paper and plywood industrial processing. To be honest, no commercial native species which has acceptance of both corporate and farmer are available except bamboos. No: 2. These corporate are act as a good market for the farmer who get benefitted immediately and sale amount credited to their bank accounts. And more over, if the agreement or consent for the carbon benefits are clearly mentioned about their shares, it will be major opening for the farming community get benefited from the carbon credit instead the corporate consume the entire chunk of the monitorial benefits. Because of this additional income from the carbon benefit, farmers will willing to extent their plantation areas rather than keeping as wastelands. No:3, mono culture is prevalent in the waste land areas where no agricultural activities are viable. The above said companies are approaching the famer with with few benefits such as seedlings at free or nominal price, monitoring frequently, support at the time of pest and disease incidences, IPM, buy back the plantation with pre agreed terms. This will be get affected if the carbon credit is stopped. Moreover the species such as Eucalyptus, Causarina, Subabul are introduced to india almost 200 years back and well adapted to the climatic condition of the country. Avoiding this from carbon credit will be strong blow on the farming community. Fix the rule and requirements strong and have a trail and error methods to identify the real time issues and finalize ideas.
16	Richard Zell Donovan	n/a - independent	USA (Vermont)	Yes. First, dnder the circumstances you articulate in the draft. Second, only when approvable through FSC SFM certification at the forest management unit level.
17	Danny Torres	Saltus	Colombia	Yes, first of all, in nature, the native or non-native character does not exist, the presence of a species in a given site is a combination of chance and adaptation. On the other hand, monocultures should be elegible, but limited in size (respect the area of the watershed in which it is implemented)
18	Jacob Penner	The Nature Conservancy	United States	In accordance with the tenets and principles of Natural Climate Solutions (publication in progress), TNC believes that non-native monocultures should only be an eligible activity for generating carbon credits under specific circumstances that ensure there is no associated negative ecosystem impact. Any project activity that seeks to convert native ecosystems (forest, grassland, or wetland) to non-

				native monocultures should not be eligible. Any project activity that seeks to convert native monocultures to non-native monocultures should not be eligible. The planting of non-native monocultures should only be an eligible project activity when the planting occurs on land that was previously under natural forest cover where the planting of native trees is proven to be infeasible. Further safeguards should be considered to ensure that any non-native species planted in monoculture are not invasive nor expected to negatively impact biodiversity (via competition, hybridization with native species, etc.) and human safety (increased wildfire risk) in the project area.
19	ANONYMOUS #7	N/A	N/A	Non-native monocultures should be only eligible activity for generating carbon credits when the project activities are implemented by small landowners due to the following risks: Additionality: When non-native monoculture is planted to be harvested for commercial purposes and the project proponent is a big timber/paper/pulp company, it is challenging to demonstrate that the activity would not have occurred in the absence of the carbon market's incentive when the main activity of the company is the plantation and harvest of such monoculture. Property rights: Land rights can be affected by projects owned by a timber/paper/pulp company that buys or leases the community's private or public lands. Ecosystem health: Sometimes contradictory situations occur when some non-native commercial species are not included in local or regional invasive species registries due to economic interests. However, there exists local information that gives evidence to consider non-native species presenting a high risk of invasion and danger to the maintenance of the biodiversity and ecosystem functionality, and there exists local or regional legislation that recommends or prohibits using those non-native species in protected areas. When the project is owned or implemented by small landowners, these risks are minimized, and then the activity could be considered for generating carbon projects but under a separate ARR category. These plantations should be considered as something similar to a crop.
20	ANONYMOUS #8	N/A	N/A	Yes. The reason for this is that a prohibition of non-native monocultures will greatly decrease investments in, and subsequently, areas of afforestation projects. Non-native tree species are globally produced for wood and pulp industry which decreases the risk in a carbon project. It is understood that there needs to be an additionally within a carbon project, but total

				absence of possibility of sales of wood grown in the project would add too much risk both for the investor but also for the credit buyer. An investor is incentivized by future wood sales to keep the trees healthy, growing and alive, and that the planting operation is successful, rather than just selling the carbon credits and perhaps not fulfilling the rest of their obligations. Many native tree species are not used industrially, and therefore there is generally speaking, limited market demand for wood from these species. Current knowledge about growth patterns of the many native tree species is relatively low. The science of forest management has mostly focused on commercial tree species which are very well described. There are growth models and plenty of research to support growth and carbon sequestration for these species. Unfortunately, this is not yet the case for many native tree species. It is therefore likely that the assumptions and projections used in such carbon projects are likely to be wrong. Moreover, since there is little market demand for the native-tree species, there is very little plant material available to allow for large-scale afforestation projects world-wide (which is what the world needs to sequester large amounts of carbon).
21	Lucio Pedroni	Carbon Decisions International (CDI)	Colombia	Yes, non-native monocultures should definitively be eligible for generating carbon credits. Philosophical justification: a. As a species, we grow introduced (i.e., non-native) crops in large-scale monocultures because we need to feed a growing human population, reduce food costs, and build up food reserves to confront famines and humanitarian crises as efficiently as possible. We invented monocultures for good reasons: humanity cannot feed itself without them, and too many people would not be able to afford the costs of the food they need to survive if it were not grown in monocultures. b. Due to human activities, the concentration of CO2 in the atmosphere is increasing rapidly, reaching a level that has never been as high as today since our species appeared on planet Earth. For our own survival and welfare, we must stop and reverse this trend by all means at our disposal. Monocultures of non-native trees can be an efficient and effective way to remove CO2 from the atmosphere and they can be established and managed without causing any discernible harm to biodiversity, the environment, and local livelihoods.

				c. Mankind cannot solve its problems without monocultures. By adopting meaningful safeguards and adequate management practices, monospecific forest plantations can make important contributions to climate change mitigation and many other sustainable development goals and, if prudently established and adequately managed, they can deliver environmental, biodiversity, and socio-economic benefits. Practical justification: a. We must remove large amounts of CO2 from the atmosphere as quickly as possible. In many parts of the world, non-native monocultures of trees are the most efficient and effective way to achieve this goal. b. Without non-native monocultures, many ARR project activities do not meet the thresholds of a viable investment proposal and will not be carried out. Consequently, many opportunities for mitigation and sustainable development will be lost. Entire regions and countries may be excluded from contributing to climate change mitigation through ARR activities despite having great potential to do so if allowed to establish non-native monocultures. c. Typical ARR project activities have a crediting period of 30 years or more and a useful life that can and should exceed the crediting period by many decades and even centuries to ensure that their carbon benefits are durable. Over such long periods of time, species composition and areas devoted to monocultures will change several times, ideally causing the landscape to evolve towards more diversified and biodiverse forms of land use, rather than the other way around. In other words, ARR projects that start with large monospecific plantations for economic, technical and knowledge reasons can (and should) evolve towards more biodiverse projects without compromising the durability (or "permanence") of their already credited carbon benefits. d. Rather than limiting or banning monocultures, carbon standards should encourage low biodiversity projects to evolve into high biodiversity projects through verification/certification schemes that help achieve better prices for the VCUs when biodiversity (and other non-carbon benefits) are improving. Technical justification: a. Non-native tree species are not necessarily bad for the environment, biodiversity, and local livelihoods just because they are “non-native”. A person's passport, ethnicity and genes do not

				predetermine whether that individual is a good or bad human being. The same applies to trees and non-tree species: what needs to be analyzed is the human use of a species, not the species itself. b. Native species are not automatically good for the environment, biodiversity, and local livelihoods just because they are “native”. When planted in monoculture, native species can have negative allelopathic effects on other species, be hosts and vectors of pests and diseases that can spread to other species, and compete for water, nutrients, and light in the same way that non-native species do. Therefore, native monocultures are not necessarily risk-free, nor are they always much lower risk than non-native monocultures. c. Not necessarily because a species is introduced, it poses a risk to the ecosystem. It is crucial to clarify the distinction between introduced species and invasive species. These two concepts are often confused, leading to misunderstandings and the fear of using introduced species. d. Over time, species have developed various adaptations that make them more likely to thrive in the environmental conditions in which they evolved. When planted in large monocultures and managed to maximize productivity, that is, in environmental conditions controlled by man, both native and non-native species will have the opportunity to express certain adaptations much more than they do in the ecosystems where they thrive naturally. This will generate the desired effects of monoculture (high productivity) as well as unintended impacts (sometimes positive and sometimes negative) on the environment, biodiversity, and local livelihoods. These effects and impacts may become observable sooner when non-native species are used, because when non-native species are planted it is always for their superior productivity compared to the native ones. However, in the long term, there is no reason to believe that non-native monocultures are always or more frequently harmful than native monocultures. e. In places where environmental factors such as temperature, water, soil, and light become limiting factors for tree survival, fewer tree species can thrive naturally, and that is why in many parts of the world there are natural ecosystems dominated by a few or only one single species of tree. Therefore, monocultures are not inherently a bad choice, they may be the rational and appropriate choice in places where edaphic, climatic, and biotic factors limit the choice of species to a few. f. When land has been degraded, the original conditions that allowed native species to thrive may have been lost, making it extremely expensive or impossible to reintroduce native species through planting. Firstly, the limiting factors that were generated or enhanced by the degradation processes

				must be mitigated. In such circumstances, non-native species that have evolved in environmental conditions like those found on the degraded lands may thrive much better than the native ones, making them the only option that can make an ARR activity technically and financially viable. g. With proper management, planting non-native species on degraded lands, including establishing non-native monocultures, can help restore soil fertility, improve environmental conditions, and improve biodiversity compared to the baseline conditions. In this way, when soil and environmental conditions have improved sufficiently, the reintroduction of native species becomes possible. The reintroduction can occur spontaneously through natural regeneration, be enhanced by enrichment planting, or accelerated by direct planting after harvesting the non-native species initially planted. Therefore, planting non-native monocultures can help restore degraded landscapes and create the conditions that make the return of native species possible. This does not imply that areas that were initially planted with non-native monocultures should always be replanted with native species to be eligible for the generation of carbon credits. Where non-native species have a superior carbon removal performance and do not cause discernible harm to the environment, biodiversity and local livelihoods, replanting with native species should be an option, not a mandatory requirement. h. Monocultures offer many advantages in terms of productivity, management efficiency and cost savings. Although taking advantage of them is of vital importance to expand mitigation actions, it is also true that monocultures carry certain risks, such as the spread of pests and diseases. Monocultures, whether of native or introduced species, pose a potential risk due to the low genetic variability they exhibit. If the planted plants are clones, the risk is maximized because they can be vulnerable to certain pathogens or environmental conditions, which could jeopardize the entire crop. It is crucial to understand that it is not the monoculture of introduced species that represents a risk; it is the monoculture itself. Professional foresters are aware of this risk and if they take it on, it is mostly for economic and technical reasons, which does not mean that over the life of the project no one will take steps to mitigate the risk by developing more clones, diversifying the number of species planted, and other measures. In this context, it is important to remember that diversifying species often implies sacrifices in productivity, higher costs, loss of efficiency and, possibly, reversals of removals credited in past periods. Therefore, if ARR projects are to be developed at the scale required to provide a meaningful contribution to climate change mitigation without causing a proliferation of harmful large-scale monocultures, it is important that the carbon market adequately rewards projects that work with more species and fewer monocultures, without punishing ARR projects that adopt meaningful safeguards when establishing and managing monocultures.

				Therefore, the VCS Standard should not prohibit, limit, or restrict non-native monocultures, but rather establish meaningful and practicable safeguards that minimize the risks associated with monocultures in general (regardless of whether they are composed of native or non-native species) and develop verification/certification schemes and public education/communication campaigns that allow high biodiversity ARR project to achieve better prices for their VCUs than low-biodiversity ARR projects.
22	ANONYMOUS #9	N/A	N/A	Yes. Non-native monocultures offer significant potential to support VCS's stated aims to drive climate finance "toward activities that reduce and remove emissions, improve livelihoods, and protect nature." We believe that placing limitations on non-native species in ARR projects would not be based in science and would go against the aims of the VCS. At its core, the VCS program needs to ensure accurate accounting of the emissions reductions and carbon removals from climate mitigation activities, and there is no science-based reason to exclude entire classifications of species (native or non-native) or planting regimes (monoculture or otherwise). Non-native monocultures are a significant tool in our collective toolbox of climate solutions and also play an important role in the net-zero land use transition, ensuring the sustainable production of wood and fiber to meet global needs. We note there is an important distinction that not all ARR projects aim for restoration of native ecosystems; this is not a problem, but rather a benefit of having multiple mitigation tools we can deploy in climate action. Furthermore, carbon finance is essential in many ARR projects and removing it would significantly limit the expansion of wood and fiber resources from sustainably managed, planted forests – which the UN and FAO have determined are necessary to meet to land and climate goals – and may increase demand for exploitation of natural forest resources. There is an established track record of effective climate mitigation projects involving non-native monocultures. Such projects are often favored because of their additional benefits, such as ability to produce sustainable wood products and materials. An extensive body of science and research supports non-native monocultures through genetics, silviculture, and technical know-how that enhances forest productivity, which is directly correlated with carbon sequestration rates. Furthermore, non-native monocultures can contribute to land sparing that supports conservation in other places, such as native forest ecosystems. As with any climate mitigation strategy, non-native monoculture projects should be deployed with use of environmental safeguards. Fortunately, the science and body of practice around key commercial monocultures brings with it strong evidence to support science-backed best management practices. Well-managed non-native monocultures are not a threat to biodiversity or ecosystem resilience so long

				as (i) good management practices are followed, (ii) their utilization does not drive conversion of intact, native ecosystems, and (iii) only non-invasive species are utilized. The global community has developed robust tools to guide sustainable management, such as the Programme for Endorsement of Forest Certification (PEFC) and Forest Stewardship Council (FSC) certification, that address all three of these requirements through principles, criteria, and safeguards. These programs have demonstrated success in ARR projects that avoid negative impacts to threatened native ecosystems; avoid impacts on rare, threatened, or endangered species or habitats; mitigate against risks of invasive species; and ensure protection of hydrological functions. To support Verra in understanding how best management practices and existing global initiatives can support quality ARR projects, we encourage reference to the FSC, PEFC, and the IFC Performance Standards. These standards have been time-tested and deployed by a range of actors, subject to multi-stakeholder development, and demonstrate the ability to establish and manage non-native monocultures while producing a combination of environmental, social, and economic benefits. Notably, the VCS Standard already incudes criteria to ensure against adverse environmental impacts and which are implementable within ARR projects (3.19.25-28), regardless of whether a species is native or whether more than one species is planted. Limitations on non-native species in ARR projects would create important North-South equity concerns. Non-native species are planted extensively in the Global South, with planted forests being a well-documented part of the “forest transition” whereby developing economies and industries transition from natural forest exploitation to managed resources dedicated for timber and fiber production. Such planted forests, most often non-native due to commercial needs and the existence of vast bodies of research and development, are critical to sustainable development. Yet, in many cases the economics of planting new forest plantations remains challenging. Carbon finance is a tool that makes ARR more financially attractive, making projects feasible that otherwise would not be implemented. Excluding non-native monocultures from Verra methodologies would severely limit the Global South from accessing a significant portion of ARR climate finance and would place additional pressure on native forest resources. To repeat: the global consensus of multistakeholder, multi-decade processes to define sustainable forest management have concluded that well-managed, non-native monocultures are perfectly suitable for sustainable forest management. We are not aware of evidence indicating that non-native monocultures in and of themselves are likely to have significant negative ecosystem impacts, so long as good management practices are followed, their utilization does not drive conversion of intact native ecosystems, and only non-invasive species are used. We believe the burden of proof to demonstrate

				that non-native monocultures are in some way more detrimental than native monocultures has not been met.
23	Zoltan Kun	Great Lakes and Wetlands Association (Forest Defenders Alliance)	Hungary	Using non-native monocultures should not be eligible to generate carbon credit.. Justification: the biodiversity and climate crises are intertwined and cannot be separated. Scientific evidence proves that increasing naturalness of forests results in higher resilience to natural disturbances . Non-native monocultures not only harm local biodiversity, but - as they lack naturalness - they will also be more vulnerable to natural disturbances. Therefore carbon credits issued for non-native monocultures cannot guarantee the longevity of carbon stock while it would seriously harm biodiversity targets as well.
24	ANONYMOUS #10	N/A	N/A	Yes, provided it is done on lands previously deforested and taking into account all environmental and social safeguards. Plantation species are key to developing rural economies and are a critical part of the fight against deforestation. Carbon credits can make a significant difference to plantation developers and will allow developments to take place in geographic areas currently seen as too risky or uneconomic; often it is these areas that have been faced with significant levels of deforestation and are vulnerable to climate change. Whilst plantation developments are often based on monoculture it is important to note that on a landscape level those plantations are typically done in a mosaic pattern with significant set aside areas (10% minimum under FSC but often significantly more) for conservation purposes. FAO's Global Forest Sector outlook forecasts an increase in demand for industrial roundwood of 25-45% by the year 2050 compared to 2020 and an increase of 37% of primary processed wood products over the same period; without active plantation development this supply can only come from unsustainable sources. The costs associated with operating under a more environmentally and socially sustainable manner (e.g., overhead costs, opportunity costs, biodiversity protection and enhancement, livelihoods programs, certification audits) have never been routinely matched by an enhanced product value for certified timber. This competitive imbalance with operations that maximize ecosystem clearance and conversion to intensive monoculture plantations may be at least partially offset by carbon finance.

				Green Resources believes that allowing non-natives monocultures to qualify as carbon projects is a positive aspect provided all the necessary safeguards are in place.
25	ANONYMOUS #11	N/A	N/A	Yes, it should be. Humans have domesticated several species for food production, shelter, and energy production for millennia. These species have been selected for their productivity, superiority, resistance to pests, and ease of cultivation. Nearly all commercial species are cultivated outside their region of origin. They are the cornerstone of commercial endeavors and labels such as FSC and PEFC have demonstrated that exotic species can be cultivated in a sustainable manner. Making exotic species ineligible for accreditation means excluding sustainable (additional) commercial plantations. Long debates over the past several decades have demonstrated that sustainable production is the best approach to balancing the product needs of society and the responsible use of natural resources. Excluding sustainable exotic species plantations form eligibility for generating carbon credits, implies that forest carbon sequestration under Verra is only achievable through conservation. Verra should consider finding ways to better integrate their standards with established industries and foster mitigation initiatives, rather than excluding industries altogether based on prejudices or political pressure. Plantation forestry makes the best use of an individual site. Making up only 3% of the global forest area ((1) Food and Agriculture Organization of the United Nations (FAO)´s FRA 2020), it is estimated that plantation forests deliver 46% of the world's industrial roundwood ((2) Jürgensen/FAO et al 2014), alleviating the pressure and subsequently conserving natural and diverse ecosystems. Also, as forest plantations have high photosynthetic rates, carbon sequestration costs are lower than other less productive systems. It has been argued that forest plantations should be established using native species. This may be viable for permanent sequestration or native forest restoration. However, growing native species for wood production is uneconomic as it relies on many flawed assumptions such as unproven growth rates (at a fraction of plantation forest productivity), overly optimistic price expectations (like those of native mature timber), and thinly traded markets. The teak plantation industry, for example, remains a niche market (2-3 Mm3/yr) after 50 years in existence and its products are priced at a fraction of old growth forest timber. Thus, following the above rationale, we believe that native plantations when proven uneconomic, will be abandoned, not managed adequately and/or not replanted for future rotations. Several groups have opined that sequestration from commercial plantations does not meet the additionality criteria as these forests represent the ordinary course of business. It should be noted

				that where non-native monocultures are an eligible activity for generating carbon credits, areas that would otherwise be uneconomic for growing commercial timber will be planted, thereby contributing to the global effort of mitigating climate change. Investments will be made towards planting these marginal areas only if returns from selling timber to the forest products sector are complemented by returns from carbon markets. As agriculture displaces forestry and other less profitable activities, timber products must travel longer distances to consumption points. Infrastructure is poor and logistic costs account for 5-10x the stumpage margin received by the forest owner. Fringe plantation forests are additional and can only happen with carbon credit incentives. The way to make sure that plantation forests are additional is to strengthen the additionality criteria for new plantations. An enhanced additionality standard should provide more structure, standardization, and scientific backing for WACC calculations, cost, logistic and product model inputs. Verra and some rating agencies would benefit from a clearer understanding of forest industry thresholds, costs, and key variables. (1) Food and Agriculture Organization of the United Nations'(FAO) Global Forest Resource Assessment (FRA) 2020. Available at https://www.fao.org/3/CA8753EN/CA8753EN.pdf (2)Jürgensen, C., Kollert, W. and Lebedys, A. 2014. FAO's Planted Forests and Trees Working Paper FP/48/E. Rome. Assessment of industrial roundwood production from planted forests. Available at http://www.fao.org/forestry/plantedforests/67508@170537/en
26	Spencer Meyer	BeZero Carbon	U.S.	We recommend that the development of the methodology focuses on the core parameters of credit quality and the fundamental attributes for which credits are traded as an asset (carbon). In regards to such an overarching question on the quality of project activities, for carbon credits to be delivered from additional projects with robust carbon accounting, we recommend that methodologies require projects to stipulate whether their project is associated with native or non-native species, and whether there is an association between their chosen non-native monocultures and commercial plantation because of how this may affect additionality and non-permanence as discussed below. Typically, species used in non-native monocultures are also commercial species, which may be planted for harvesting. Whilst the impact of this on carbon accounting is considered, we recommend that projects provide disclosure on business-as-usual practices related to commercial activities. For example, we recommend disclosure around potential for timber revenues, standardised financial analysis, and harvest plans that may confer non-permanence risks in the public domain. Furthermore, we would suggest that it may also be beneficial to identify and report commonly planted non-native species which may have negative ecological leakage impacts, such as Eucalyptus which can have

				greater water demands, to ensure that planting of these species (whether they're native or non-native) is appropriate. We also recommend that projects make publicly available their risk assessments which estimate the risk of diseases and pests and how these may differentially impact monoculture plantations.
27	ANONYMOUS #12	N/A	N/A	Yes. Non-native monocultures represent a significant tool in carbon sequestration and should not be excluded entirely. In some cases, these afforestation works meet a growing need for timber within the local community and can reduce leakage issues with a sustainable timber resource within the ARR project. It is our opinion that rather than focusing on financial additionality, non-native monocultures should deliver significant social and economic benefits, above and beyond what is required for pure native afforestation projects, to be suitable for carbon credits. Non-native monocultures may only take place on land which is classed as degraded or intensive agriculture areas and where this area plays an ecological insignificant role within the wider ecoregion. Preference should first be given to native species if they can be found to perform the same monocultural economic and social role as the non-native choice. If after the commercial, technical, and agronomical circumstances have been considered and there is no suitable native species, we believe that the selected non-native species must be shown to not present a high risk to biodiversity, to reduce risks to biodiversity the project proponent must check the "invasiveness potential" of the non-native species used. Also, project must understand and manage the reproduction cycle of the species and assess and mitigate against any potential impacts to local biodiversity and native population, impacts on water extraction and soil acidification.
28	Jeremy Kaufman	Propagate Group PBC	United States	Yes. Using non-native monocultures, with specific conditions, should be eligible. Especially in historically intensive agricultural settings. We are in support of the proposed changes and request a specific set of definitions and conditions to clarify how agricultural land can qualify for ARR and WRC projects that ensures a fair balance between decreasing environmental risks, decreasing poor use of gamification while also ensuring farms can implement carbon removal activities in historically agricultural landscapes, which are in large part already non-native monocultures. If you think about the set of options farmers have, they are looking for what works best for their land that can earn them an ongoing income. They have to weigh their opportunity cost of not continuing in corn or soy or hay. Across most of the US, native and non-monoculture based ARR options can't compete with commodity production economics and that is in large part due to the lack of an economic case for converting farmland to non-monoculture ARR projects, native or non-native. There are however options that do make sense for farmers, such as switching from corn & soy to something

				like European hazelnuts or Chinese chestnuts. Ideally with ground covers and ideally with some biodiversity added, but in most cases farmers would rather just focus on the crop itself. These types of switches are not economically feasible for most farms due to the cost of conversion and would be greatly incentivized by inclusion into ARR methodologies. It cannot be understated that the gain in carbon pools of these non-native monocultures would be much greater than the continuation of: soy, corn, or hay. Carbon inclusion of non-native monocultures on solely current and historically former agricultural land would enable upfront capital for the projects when there is a big gap in revenues before those trees mature and produce a crop on which farmer livelihoods depend. Non-native monocultures should absolutely be excluded from introduction into recent history (last 10 years) forested environments and protected lands. A rainforest that was recently deforested and then planted to non-native monoculture plantation should obviously not qualify. That should not be the case when conducting ARR on agricultural land that has historically been ag land for over 10 years and for all intents-and-purposes would remain ag land if not for an attractive non-native monoculture that has carbon benefits. All species systems should be available to farmers in these contexts, assuming they meet other ecological risk provisions as laid out in sections 3.19.25 - 3.19.28. These provisions already protect against non-native plantings that pose a true environmental risk. Additionally there should be refinements for the definitions around what a monoculture is and what it is not to ensure clarity. For tree plantings that maintain a year round permanent ground cover under the tree canopy of a diverse set of grasses, forbes, and legumes, there is somewhat less clarity. This by definition would change the system from being a monoculture as compared to a conventional soy crop or an almond crop with bare ground. A mix of grasses, Forbes and legumes would ensure lesser adverse effects such as soil erosion while providing floral biodiversity to the projects. On our projects, diverse grass & forbes mix covers >80% of the basal area of the farms footprint and is established from the beginning of planting. A 50% minimum of the basal area covered by plants year round could be a good threshold to differentiate between farms that have bare-ground and 1 species of tree and those that manage for a more diverse understory. Monitoring basal area coverage by grasses or shrubs is not a significant addition to sampling. Things like corrective action could be allowed to meet compliance as ground cover is able to be re-established through seeding the ground, and/or pruning a closed canopy for light to reach the understory to ensure projects don't fall out of compliance.
29	ANONYMOUS #13	N/A	N/A	Yes. Non-native monocultures offer significant potential to support VCS's stated aims to drive climate finance "toward activities that reduce and remove emissions, improve livelihoods, and protect nature." We believe that placing limitations on non-native species in ARR projects would not be based in

				science and would go against the aims of the VCS. At its core, the VCS program needs to ensure accurate accounting of the emissions reductions and carbon removals from climate mitigation activities, and there is no science-based reason to exclude entire classifications of species (native or non-native) or planting regimes (monoculture or otherwise). Non-native monocultures are a significant tool in our collective toolbox of climate solutions and also play an important role in the net-zero land use transition, ensuring the sustainable production of wood and fiber to meet global needs. We note there is an important distinction that not all ARR projects aim for restoration of native ecosystems; this is not a problem, but rather a benefit of having multiple mitigation tools we can deploy in climate action. Furthermore, carbon finance is essential in many ARR projects and removing it would significantly limit the expansion of wood and fiber resources from sustainably managed, planted forests – which the UN and FAO have determined are necessary to meet to land and climate goals – and may increase demand for exploitation of natural forest resources. There is an established track record of effective climate mitigation projects involving non-native monocultures. Such projects are often favored because of their additional benefits, such as ability to produce sustainable wood products and materials. An extensive body of science and research supports non-native monocultures through genetics, silviculture, and technical know-how that enhances forest productivity, which is directly correlated with carbon sequestration rates. Furthermore, non-native monocultures can contribute to land sparing that supports conservation in other places, such as native forest ecosystems. As with any climate mitigation strategy, non-native monoculture projects should be deployed with use of environmental safeguards. Fortunately, the science and body of practice around key commercial monocultures brings with it strong evidence to support science-backed best management practices. Well-managed non-native monocultures are not a threat to biodiversity or ecosystem resilience so long as (i) good management practices are followed, (ii) their utilization does not drive conversion of intact, native ecosystems, and (iii) only non-invasive species are utilized. The global community has developed robust tools to guide sustainable management, such as the Programme for Endorsement of Forest Certification (PEFC) and Forest Stewardship Council (FSC) certification, that address all three of these requirements through principles, criteria, and safeguards. These programs have demonstrated success in ARR projects that avoid negative impacts to threatened native ecosystems; avoid impacts on rare, threatened, or endangered species or habitats; mitigate against risks of invasive species; and ensure protection of hydrological functions. To support Verra in understanding how best management practices and existing global initiatives can support

				quality ARR projects, we encourage reference to the FSC, PEFC, and the IFC Performance Standards. These standards have been time-tested and deployed by a range of actors, subject to multi-stakeholder development, and demonstrate the ability to establish and manage non-native monocultures while producing a combination of environmental, social, and economic benefits. Notably, the VCS Standard already incudes criteria to ensure against adverse environmental impacts and which are implementable within ARR projects (3.19.25-28), regardless of whether a species is native or whether more than one species is planted. Limitations on non-native species in ARR projects would create important North-South equity concerns. Non-native species are planted extensively in the Global South, with planted forests being a well-documented part of the "forest transition" whereby developing economies and industries transition from natural forest exploitation to managed resources dedicated for timber and fiber production. Such planted forests, most often non-native due to commercial needs and the existence of vast bodies of research and development, are critical to sustainable development. Yet, in many cases the economics of planting new forest plantations remains challenging. Carbon finance is a tool that makes ARR more financially attractive, making projects feasible that otherwise would not be implemented. Excluding non-native monocultures from Verra methodologies would severely limit the Global South from accessing a significant portion of ARR climate finance and would place additional pressure on native forest resources. To repeat: the global consensus of multistakeholder, multi-decade processes to define sustainable forest management have concluded that well-managed, non-native monocultures are perfectly suitable for sustainable forest management. We are not aware of evidence indicating that non-native monocultures in and of themselves are likely to have significant negative ecosystem impacts, so long as good management practices are followed, their utilization does not drive conversion of intact native ecosystems, and only non-invasive species are used. We believe the burden of proof to demonstrate that non-native monocultures are in some way more detrimental than native monocultures has not been met.
30	Cyril Melikov	EP Carbon	United States of America	EP Carbon advocates for the inclusion of non-native monocultures as an eligible activity for generating carbon credits under the VCS standard while additional research enabling the broader establishment of native species continues to advance. In addition to the arguments listed under section 2.2 Proposal of this Public Consultation document, with which we are aligned, we believe that introducing non-native monocultures provides an additional avenue to sequester carbon in the short-term, especially where planting native species may not be feasible. While their contribution might be modest and unsustainable in the long term due to their reduced resilience to disturbances compared to native or

				mixed plantations, they do present some immediate benefits. These include more immediate responses to addressing climate change, addressing pressing needs for fuel and fiber, and alleviating pressure on beleaguered native forests, particularly in the context of developing economies. While non-native monoculture is by no means the ideal activity, we believe the risks of climate change are sufficient to explore utilizing all available tools to mitigate it. Similarly, these activities also have the potential to address related and underlying development issues that are driving GHG emissions along with unsustainable land uses. Critics often dismiss non-native monocultures as "green deserts", but this ignores the landscapes in which these activities are often implemented. In fact, these plantations could function as gateways towards building vegetation corridors in degraded landscapes, when they are effectively and strategically combined with native species restoration, which enhances local fauna while offering diverse advantages beyond carbon sequestration (Lugo, 1997; Paviolo et al., 2018). Furthermore, when managed effectively, such as through the incorporation of nitrogen-fixing species as companion or fertilizer crops, non-native monocultures have the potential to yield significant biodiversity advantages alongside carbon gains (Feng et al., 2022; Liu et al., 2018; Melikov et al., 2023; Paquette & Messier, 2011). These monocultures could serve as a positive alternative land use for degraded lands where restoration using native species is not feasible or viable in the short-term. Nevertheless, recognizing the potential negative impacts of expansion of non-native monocultures, EP Carbon advocates for their inclusion as eligible activities under the VCS standard only if the following conditions and safeguards are met. First, we believe that the project proponent must demonstrate that mixed and monotypic stands of native species have been thoroughly considered for the planting activities and comprehensively detail the reasons for excluding them from the afforestation/reforestation plans. Additionally, we assert that non-native monocultures should not be established on steep slopes, near riparian areas, or in proximity to areas mentioned in VCS requirements 3.19.26, as allowing so would likely negatively impact local biodiversity and ecosystem integrity/stability. Monitoring requirements should also consider off-site monitoring for invasiveness, potentially using a distance-based buffer, when such characteristics are not conclusively known and easily demonstrated. Moreover, ARR is too often blind to off-site biodiversity threats immediately around the eligible ARR area. This could be mitigated by additional safeguards that require that pre-existing native habitats within the operational control of the proponent must be conserved and monitored, but without quantifying any avoided emissions from this activity unless they are part of parallel REDD project design. Finally, we propose that non-native monocultures could be eligible for generating carbon credits if their establishment fosters diversification of livelihoods in the area, such

				as foraging, agroforestry systems (silvopasture), and honey production. In conclusion, while EP Carbon advocates for the inclusion of non-native monocultures as an eligible activity, with appropriate safeguards, under the VCS, we also want to stress the crucial need for additional research and improved compilations of existing information regarding the silviculture of native species. Verra should consider adding in a requirement to demonstrate that the project proponent has explored alternative activities focused on native restoration and that non-native monoculture is a last-resort option. It may also be reasonable to add risk factors in the non-permanence risk report to penalize the lack of resiliency of these systems, particularly in adaptation to climate change. These adjustments could ensure that native species could be prioritized in the longer term and minimize the concern that climate finance is exacerbating threats to native biodiversity. References: Feng, Y., Schmid, B., Loreau, M., Forrester, D. I., Fei, S., Zhu, J., Tang, Z., Zhu, J., Hong, P., Ji, C., Shi, Y., Su, H., Xiong, X., Xiao, J., Wang, S., & Fang, J. (2022). Multispecies forest plantations outyield monocultures across a broad range of conditions. Science, 376(6595), 865–868. https://doi.org/10.1126/science.abm6363 Liu, C. L. C., Kuchma, O., & Krutovsky, K. V. (2018). Mixed-species versus monocultures in plantation forestry: Development, benefits, ecosystem services and perspectives for the future. Global Ecology and Conservation, 15, e00419. https://doi.org/10.1016/j.gecco.2018.e00419 Liu, X., Trogisch, S., He, J.-S., Niklaus, P. A., Bruelheide, H., Tang, Z., Erfmeier, A., Scherer-Lorenzen, M., Pietsch, K. A., Yang, B., Kühn, P., Scholten, T., Huang, Y., Wang, C., Staab, M., Leppert, K. N., Wirth, C., Schmid, B., & Ma, K. (2018). Tree species richness increases ecosystem carbon storage in subtropical forests. Proceedings of the Royal Society B: Biological Sciences, 285(1885), 20181240. https://doi.org/10.1098/rspb.2018.1240 Lugo, A. E. (1997). The apparent paradox of reestablishing species richness on degraded lands with tree monocultures. Forest Ecology and Management, 99(1), 9–19. https://doi.org/10.1016/S0378-1127(97)00191-6 Melikov, C. H., Bukoski, J. J., Cook-Patton, S. C., Ban, H., Chen, J. L., & Potts, M. D. (2023). Quantifying the Effect Size of Management Actions on Aboveground Carbon Stocks in Forest Plantations. Current Forestry Reports, 9(3), 131–148. https://doi.org/10.1007/s40725-023-00182-5 Paquette, A., & Messier, C. (2011). The effect of biodiversity on tree productivity: From temperate to boreal forests. Global Ecology and Biogeography, 20(1), 170–180. https://doi.org/10.1111/j.1466-8238.2010.00592.x Paviolo, A., Cruz, P., Iezzi, M. E., Martínez Pardo, J., Varela, D., De Angelo, C., Benito, S., Vanderhoeven,

				E., Palacio, L., Quiroga, V., Arrabal, J. P., Costa, S., & Di Bitetti, M. S. (2018). Barriers, corridors or suitable habitat? Effect of monoculture tree plantations on the habitat use and prey availability for jaguars and pumas in the Atlantic Forest. Forest Ecology and Management, 430, 576–586. https://doi.org/10.1016/j.foreco.2018.08.029
31	CASSAGNE Morgan	FRM COMMITMENT	FRANCE	Above all, the question is how to fight climate change effectively, and which plants to use: a plant produces goods and services, and the most suitable plant must be chosen. Plantations of non-native species must remain an eligible activity (when they are additional and not carried out on cleared native ecosystem) as they are essential in the fight against global warming, particularly in Central Africa: • They can provide sustainable firewood and timber for local populations/ markets and therefore induce a reduction in pressure on surrounding natural forests. • There are no existing native species in Central Africa with the following combined required features: o Strong initial growth; o Ability to compete against weeds; o Very good wood properties for producing firewood/charcoal and timber (sawing, peeling); o Medium to high wood densities; o Soil improving ability (Fabaceae); o Easiness and low cost of producing seedlings or cuttings. We can also draw a parallel with the history of agriculture and the domestication of plants: for thousands of years when there was a production imperative (to feed man for example) and there are no sufficiently productive native species on which to rely, man introduced and selected non-native species. This is the case with wheat (introduced into Europe from the Middle East during the Neolithic period), potatoes (introduced into Europe from America in the 17th century), cassava (introduced into Africa from America via Europe in the 16th century) and so on. Most of the main varieties cropped for human and cattle food come from “exotic” species. These initially non-native species have today become the staple diet of the countries into which they were introduced. These non-native monocultures have provided colossal services to humanity and should not be dismissed on principle. In the context of the fight against climate change, the problem is absolutely comparable: naturally, there are not everywhere native species sufficiently productive and with the required features to respond to current climate challenges.

				Most natural boreal and temperate forests are based on less than 5 forest species (even just 1 or 2 species in many cases). ARR projects must be defined on the scale of a multifunctional territory including: • An area in which a sector will be dedicated to planting by integrating social and landscape dimensions: the number of species planted can be relatively small; and • An area dedicated to biodiversity conservation and restoration (based on existing natural forests or HVC areas to be protected and/or restored). What could therefore be considered a monoculture at the scale of the management unit (actually planted) is ultimately not a monoculture if we consider the entire territory managed by the project (i.e. the entire project area).
32	Laurent Valiergue	THE SHARED WOOD COMPANY	FRANCE	Yes, non-native monocultures should definitively be eligible for generating carbon credits. The question is misleading since it aggregates two different topics which should require two separate discussions. The Company is thus proposing to distinguish the use of non-native species from the modalities of their introduction. The concept of non-native species must be revisited today since some “native” species might not be suited anymore to their “natural” range tomorrow while other species have already naturally started migrating to areas with new favorable edaphic conditions, where they were not present so far, as a result of climate change. The move is ongoing, but it is slow, and the question is to decide on whether we want to accelerate it. As far as The Company is concerned, we do believe that the climate emergency requires such a push. In the context of climate change, adaptation is key and “non-native” species, as defined today, and as long as they do not cause undesired negative impacts, are essential to bolster future resilient forest stands able to cope with future climate hazards, while optimizing the carbon storage potential of living biomass. On the other hand, monocultures per se refer to the modalities of planting at a given point, but everyone knows that the future of a “population of a single species” at a given point is evolving in the medium run according to its forest management type. Selective cutting may e.g. favor natural regeneration of local species under the forest cover resulting in native and/or diverse restored forests in the long run.

				As a proposal, if the VCS Program intends to introduce some limitations for monocultures, it must consider their management type in the medium run, and, in all cases, accept monocultures as a vegetational succession towards more diverse stands. On the latter, it is of critical importance to recall that shade plants cannot be planted in full light. Forest environment must be restored first and that could require the establishment of a first vegetational succession made of heliophilous seedlings which may be non-native as needed.
33	Santiago Castelo	Carbosur	Uruguay	In our opinion, activities involving the use of non-native monocultures should be eligible for generating carbon credits when their benefits are proven, and they do not have adverse effects on climate, community, and biodiversity. This is particularly applicable when such monocultures are implemented on degraded soils or altered ecosystems. When supported by scientific studies and projects adhere to the conditions outlined in the VCS Standard, we see no reason why such plantations should be excluded from VCS projects. We find it challenging to comprehend the rationale behind imposing limitations on ARR projects based on the origin of the species used. This approach seems to lack a scientific basis and goes against the goals of the VCS. Essentially, the VCS program should ensure accurate accounting of emission reductions and carbon removals resulting from climate change mitigation activities. There is no scientifically justified reason to exclude entire species classifications (native or non-native) or planting regimes (monoculture or other) from these efforts. Specifically addressing monoculture plantations using non-native species, these play a vital role in mitigating the effects of climate change. The effective and economical carbon sequestration and storage capacity of these forests have been widely recognized as highly efficient strategies in combating climate change. Furthermore, forest plantations not only contribute to climate change mitigation but also serve as a source of sustainable materials such as wood, fiber, and fuel, supporting the transition to a green and sustainable bioeconomy. This, in turn, has a proven positive impact on the economy and employment in rural areas. Concurrently, this activity reduces the pressure on timber products from natural forests, indirectly contributing to deforestation reduction. It's crucial to highlight that sustainable forest management is fundamental to ensuring the responsible implementation of these plantations. Internationally recognized certifications, such as FSC and PEFC, establish stringent standards promoting sustainable practices and could serve as benchmarks to ensure forests are managed sustainably.

				Within the context of the 2030 Agenda, forest plantations are essential for achieving outlined goals by contributing to meeting Sustainable Development Goals. This is evident in project monitoring reports submitted to the VCS. In fact, commercial afforestation is included in projections to achieve these objectives. Additionally, within the United Nations Strategic Plan for Forests 2030 [1], advocating for a world where forests are "sustainably managed, contribute to sustainable development and provide economic, social, environmental and cultural benefits for present and future generations," these activities align perfectly with each of the 6 Global Forest Goals presented in the plan. Furthermore, we do not understand how the mere use of non-native species could disqualify a carbon sequestration project when its impact is well-known and extensively studied. When well-planned and guided, afforestation initiatives could effectively reverse biodiversity loss and enhance connectivity in high-value conservation areas [2]. It would be reasonable to scrutinize cases involving species with no prior history in the region or country, as this raises questions about potential benefits and adverse effects. When multiple benefits, absence of adverse effects, and sustainable management are proven through certifications, forest plantation projects demonstrating their additionality should be considered for carbon credits. The assertion that non-native monocultures are somehow more harmful than native monocultures has not been demonstrated. The global consensus arising from multi-stakeholder, multi-decade processes dedicated to defining sustainable forest management underscores that well-managed monocultures of exotic species are entirely compatible with sustainable practices. Currently, there is no evidence suggesting that non-native monocultures have a significantly negative impact on ecosystems, as long as appropriate management practices are followed, their use does not lead to the conversion of intact native ecosystems, and only non-invasive species are employed. The combination of climate change mitigation, economic development, and environmental sustainability makes the inclusion of these activities a highly valuable alternative in the fight against climate change. [1] https://www.un.org/esa/forests/wp-content/uploads/2018/12/UNSPF__brochure.pdf [2] https://www.profor.info/sites/profor.info/files/PROFOR%20Special%20Issue%2022-S1-IFR.pdf

34	ANONYMOUS #14	N/A	N/A	Yes. In many cases, the economic viability of establishing new forest plantations remains challenging in Peru. We are actively engaged in the development of the forestry sector, and investors express a preference for planting species that are well-known in the market. Unfortunately, native species in our context lack market provenance. Carbon finance emerges as a pivotal tool that enhances the financial attractiveness of Afforestation, Reforestation, and Revegetation (ARR) initiatives, rendering projects feasible that might otherwise not be implemented. Excluding non-native monocultures from Verra methodologies would severely constrain the Global South's access to a significant portion of ARR climate finance, imposing additional pressure on native forest resources.
35	Cliff Massey	Burapha Agroforestry Co. Ltd	Lao PDR	AGREE Carbon sequestration from non-native plantations, such as eucalyptus, are an important tool to control CO2 levels in the atmosphere and reduce the effects of global warming. Full stop. The cultivars may sequester over 10 Mg of C/ha/year as short rotation woody crops (Rockwood et al, 2022), Burapha's own plantations have been measured to remove approximately 243 CO2t/ha/y. From a business perspective, revenue from carbon credit sales is a critical income stream for the company. At the ARR project start date in 2016, Burapha had succeeded in planting 1910 hectares. This was done for the purpose of demonstrating the viability of tree planting for potential investors in a plywood mill, which was commissioned in 2021. There was no commercial offtake for timber in Laos at that time meaning the project had no alternative for selling its timber except through processing to plywood. This demonstrates that only operating a commercial timber plantation in Laos was not a realistic scenario. This means that the only alternative to explore was to combine the investment in tree plantations together with the investment in end-use of wood (plywood) and financial revenue from the sale of carbon credits. Ultimately in May 2023 Burapha, was able to generate 134, 440 VCU credits from 2776 ha which had two effects 1) the VCU revenue was put back into production to expand its plantations on degraded lands in central Laos, and provide much needed work for remote communities, and 2) raised the value of the company by proving its ability to generate credits thus brining much needed direct foreign investment into Laos.

36	ANONYMOUS #15	N/A	N/A	Yes, based on each project's specific criteria and merits. Creating renewable resources from productive, responsibly managed timber plantations is an important part of the toolbox for fighting climate change globally. Incentivizing rural smallholders to grow trees requires them to see multiple values in the trees, not only carbon, but also in the final mature poles or timber. It is risky for subsistence farmers to grow trees for only carbon, as they could be vulnerable if the carbon prices or markets do not materialize. For permanence, smallholders need to see tree growing as profitable over crops, requiring carbon and other revenue streams from their land.
37	ANONYMOUS #16	N/A	N/A	Yes. The purpose of carbon credits is carbon sequestration and not biodiversity (fringe benefit). Without commercial monoculture plantations projects will not be sustainable and not have social benefits for the surrounding communities.
38	Marlène Ramón Hernández	Carbon Market Watch	Belgium	Non-native monocultures should not be an eligible activity for generating carbon credits. They give rise to many issues: reversibility of stored carbon, overestimating carbon storage capacity, inadequate management, and liability for released carbon. More importantly, carbon credits offer perverse incentives for forestry projects, which should focus squarely on biodiversity and ecosystem restoration. Each of these points shall be examined in turn below. Firstly, monocultures lack resilience as they are more susceptible to biotic and abiotic disturbances. As such, they are prone to pests and diseases, can cause wildfires, and are sensitive to drought, changes in temperature, precipitation, and other natural catastrophes (which are further exacerbated by the worsening future climate conditions breakdown). This is inherent to monocultures as resilience is determined by ecosystem connectivity, heterogeneity, and diversity at multiple trophic levels (Oliver et al., 2015). Unfortunately, this vulnerability to perturbations encourages the release of carbon, which can also occur when plantations are harvested, as is typically done with non-native monoculture plantations like Eucalyptus and Pine. In this vein, it is essential to highlight that monoculture plantations, which are subsequently cut down for commercial purposes, cannot be subject to an offsetting scheme as little to no climate benefit will derive from these (Greenfield, 2023). Moreover, the instability and temporality of carbon storage in forestry projects make accounting for the net emissions practically impossible, further undermining environmental integrity. Secondly, the soil found in degraded land or land that has been subject to intensive farming in the past ten years will necessarily be depleted. Yet monocultures cause the soil to become acidic and prevent other vegetation from growing, only degrading the land further (Vu Ho, 2023; Word Forest,

				2020). Additionally, monocultures lack the potential to absorb as much carbon as polycultures. Studies have shown that carbon stocks are at least 70% higher in mixed forests than in monocultures (Aguirre-Gutiérrez et al. (2023) and that, in subtropical climates, species-rich forests of twenty tree species per hectare store three times more carbon than monocultures (Beugnon et al., 2022). The literature overwhelmingly supports higher above-ground carbon stocks in mixed species plantations (both native and non-native) than in monocultures (Warner et al.,2022). Liability for potential non-permanence is yet another challenge. Restoration takes time, meaning monitoring, reporting, and verification must be maintained for decades. Yet, projects may be abandoned, suffer from poor management, or see ownership changes, making liability difficult to establish and potentially attributing it to future unborn generations. One final point is that engaging in forestry projects with a carbon-focused mindset fails to address the twin climate and nature crises. Carbon crediting schemes incentivise restoration projects as short-term economic assets that sequester carbon at the lowest price. Yet restoration projects must be approached through a holistic lens that places climate and biodiversity objectives at its core while addressing the complex drivers of concrete environmental challenges. For instance, tree planting projects may not be appropriate in higher latitudes as their presence could alter the surface albedo, which is critical to the cooling of the planet. Ultimately, restoration activities must also acknowledge socio-ecological contexts, ensuring that local communities and dependent flora and fauna are not negatively impacted. Relevant considerations might be whether land, degraded through intensive agriculture, should revert to regenerative farming or agroforestry, as opposed to AFF or WRC activities so as to avoid potential land competition while supporting sustainable food production. Overall, there is a need for careful planning, communication with nearby communities, and a long-term commitment to land protection and management. Oliver, T.H. et al., (2015), Biodiversity and Resilience of Ecosystem Functions https://pubmed.ncbi.nlm.nih.gov/26437633/ Greenfield, P (2023), “Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis show” The Guardian shttps://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe

				Vu Ho, K. (2023), Non-native tree plantations are weak substitutes for near-natural forests regarding plant diversity and ecological value https://www.sciencedirect.com/science/article/pii/S0378112723000221; Word Forest (2020), Not all Tree Planting is Equal - https://www.wordforest.org/2020/09/04/not-all-tree-planting-is-equal/ Aguirre-Gutiérrez, J. et al. (2023), Valuing the functionality of tropical ecosystems beyond carbon https://www.cell.com/trends/ecology-evolution/fulltext/S0169-5347(23)00223-9#%20 Beugnon, R. et al. (2022), Diverse forests are cool: Promoting diverse forests to mitigate carbon emissions and climate change https://onlinelibrary.wiley.com/doi/epdf/10.1002/sae2.12005 Warner, E. et al. (2022), Higher aboveground carbon stocks in mixed-species planted forests than monocultures – A meta-analysis. bioRxiv, 2022-01. https://doi.org/10.1101/2022.01.17.476441
39	ANONYMOUS #17	N/A	N/A	Respira's position here is that non native monocultures - done well - are an important part of a holistic solution to meeting demands for timber whilst alleviating pressure from native forests. They can also be a credible climate solution which should not be ignored. The key, of course, is to ensure the projects are sited in the correct place, don't compete with food, don't lead to the eviction of local populations, don't drain water sources, don't lead to the conversion of native ecosystems and don't introduce invasive species which can escape from the plantation area. They also need to meet other key requirements of Verra's certification process (notably financial and common practice additionality which is particularly relevant for this project type). We believe that the social, biodiversity and water issues are all easily managed by responsible actors who need to follow this best practice to achieve FSC or other forest sustainability requirements anyway. The economics of these projects in the global south are difficult without carbon finance so we believe that a blanket exclusion does not make sense. We defer to the expert commentary provided by Forest Investment Associates (FIA) and BTG's Timberland Investment Group for more detailed responses which are very much in line with Respira's.
40	ANONYMOUS #18	N/A	N/A	Yes, especially for the restoration of degraded areas in the tropics, combined with native forests the use of non-native tree monocultures can provide additional income to local communities and also be a renewable source of firewood, especially in Africa. According to FAO data (FAOSTAT 2021) in 2019 the wood consumption in Africa was around 800 million m3 and almost half of this volume is for firewood coming from native forests. Therefore ongoing deforestation and forest degradation are happening in Africa to supply firewood to local

				communities living near the tropical native forests. In these areas, it is possible to do restoration projects in the degraded areas combining natural forest with non-native tree monocultures, that can provide renewable sources of firewood, with the establishment of for example eucalyptus or acacia plantations. The carbon credits can be generated from the natural forest restoration plus the additional carbon from the avoided deforestation of existing natural forests by the supply of firewood provided by the non-native tree plantations. One important aspect of the use of non-native tree monocultures is that the selected exotic species must be non-invasive, to avoid the introduction of a problem in the ecosystem that will cause harm in the future.
41	ANONYMOUS #19	N/A	N/A	Yes it should be included, but only when coupled with native ecosystem restoration as stipulated in the proposed amendments to the standard of 30% of the proposed project area. This will ensure that at least some native ecosystem restoration takes place that would have otherwise not happened. The monoculture plantation will cross subsidise this restoration. Also improve on the definition of a monoculture, provide a clear definition of “non-native monoculture” to make sure that the effect of this rule is in line with its intent. For example, would inclusion of a small percentage of other species avoid a “monoculture” label (e.g., 1-5% pine with 95-99% eucalyptus)? Would monoculture of overstory species (timber or tree crop) with planting of understory shrubs/herbaceous vegetation of a different species (even crops) be considered “non-native monoculture”? The lack of clarity in the definition is one concern raised during the original consultation that has not been addressed by the proposed revisions.
42	Shermila Weragoda	stx commodities b.v	Netherlands	Yes. The UN FAO estimates that 10 million hectares of forest are cut down each year, and several degraded lands take a significant time to reverse into the natural ecosystem. Although non-native monoculture does not offer all the ecological benefits that native mixed tree species do, it does benefit climate change and resource scarcity. The purpose of the non-monoculture plantations is to meet market demand for natural resources. One of the main problems when establishing plantations is that there is no monetary return during the initial stages until it generates revenue (Eg, fruits, latex, etc.) and allocates extra money for the project's other social and environmental benefits. However, as per the additionality requirement of the ARR methodology, it is recommended to conduct extensive verification of the financial additionality of such a project.

43	Shauna	The ForestLink	Italy	First of all - there is no clear definition on non-native monoculture or more simply, monoculture, and I don't think this word should be used without one. It is extremely negative connotations, and Verra would be wise to follow other best practice standards, and not use the word at all. But yes, there is a time and place for using non-native tree species to generate carbon credits, and sometimes this may be a single or few species. Using well researched, site-suited non-native tree species in a managed forest can support forest landscape restoration activities - be supporting soil structure, hydrological cycles and erosion protection. When integrated appropriately into the forest landscape (with areas of natural forest and other ecosystems), they have also been shown to support biodiversity improvement in previously degraded areas. They provide much needed fiber for various wood products, reducing pressure from vulnerable intact forest systems, and because they can be grown intensively, they can often produce more fiber than some native species configurations - which is extremely important given the rising population's increasing need for low-emission materials. It's not to say that non-native species should be used in every situation - it is highly nuanced, and should be assessed on a case-by-case basis. Relating to carbon credit generation - this is a relatively new, and extremely important piece of forest landscape restoration finance. In emerging markets, where deforestation and forest degradation are arguably suffering the most - there is a need to both restore forests and provide alternative wood fiber to prevent further degradation. This is not happening because there is no funding for it - public funding in these jurisdictions doesn't exist, and investors are often uncomfortable with the perceived risks of investing in early stage forest restoration in these markets. Carbon credit finance is providing a very crucial piece of early-stage finance that is supporting to restore forests for multiple values at scale and urgency that wouldn't be possible with only using native species.
44	ANONYMOUS #20	N/A	N/A	Yes, the non-native monocultures must be an eligible activity for generating carbon credits. The first point regarding the generation of carbon credits via reforestation in the non-native monoculture model is the great potential for removing carbon from the atmosphere that this type of project encourages, this is possible due to rapid forest growth, enhanced by knowledge technique available for these crops, combined with sustainable cultivation. There is still no other accessible technology that promotes the removal of carbon from the atmosphere, other than forest growth. It is important to highlight that projects of this type will not be an exception to the other eligibility criteria of the standard and their respective methodologies and that they must be by the principles of carbon credits: additionality; permanence; robust calculations for quantifying emissions reductions and removals; there is no double counting; effective governance; traceability; transparency; robust independent third-party validation and verification audit; benefits aimed at sustainable development

				(SDG) and safeguards and contribution to the transition to net zero. It is necessary to note that this type of reforestation can be done in a sustainable way, when appropriate management techniques are applied, such as the use of mosaics, these aspects can be confirmed both in the design of the project and in the monitoring stages, through environmental indicators. And social aspects described in the monitoring plan. From the point of view of the economic viability of carbon credit projects, specifically ARR projects, the majority of projects that propose the planting of only native species do not present economic viability, which discourages investment in this type of format, therefore a mix between planting trees in a monoculture format, with non-native and native species is necessary, the non-natives end up financing environmental restoration with the planting of native species. Without this model, restoration projects cannot achieve large-scale and thus do not have enough impact on combating climate change.
45	Tony Knowles	Cirrus	South Africa	Yes, under appropriate circumstances. Whereas the afforestation of indigenous ecosystems is certainly not desired, planting non-native monocultures in previously cultivated lands can provide carbon revenues and a source of fuelwood and timber to smallholders. In areas where the primary source of energy is charcoal and fuelwood, it can reduce pressure on indigenous forests and the time spent by parties collecting fuelwood. Care needs to be taken to insure it does not reduce food security or impact water services.
46	Thurstan Wright	SilviCarbon	Netherlands	Yes. There are a number of reasons why non-native monocultures should be an eligible activity for generating carbon credits. These include the following: • The IPCC suggests that 210 Giga tonnes of AFOLU CDR's are necessary to reach the Paris target of limiting global warming to 1.5C above pre-industrial levels. This cannot be achieved without carbon removal projects with non-native species because they are based on proven, bankable market practice and thus can mobilise the much-needed private sector finance. In many places in the world such projects still face large barriers for development. Carbon finance will be crucial to achieve the 210 Gigaton Target. • Modern production forestry plantations (that use non-native species) follow international standards and are an excellent fit in the landscape approach of combining productive landscape uses with restoration / conservation. Plus, they create many local jobs and economic development in rural areas which is crucial in the climate strategy of many developing countries. Thus, they meet the sustainable development objectives of developing countries while contributing to their Paris agreement targets; • The scalability of non-native production forests means that these types of carbon removal projects

				can generate high multiplier climate impacts after market barriers are reduced; • Too little information is available on native trees to make them a short-term alternative for plantations to land owners or investors. Commercial non-native tree species have been extensively studied by the science of silviculture which the potential return on investment in the underlying asset can be reliably forecasted. Downstream, the wood industry will only pay a premium for their timber if they can accurately rely on predictions of the use characteristics of the wood. Native species lack this information and it will take decades to develop sufficiently reliable information for native species (at least 20-30 years for a species). While this is important, waiting for this will not bring the world anywhere close to the 210 GtCO2 target; • Non-native industrial forestry plantations not only act as a carbon sink but also avoid emissions via the displacement of products. For example, wood-based products and bioenergy displace fossil-based alternatives, thereby reducing emissions. The additional supply of sustainable timber also reduces illegal logging of natural forests. This means that the climate benefits of production forests outweigh the climate benefit of protecting existing trees by a significant multiple;
47	ANONYMOUS #21	N/A	N/A	NO - No, in some cases exotic species develop invasive strategies or change bird dynamics as monoculture results in a particular nesting strategy. Climate change should not be used as an excuse to reduce biodiversity. Conservation strategies should be hand in hand. In my opinion, reforestation SHOULD include at least 20% mix of native species plantations to leave a patch of native species in perpetuity as a restoration activity.
48	ANONYMOUS #22	N/A	N/A	In terms of carbon credit generation, the inclusion of non-native monocultures should be considered due to their ability to efficiently capture carbon. This choice is supported by their higher productivity and wood quality compared to mixed crops or local species. This improvement in productivity within a shorter time significantly contributes to carbon capture, aligning with the goals of climate change mitigation.
49	ANONYMOUS #23	N/A	N/A	YES First, we would like to remind some key contextual factors: a) In 2001, FAO (Unasylva, 2001) estimated that plantation forest where producing 34% of the world industrial roundwood (here), of which 24% where produced with native species; b) Planted forest represent 7% of all planted forests in the world in 2020 (Source: FAO, Global Forest Resource Assessment 2020);

				c) Timber is a beautiful natural and renewable material, that will be a key component of the ongoing transition, generally in the construction sector, and more specifically in the energy sector in developing countries. In certain region of the world, non-native monoculture, whether it is for forestry or agriculture, have been a cause of massive deforestation, becoming a threat for ecosystems and biodiversity. While we acknowledge this situation, we believe that sufficient principles are in place to avoid carbon finance to be used in such situations (namely “no deforestation” and “no conversion of native ecosystems” rules) In the context of forestry mitigation, adaptation is crucial. Identifying species that can thrive in the anticipated changing climate is essential for the resilience and longevity of plantations. In certain situations, introducing non-native species into new ecosystems may be necessary for effective forest restoration. Additionally, in degraded areas with poor soil conditions, native species may struggle to recolonize and compete with invasive vegetation that has low carbon stocks. In these cases, considering non-native species is a viable option. In many geographies, there are actually no option to use native species in plantations, and R&D programs are not sufficiently advanced to allow to develop ARR projects based on such species. In this context, project should not be prohibited from using non-native species, while R&D program, that can require decades in this sector, make native species available for plantations. Monocultures aim to rapidly and efficiently produce standardized resources that are readily processed, such as charcoal or lumber. When these types of carbon sequestration activities align with the needs of local communities, they provide economic benefits in terms of employment and increased access to timber. They are particularly relevant in contexts where fuelwood and timber are harvested from natural forests with high carbon and biodiversity value, and monoculture projects present an alternative to these practices. In certain situations, implementing complex forestry practices can jeopardize permanence. If silvicultural plantation designs are too intricate or costly to follow, such as when thinning schedules are inconsistent, the likelihood of adherence decreases. In many cases, mixed species plantations models are not mature at all, increasing drastically the risk of non-permanence, while decreasing the economical viability, without bringing significant improvement for biodiversity values. Monocultures, on the other hand, offer a simpler design that enhances the chances of permanence by maximizing the adherence to management plans throughout the project's lifespan. For these reasons, we believe that non-native monocultures should be eligible for carbon credit generation.

				Key points: - Plantations forests (monocultures), whether they are native or non-native, are an essential Nature Based Solutions "tool" to tackle Climate Change by providing carbon sequestration, economic revenues, forest restoration opportunities to transition to more mixed ecosystems; - Monocultures can be adapted to local contexts and provide additional economic benefits to rural communities. Carbon finance is an essential tool to develop such projects, thus non-native monoculture should remain eligible into ARR methodologies, when of course it is demonstrated that the projects are additional; - Simpler monoculture designs can enhance the likelihood of permanence; - All the above points are acceptable if and only if the project of non-native plantations are clearly integrated in a landscape approach balancing the social, biodiversity, ecosystems restorations and economical values.
50	ANONYMOUS #24	N/A	N/A	Yes. Non-native monocultures have the potential to sequester large amounts of carbon and create positive impacts. Given the potential adverse environmental and social impacts, strong safeguards should be in place, like forest management certification schemes. Among other, requiring proper matching of used species and site conditions and genetic diversification, promoting mosaic approaches to avoid large continuous areas of age-even plantations, ensuring the protection of high value and sensitive sites and the restoration of native ecosystems, implementing early detection and monitoring systems. These aspects are already covered in the standard. Excluding non-native monocultures would exclude most commercial projects. These are important to reach scale, and commercial viability is necessary to ensure the sustainability and permanence of the achieved sequestration. Furthermore, institutional investors have not yet reached sufficient comfort levels to invest in commercial plantations in frontier markets, so these projects still face important barriers.
51	María Claudia Pittamiglio	Sociedad de Productores Forestales	Uruguay	Certainly. A monoculture non-native plantation generates various benefits, not only due to its significant and cost-effective carbon sequestration capacity, which helps mitigate atmospheric carbon levels and indirectly reduces deforestation-related emissions, but also because of its positive social and environmental impacts. And it is essential to recognize that a general negative impact from monoculture non-native afforestation with exotic species cannot be presumed. Understanding how a project can be disqualified from carbon sequestration solely based on the non-native status of species poses a challenge for us. Especially when, generally their positive impacts are well-documented and extensively studied.

				In addition to their contribution to mitigating climate change, it is crucial to emphasize that these projects serve as a source of sustainable materials such as wood, fiber and fuel, supporting the transition towards a green and sustainable bioeconomy. Notably, approximately 10% of Uruguay´s the country's electricity is generated from forest biomass, with the potential to reach 20% during peak demand periods (source: https://ceres.uy/index.php/estudios/informes_especiales). This dual role, both in advancing the principles of bioeconomy and aiding in the reduction of fossil fuel dependency, underscores the multifaceted significance of these projects within the broader sustainability framework. In Uruguay, a comprehensive legislative framework compels the forestry sector to produce in an environmentally and socially responsible manner. Moreover, over 80% of the country's forested area is certified under FSC and PEFC standards, ensuring adherence to sustainable management practices and principles (1) such as the obligation to "maintain, conserve, and/or restore ecosystem services and environmental values of the Management Unit, and avoid, repair, or mitigate negative environmental impact." For instance, any new forest plantation spanning 40 to 100 hectares must (2) undergo registration before planting with the Ministry of Environment in Uruguay. Plantations exceeding 100 hectares are required to undergo a prior environmental assessment (3) Among other stipulations, any monoculture and exotic species forest plantation must adhere to: [Specify the regulations or guidelines that must be followed]. • Plantation blocks cannot exceed 50 hectares, allowing for the establishment of biological corridors comprising grasslands and native forests. • Planting is restricted to specific soil types as defined by the country. In fact, only soils designated as forest priority are eligible, meaning that areas suitable for afforestation can be planted, at best, on 60% of the total land. The remaining portion must be kept free of plantations, underscoring the crucial and synergistic role of livestock farming in conjunction with afforestation. • Distances with neighboring fences, native forests, power lines, roads, and highways must be respected. • Waste management resulting from the use of chemical or biological products in forestry activities (among other sectors) is regulated by Decree 152/2013 (4) • A National Code of Good Forestry Practices serves as a tool for sustainable forest management, voluntarily adopted by the vast majority of the forestry sector. Regarding the hydrological cycle in forested sites, it has been determined that there are no negative impacts attributable to forests. In fact, forests lead to a reduced influx of water into the soil, resulting

				in decreased surface runoff. The root systems of trees create channels that enhance water infiltration into the soil, reducing the speed and volume of water flowing into rivers and streams during heavy rainfall. Consequently, this contributes to lower runoff and sheet erosion of the soil. It is true that afforestation entails a transformation of the landscape. This is why the sector is committed to demonstrating that the impact is positive in biodiversity terms too. In cases where there is a specific negative impact, goals and objectives are proposed to mitigate it. "...over the last two decades, the forestry sector has invested more than USD 3 million in over 1,000 monitoring and tracking studies of conservation areas. This aims to develop better strategies for biodiversity conservation and ecosystem functions. The forest sector in Uruguay is a pioneer in studying the diversity and abundance of birds and mammals, demonstrating that the total number of species has not decreased with the expansion of afforestation. Continuous monitoring and research have expanded knowledge about biodiversity and natural resources in forested areas, and efforts persist in finding improved strategies for conservation area management. This includes evaluating best management practices, primarily controlling invasive exotic species, livestock management, beekeeping, among others." (5) 1https://adria-balkan.fsc.org/en/forest-management/fsc-principles-and-criteria) 2 https://www.impo.com.uy/bases/decretos/405-2021 3 https://www.impo.com.uy/bases/decretos-reglamento/349-2005 4 https://www.impo.com.uy/bases/decretos/152-2013 5 https://ceres.uy/admin/uploads/slides/archivo_1699474632.pdf, pág 11
52	Thais Stoppe	Geonoma	Brazil	We believe that non-native monocultures should be eligible for generating carbon credits in the conditions proposed by Verra and provided that, for large areas, such monocultures are not harvested for commercial purposes. Also, we note that these conditions should only be applied to monocultures, meaning that non-native species may be used to facilitate restoration. In Brazil, for example, it is scientifically proven that eucalyptus is very beneficial to restoration, when combined with native species. For that reason, although this possibility is implicitly allowed, we propose the inclusion of explicit wording informing that non-native species may be used associated with native species for the purpose of restoration.
53	ANONYMOUS #25	N/A	N/A	Yes, if the project developer proves additionality and defines a clear baseline that evidences the new carbon stocks will contribute to GHG removals, Verra already has provisions to determine appropriate calculations, as long-term average application is considered.

54	ANONYMOUS #26	N/A	N/A	Yes. Monoculture non-native plantations can generate various benefits, not only due to its significant and cost-effective carbon sequestration capacity, which helps mitigate atmospheric carbon levels and indirectly reduces deforestation-related emissions, but also because of its positive social and environmental impacts. A general negative impact from monoculture non-native afforestation with exotic species should not be presumed. It is difficult to understand why a forest plantation project could be disqualified from carbon sequestration solely based on the non-native nature of the planted species. Especially when, generally their positive impacts are well-documented and extensively studied. In addition to their contribution to mitigating climate change, it is crucial to emphasize that these projects serve as a source of sustainable materials such as wood, fiber and fuel, supporting the transition towards a green and sustainable bioeconomy. Notably, approximately 10% of Uruguay´s the country's electricity is generated from forest biomass, with the potential to reach 20% during peak demand periods (source: https://ceres.uy/index.php/estudios/informes_especiales). This dual role, both in advancing the principles of bioeconomy and aiding in the reduction of fossil fuel dependency, underscores the multifaceted significance of these projects within the broader sustainability framework. In Uruguay, in which all forest plantations are “non-native monocultures“, a comprehensive legislative framework compels the forestry sector to produce in an environmentally and socially responsible manner. Moreover, over 80% of the country's forested area is certified under FSC and PEFC standards, ensuring adherence to sustainable management practices and principles such as the obligation to "maintain, conserve, and/or restore ecosystem services and environmental values of the Management Unit, and avoid, repair, or mitigate negative environmental impact." For instance, any new forest plantation spanning 40 to 100 hectares must undergo an environmental registration approved by the Ministry of Environment in Uruguay before planting. Plantations exceeding 100 hectares are required to obtain a prior environmental authorization by the Ministry of Environment . Among other stipulations, any forest plantation must comply with the following regulations: • Plantation blocks cannot exceed 50 hectares without firebreaks • Planting is restricted to specific soil types as defined by the country. In fact, only projects in which the majority of the soils are designated as forest priority are eligible • Distances with neighboring fences, native forests, power lines, roads, and highways must be respected. • Areas pre mapped by the Ministry of Environment as potentially having conservation priority must be carefully surveyed to ensure that the areas to be planted are not sensitive areas (if they are, they

				cannot be planted) • As a result of the above regulations, the plantable proportion per farm can reach at best 60-65%. The remaining portion is kept with native vegetation (mostly grasslands, but also native forests, wetlands, etc.) thus contributing significantly to biodiversity conservation. • A National Code of Good Forestry Practices serves as a tool for sustainable forest management, voluntarily adopted by the vast majority of the forestry sector. Regarding the hydrological cycle in forested sites, , forest plantations reduce water runoff through the soil surface, resulting in decreased soil erosion. The root systems of the trees create channels that enhance water infiltration into the soil, reducing the speed and volume of water flowing into rivers and streams during heavy rainfall, while maintaining a basal water flow for longer periods. Consequently, this contributes to lower runoff and sheet erosion of the soil and to minimize floods. In general, establishing forest plantations in Uruguay contributes to biodiversity conservation. In cases where there could be a specific negative impact, goals and objectives are proposed to its mitigation. "...over the last two decades, the forestry sector has invested more than USD 3 million in over 1,000 monitoring and tracking studies of conservation areas. This aims to develop better strategies for biodiversity conservation and ecosystem functions. The forest sector in Uruguay is a pioneer in studying the diversity and abundance of birds and mammals, demonstrating that the total number of species has not decreased with the expansion of afforestation. Continuous monitoring and research have expanded knowledge about biodiversity and natural resources in forested areas, and efforts persist in finding improved strategies for conservation area management. This includes evaluating best management practices, primarily controlling invasive exotic species, livestock management, beekeeping, among others." The foregoing elucidation unequivocally establishes that when the multiple benefits, absence of adverse effects, and sustainable management, endorsed through international certifications, can be substantiated, forest plantation projects should be deemed eligible for carbon credits, regardless of whether they are planted with a single exotic species. The amalgamation of climate change mitigation, economic development, and environmental sustainability renders the inclusion of these activities an exceedingly valuable alternative in the fight against climate change.
55	ANONYMOUS #27	N/A	N/A	We believe the definition of monocultures should be further detailed in the Standard. Forestry plantations that we have today involve several different species, so they can hardly be defined as monocultures. In our case we have at least 7 different species of Eucalyptus and 2 species of Pines, which in turn include different seed sources and materials, which implies great genetic diversity.

				If a project proponent establishes a forest based on native species and thereby achieves carbon credits as its main source of income, there is a risk that when carbon prices fall or when all the credits have been collected, the proponent will no longer have an incentive to maintain the forest. Whereas in multipurpose forest plantations, the diversity of income sources makes it attractive for the proponent to maintain the forest (and therefore the carbon) even in times of low carbon credit prices. We believe this makes the projects more sustainable. In addition, forests planted for timber/cellulose production have the advantage of requiring silvicultural activities during different stages and therefore generate more employment for local communities. In contrast, native forests with very long cycles (70-80 years) and with many species (many of which will not have a commercial use) generate less need for interventions and therefore less work at the local level. From the point of view of carbon fixed, the most desirable impact for the planet is that carbon is fixed quickly and that the new ecosystem is sustainable (environmentally and economically). The greater the volume of biomass generated per hectare per year, the greater the carbon sequestration from the atmosphere. The species selected by the companies for plantations are those with which forests can be established quickly (6 months to 2 years) and with certainty (high probability of success). While native forest plantations based on many species are difficult to establish and we only know if we have succeeded after a long period of time (5-10 years). In addition, with forest plantations, carbon sequestration is 5 times higher for a period of 20 years, which means that the areas that must be intervened to achieve the same volume of carbon are much smaller (and therefore the risk of environmental impact is reduced). Last, another aspect to take into account is the increase of carbon in soils, a variable that increases significantly in soils with forest plantations in Uruguay. Last, the need to plant species selected for a certain objective (sawn timber, debarked wood, cellulose, and biomass) lies in the fact that these species are able to generate a uniform product in a time frame that makes it economically viable. Man has been selecting species from nature in a process of many years with the objective of achieving homogeneity, predictability, resistance to diseases and greater production in all the products that are cultivated.

56	ANONYMOUS #28	N/A	N/A	Yes, the use of non-native monocultures should be an activity eligible to generate carbon credits because the conversion of degraded lands or previously used for intensive agriculture to reforestation projects with a single introduced species that have been developed to date have demonstrated climate, biodiversity, and social benefits. In addition, they have been a viable option in many cases to overcome challenges on degraded lands and in small-scale projects. Also, most of the commercial reforestation developed corresponds to plantations managed with a single species that is an introduced species, given that it has better growth, short production cycles, has developed research packages, and does not generate significant negative impacts on other ecosystems. In fact, many species of flora, despite not being native and being monocultures, have demonstrated benefits for biodiversity, for soils, and in general climatic and environmental benefits, and ultimately reflect results for carbon mitigation. However, it is essential to guarantee the non-generation of significant negative impacts, ensuring that the project considers and evaluates potential indirect biodiversity losses and long-term cumulative effects, and also designs and structures the corresponding mitigation measures.
57	James Hewitt	independent	United Kingdom	A Non-native monocultures tend to sequester less CO2 permanently than native species. They should never be preferred over natural biomes. B The literature wood dispute that non-native monocultures are less resilient than native biomes against disruptions of the sort which the collapsing climate is inducing world-wide. The trend (in northern Europe) is to endeavour to restore natural ecosystems once plantations have been clear-felled (whether for sawnwood, pulpwood, or post-beetle infestation sanitary clearance). C Non-native monocultures have tended to evolve primarily as a consequence of market failure – social and environmental (and governance) costs associated with related land-use change are amongst the most notable costs excluded from prices. Markets and excessive consumption have expanded by virtue of that implicitly subsidy. The FSC recognised this three decades ago – setting November 1994 as the threshold date after which certification of non-native monocultures on land cleared of natural forest would be prohibited. RSPO and its equivalents for soy, rubber, etc set subsequent thresholds, their corresponding industries having failed to respect the ethical position of the FSC and turning a blind eye to clearly rampant social, environmental and corruption-related harm. D Non-native wood mono-cultures serve to maximise temporary gain of carbon in above ground tree trunks, thereby being less valuable than native vegetation would have been in permanent storage below ground. The products which those monocultures have been established to produce are short-lived – their embodied carbon would be released shortly after production. The environmental and carbon life-cycle of those products and plantation management compound the loss of CO2 and harm.

58	Nadine Block	Sustainable Forestry Initiative	United States and Canada	Yes. SFI supports the use of non-native trees species for ARR projects providing these non-native species do not cause negative ecological impacts to native species. The SFI Forest Management Standard addresses this with Performance Measures 1.2, 1.4 and 2.1, as follows. • Performance Measure 1.2. mandates that a conversion from one forest cover type to another forest cover type (including non-native species) requires an assessment to determine ecological impacts and provide appropriate justification for the conversion of forest cover type. • Performance Measure 1.4. mandates that afforestation (including use of non-native species) shall not occur where there would be a negative impact to ecologically important natural communities, threatened and endangered species, or native natural communities which could be at risk of becoming rare. • Performance Measure 2.1. requires that reforestation (including non-native species) shall occur within two planting seasons. Additionally, forest landowners and managers should have the ability to research the impacts of climate change as they affect reforestation. This includes testing species for adaptation to factors like drought hardiness, fire resilience, resilience to forest pests, etc. These adapted species may be non-native species. The SFI Forest Management Standard addresses this with Performance Measures 2.4, 2.5 and 9.1, as follows. • Performance Measure 2.4 requires forest landowners and managers to protect forests from damaging agents, such as environmentally or economically undesirable levels of wildfire, pests, diseases, and invasive species, to maintain and improve long-term forest health, productivity, and economic viability. • Performance Measure 2.5 requires forest landowners and managers to deploy improved planting stock, including varietal seedlings, using best scientific methods. • Performance Measure 9.1 requires that forest landowners and managers identify and address the climate change risks to forests and forest operations and develop appropriate adaptation objectives and strategies. These strategies shall be based on best scientific information.

59	Camilla Marangon	Ibá - Brazilian Tree Industry	Brazil	Yes. ARR projects already follow strict criteria to ensure integrity and generate a significant climate benefit, helping to mitigate climate change and preserving biodiversity. We consider these criteria robust enough to ensure that non native monoculture projects do not bring along negative impacts on the environment and society. Excluding monocultures would be contradictory with the intent of the VCS Standard to help the global efforts to reach net zero emissions as soon as possible. Serious and well recognized multi stakeholder initiatives have long debated the role of monocultures, and setting sustainability requirements for them. These initiatives concluded that the point should not be on monoculture per se, but rather on the way they are managed. Sustainability is a top priority of forestry companies' activities, which is directly reflected in how forests are managed. The great majority of planted forests in Brazil were established on previously degraded areas, such as pastures or pastureland. These planted forests have been managed in some cases for more than 20 years by the most stringent and internationally recognized sustainable forest management standards, such as FSC and PEFC. One of the most important sustainable features of plantation management in Brazil is landscape management, in which productive areas of different ages are intertwined with areas set aside for conservation purposes at the landscape level. This practice protects biodiversity and water availability, among many other benefits. Landscape management is a practice recognized by the UN in its guidelines for adapting to climate change (The United Nations World Water Development Report 2020). All the benefits generated by planted forests are observed by several studies, as indicated by Pádua and Chiaravalloti (2012), Gabriel et al.,(2013), Gabriel and Godoy (2019) and Homem et al., 2020, which proves the importance of planted forests in the conservation of biodiversity and in providing a myriad of other environmental and social benefits. From an economic standpoint, the restrictions on non native monocultures may inadvertently create equity issues between the North and South. Given that non native monocultures are more prevalent in the global South, excluding them from Verra could, in turn, limit their access to climate finance. References: GABRIEL, V. de A.; VASCONCELOS, A. A.; LIMA, E. F. de; CASSOLA, H.; BARRETTO, K. D.; BRITO, M. C. de. A importância das plantações de eucalipto na conservação da biodiversidade. Pesquisa Florestal Brasileira, [S. l.], v. 33, n. 74, p. 203 213, 2013. DOI: 10.4336/2013.pfb.33.74.435. Available at: https://pfb.cnpf.embrapa.br/pfb/index.php/pfb/article/view/435. Cláudio Benedito Valladares Pádua e Rafael Morais Chiaravalotti. Silvicultura e biodiversidade. Cadernos do Diálogo; v. 4, Diálogo Florestal. Rio do Sul, SC : APREMAVI, 2012. Available at:

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60	ANONYMOUS #29	N/A	N/A	Yes. ARR projects already follow strict criteria to ensure integrity and generate a significant climate benefit, helping to mitigate climate change and preserving biodiversity. We consider these criteria robust enough to ensure that non-native monoculture projects do not bring along negative impacts on the environment and society. Excluding monocultures would be contradictory with the intent of the VCS Standard to help the global efforts to reach net-zero emissions as soon as possible. Serious and well-recognized multi-stakeholder initiatives have long debated the role of monocultures, and setting sustainability requirements for them. These initiatives concluded that the point should not be on monoculture per se, but rather on the way they are managed. Sustainability is a top priority of forestry companies' activities, which is directly reflected in how forests are managed. The great majority of planted forests in Brazil were established on previously degraded areas, such as pastures or pastureland. These planted forests have been managed in some cases for more than 20 years by the most stringent and internationally recognized sustainable forest management standards, such as FSC and PEFC. One of the most important sustainable features of plantation management in Brazil is landscape management, in which productive areas of different ages are intertwined with areas set aside for conservation purposes at the landscape level. This practice protects biodiversity and water availability, among many other benefits. Landscape management is a practice recognized by the UN in its guidelines for adapting to climate change (The United Nations World Water Development Report 2020). All the benefits generated by planted forests are observed by several studies, as indicated by Pádua

				and Chiaravalloti (2012), Gabriel et al.,(2013), Gabriel and Godoy (2019) and Homem et al., 2020, which proves the importance of planted forests in the conservation of biodiversity and in providing a myriad of other environmental and social benefits. From an economic standpoint, the restrictions on non-native monocultures may inadvertently create equity issues between the North and South. Given that non-native monocultures are more prevalent in the global South, excluding them from Verra could, in turn, limit their access to climate finance. References: GABRIEL, V. de A.; VASCONCELOS, A. A.; LIMA, E. F. de; CASSOLA, H.; BARRETTO, K. D.; BRITO, M. C. de. A importância das plantações de eucalipto na conservação da biodiversidade. Pesquisa Florestal Brasileira, [S. l.], v. 33, n. 74, p. 203–213, 2013. DOI: 10.4336/2013.pfb.33.74.435. Available at: https://pfb.cnpf.embrapa.br/pfb/index.php/pfb/article/view/435. Cláudio Benedito Valladares Pádua e Rafael Morais Chiaravalotti. Silvicultura e biodiversidade. Cadernos do Diálogo; v. 4, Diálogo Florestal. Rio do Sul, SC : APREMAVI, 2012. Available at: https://dialogoflorestal.org.br/wp-content/uploads/2018/05/cadernos-do-dialogo4-silvicultura-e-biodiversidade.pdf Gabriel, V. A.; Godoy, F. I. Community of birds in a mosaic of Eucalyptus and native vegetation in Três Lagoas, MS, Brazil. Oecologiaaustralis, v. 23, n. 3, 2019. Available at: COMhttps://revistas.ufrj.br/index.php/oa/article/view/15597UNIDADE DE AVES EM UMMOSAICO DE Eucalyptus E VEGETAÇÃO NATIVA EM TRÊS LAGOAS, MS, BRASIL | Oecologia Australis (ufrj.br). Homem, D. H.; Lima, E. F.; Nobre, R. A.; Colas-Rosas, P. F.; Trevelin, L. C.; Lima, A. L. A. Mammal fauna in Eucalyptus plantations and forest remnants in Três Lagoas, Mato Grosso do Sul State, Brazil. Oecologiaaustralis, v. 24, n. 1, 2020. Available at: MAMM https://revistas.ufrj.br/index.php/oa/article/view/22691AL FAUNA IN Eucalyptus PLANTATIONS AND FOREST REMNANTS IN TRÊS LAGOAS, MATO GROSSO DO SUL STATE, BRAZIL | Oecologia Australis (ufrj.br)
61	Peter Chappell	Finnfund	Finland	We are of the view that using non native monocultures should be an eligible way to generate carbon credits since all trees, whether native or non native, or in mixture or monoculture, sequester carbon as they grow. Forest plantations, grown silviculturally to produce forest products are crucial in our fight against climate change. Where trees are removed from carbon projects by harvesting, an appropriate methodology can be applied to reflect the level of biomass held within the production forest on average over time, with generally there being less units generated in production areas relative to restoration areas over the long term.

				Landowners generally need a commercial imperative to change land use and undertake afforestation. Future revenues from timber products can provide an incentive but there are many barriers, due to the time taken until revenues arrive. Similarly, carbon credits can provide a revenue incentive but have their own difficulties. The context is that globally afforestation investment needs huge further scaling, and this scaling will only be achieved once we gain enough traction of commercial success to woo more private actors into the space. In Africa, of $1.4bn invested in timber plantations, the current value is estimated to be $0.5bn. Excluding non native monocultures from the potential income from carbon credits would act against commercial success for investors undertaking afforestation and inhibit the scaling of finance into this space so badly required. Another reason why non native monocultures should be not be excluded from carbon income is that these types of plantations tend to be grown to produce timber products. Whilst the carbon stored within timber products is difficult to quantify, it certainly is a significant sink of great benefit and a function that non timber producing forests cannot duplicate. Also, non native monoculture timber plantations tend to grow faster than native timber plantations with the resultant carbon benefits so crucuial in the run up to 2030 / 2050. Part of our impact thesis is that there is a link between economic development of rural areas and protection of ecosystems. In many regions biodiversity is threatened. However, where forestry companies can successfully operate and provide rural jobs based on timber production from non native monocultures, pressures can ease on biodiversity loss, for example caused by deforestation. Indeed as part of sustainable forest management, the non native monocultures will include areas carefully managed for biodiversity which will be protected by those same companies. We recognise that poorly planned non native monocultures can in some situations have negative biodiversity impacts and that carbon finance should not have unintended consequences in this regard. However, we feel that a better approach would be to work with existing standards, such as those provided by FSC and PEFC, regarding the sustainable management of forests to ensure that no harm is done. Under those standards due regard must be taken to protection of biodiversity, habitats, ensuring a proportion of the the land is developed with biodiversity as the primary management objective, as well as matters relating to social sustainability of projects. Moreover, we feel that there is risk of a duel standard of sustainability emerging with sustainability and carbon standards both having their own views and unnecessarily burdening landowners with confusion similar but differing regulations.

				As an impact investor it is crucial that we see positive impact from our forestry investments. However, we feel that the net impact of excluding non native monocultures from carbon credits will be reduce biodiversity and other potential associated co benefits, by that investment then not flowing as it would have done to undertake the afforestation. Modern afforestation should be able to execute a sustainable business model including sales of timber products, potentially from non native monocultures, alongside reforestation and protection of biodiversity as part of an overall land use plan. However, the financial sustainability is a critical tenet and that must include non native moncultures.
62	ANONYMOUS #30	N/A	N/A	Yes. Non-native monocultures offer significant potential to support VCS's stated aims to drive climate finance "toward activities that reduce and remove emissions, improve livelihoods, and protect nature." Placing limitations on non-native species in ARR projects would not be based in science and would go against the aims of the VCS. At its core, the VCS program needs to ensure accurate accounting of the emissions reductions and carbon removals from climate mitigation activities, and there is no science-based reason to exclude entire classifications of species (native or non-native) or planting regimes (monoculture or otherwise). Non-native monocultures are a significant tool in our collective toolbox of climate solutions and also play an important role in the net-zero land use transition, ensuring the sustainable production of wood and fiber to meet global needs. I note there is an important distinction that not all ARR projects aim for restoration of native ecosystems; this is not a problem, but rather a benefit of having multiple mitigation tools we can deploy in climate action. Furthermore, carbon finance is essential in many ARR projects and removing it would significantly limit the expansion of wood and fiber resources from sustainably managed, planted forests – which the UN and FAO have determined are necessary to meet to land and climate goals – and may increase demand for exploitation of natural forest resources. There is an established track record of effective climate mitigation projects involving non-native monocultures. Such projects are often favored because of their additional benefits, such as ability to produce sustainable wood products and materials. An extensive body of science and research supports non-native monocultures through genetics, silviculture, and technical know-how that enhances forest productivity, which is directly correlated with carbon sequestration rates. Furthermore, non-native monocultures can contribute to land sparing that supports conservation in

				other places, such as native forest ecosystems.
63	Tobias Dorenkamp	DEG	Germany	Yes, using non-native monocultures should be an eligible activity for generating carbon credits. Non-native monocultures offer significant potential to remove emissions and improve livelihoods. To exclude non-native species in ARR projects is to our knowledge not based on science. Non-native monocultures play an important role in the sequestration efforts due to its high growth and by producing a sustainable timber resource urgently required e.g. to partially replace cement in the construction sector and reduce pressure on natural forests. Of course any non-native monoculture projects (as any projects) should use adequate environmental and social safeguards. These need to ensure inter alia to avoid reduction or destruction of biodiversity, critical habitat or native ecosystems and establish best management practices and adequate social and labor standards. We believe that over the last decades robust standards have developed that can achieve this, namely the certification Forest Stewardship Council (FSC) and the IFC Performance Standards. We oblige any partner we invest in or finance to adhere to IFC Performance Standards (across all sectors) and in addition to implement FSC certification for ARR projects. The implementation of these standards ensure to the degree possible the fulfillment of high standards and sustainability. In addition, the VCS Standard includes as well criteria to ensure against adverse environmental impacts and which are implementable within ARR projects (3.19.25-28), regardless of whether a species is native or whether more than one species is planted. As a development finance institution (DFI) we are also concerned about the imbalance a change in rule would trigger for the Global South. Non-native species are planted extensively in countries of the Global South which would be mainly disadvantaged by the change. As a financial actor we can testify that greenfield plantations (native or not) are a challenging investment with a worse risk-return profile than projects in other sectors. Carbon credits can make ARR projects financially attractive or offer a required incentive when used for own offsetting. Excluding non-native monocultures from Verra methodologies would limit carbon finance to the Global South, reduce the production of urgently needed sustainable resource and put additional pressure on native forests.

64	Yann-Olivier de Jouvancourt	Terraformation	United States	Non-native monocultures should not be eligible (or should be greatly limited), as a main project activity, for generating carbon credits for the following reasons: 1) It would imply that non-native monoculture have a positive impact on the environment and climate, which they don't (non permanence (see below), soil erosion and depletion, no biodiversity and lack of habitat, poor ecosystem resilience, etc). 2) Non permanence: monoculture plantations usually imply some level of harvesting, going against the concept of permanence, even when trees are being replanted (see Lewis et al., 2018). 3) Monocultures are less resilient than native forests and therefore present a higher risk of non permanence (from pests and other climatic disturbances). For a full report of why non native monocultures should be avoided, and native reforestation should be prioritised, see terraformation's article: https://21080104.fs1.hubspotusercontent-na1.net/hubfs/21080104/white-papers/terraformation-why-native-forest-restoration-matters.pdf Nevertheless, non-native monocultures as a side livelihood activity, for subsidence purposes, on a minority percentage of the project area, could be allowed if it is justified according to a set requirements, such as the ones that are proposed, in addition to the justification that it is needed for the project's viability and permanence. In such case, it could generate carbon credits, as it will help finance the project. We recognise that many projects will have subsistence areas of monoculture that could be woodlots to produce fuelwood, building timbers, food, non timber forest products, medicine, etc.
65	MaryKate Bullen	Forest Investment Associates	United States	Yes. Non-native monocultures offer significant potential to support VCS's stated aims to drive climate finance "toward activities that reduce and remove emissions, improve livelihoods, and protect nature." We believe that placing limitations on non-native species in ARR projects would not be based in science and would go against the aims of the VCS. At its core, the VCS program needs to ensure accurate accounting of the emissions reductions and carbon removals from climate mitigation activities, and there is no science-based reason to exclude entire classifications of species (native or non-native) or planting regimes (monoculture or otherwise). Non-native monocultures are a significant tool in our collective toolbox of climate solutions and also play an important role in the net-zero land use transition, ensuring the sustainable production of wood and fiber to meet global needs. We note there is an important distinction that not all ARR projects aim for restoration of native ecosystems; this is not a problem, but rather a benefit of having multiple mitigation tools we can deploy in climate action. Furthermore, carbon finance is essential in many ARR projects and removing it would significantly limit the expansion of wood and fiber resources from sustainably managed, planted

				forests – which the UN and FAO have determined are necessary to meet to land and climate goals – and may increase demand for exploitation of natural forest resources. There is an established track record of effective climate mitigation projects involving non-native monocultures. Such projects are often favored because of their additional benefits, such as ability to produce sustainable wood products and materials. An extensive body of science and research supports non-native monocultures through genetics, silviculture, and technical know-how that enhances forest productivity, which is directly correlated with carbon sequestration rates. Furthermore, non-native monocultures can contribute to land sparing that supports conservation in other places, such as native forest ecosystems. As with any climate mitigation strategy, non-native monoculture projects should be deployed with use of environmental safeguards. Fortunately, the science and body of practice around key commercial monocultures brings with it strong evidence to support science-backed best management practices. Well-managed non-native monocultures are not a threat to biodiversity or ecosystem resilience so long as (i) good management practices are followed, (ii) their utilization does not drive conversion of intact, native ecosystems, and (iii) only non-invasive species are utilized. The global community has developed robust tools to guide sustainable management, such as the Programme for Endorsement of Forest Certification (PEFC) and Forest Stewardship Council (FSC) certification, that address all three of these requirements through principles, criteria, and safeguards. These programs have demonstrated success in ARR projects that avoid negative impacts to threatened native ecosystems; avoid impacts on rare, threatened, or endangered species or habitats; mitigate against risks of invasive species; and ensure protection of hydrological functions. To support Verra in understanding how best management practices and existing global initiatives can support quality ARR projects, we encourage reference to the FSC, PEFC, and the IFC Performance Standards. These standards have been time-tested and deployed by a range of actors, subject to multi-stakeholder development, and demonstrate the ability to establish and manage non-native monocultures while producing a combination of environmental, social, and economic benefits. Notably, the VCS Standard already incudes criteria to ensure against adverse environmental impacts and which are implementable within ARR projects (3.19.25-28), regardless of whether a species is native or whether more than one species is planted. Limitations on non-native species in ARR projects would create important North-South equity concerns. Non-native species are planted extensively in the Global South, with planted forests being a well-documented part of the “forest transition” whereby developing economies and industries

				transition from natural forest exploitation to managed resources dedicated for timber and fiber production. Such planted forests, most often non-native due to commercial needs and the existence of vast bodies of research and development, are critical to sustainable development. Yet, in many cases the economics of planting new forest plantations remains challenging. Carbon finance is a tool that makes ARR more financially attractive, making projects feasible that otherwise would not be implemented. Excluding non-native monocultures from Verra methodologies would severely limit the Global South from accessing a significant portion of ARR climate finance and would place additional pressure on native forest resources. To repeat: the global consensus of multi-stakeholder, multi-decade processes to define sustainable forest management have concluded that well-managed, non-native monocultures are perfectly suitable for sustainable forest management. We are not aware of evidence indicating that non-native monocultures in and of themselves are likely to have significant negative ecosystem impacts, so long as good management practices are followed, their utilization does not drive conversion of intact native ecosystems, and only non-invasive species are used. We believe the burden of proof to demonstrate that non-native monocultures are in some way more detrimental than native monocultures has not been met.
66	Marek Guizot	Stafford Capital Partners	United Kingdom	Afforestation/reforestation (ARR) activities are expected to play a critically important role in mitigating climate change. In its 2019 Special Report on Climate Change and Land, the UN's IPCC indicated that ARR could account for 13%-17% of total carbon dioxide removals required by 2100, depending on which RCP pathway is referenced. Despite this, ARR projects have occupied a relatively minor space within the Voluntary Carbon Market, accounting for just 3% of all carbon offsets issued in the VCM to date, and 8% of those issued under the "Forestry & Land use" category (ref, Berkeley Carbon Trading Project database v8). This is unfortunate given that ARR is currently the only source of removals-based offsets, which have attracted growing interest from potential buyers/users. Restricting the use of non-native monocultures will substantially reduce the opportunity to increase this supply of removals-based offsets, as well as to achieve other significant outcomes. Our reasoning behind this view is detailed below: • Economic viability – Establishing new forests, whether restoring landscapes using native species, or developing monoculture plantations, is capital intensive and characterised by low returns due to lengthy periods before generating positive cashflow. In its most recent synthesis report (AR6), the IPCC highlights lack of private sector engagement and insufficient mobilization of finance amongst the key barriers to climate adaptation. But for private sector capital to be deployed in ARR a reasonable return

				on investment will be necessary, even if the funds are drawn from various impact allocations. In the case of natural forest restoration projects, the contribution from timber sales will be relatively small, leaving these projects heavily reliant on carbon revenues. This is unlikely to provide an acceptable return on its own. In addition, if most potential carbon revenue is realised by the time the investor seeks an exit there will be limited value remaining for a new owner, and exit risk becomes a looming concern. By contrast, non-native monocultures will typically be managed for commercial roundwood production. The combination of timber and carbon revenues offers a more diverse revenue stream and one more likely to meet overall return targets. Furthermore, by the time of exit, the asset will have developed into a mature (or near-mature) resource that will present an attractive target for either industrial or institutional investors. Given their more balanced risk profile, non-native monocultures are far more likely to attract private sector capital than projects based on non-commercial mixed native species. • Permanency –As outlined above, the economic value of a non-native monoculture plantation is likely to persist beyond the point at which a carbon project ends. This is a strong argument in favour of it most likely remaining a working forest and for reducing the non-permanence risk. • Ability to achieve scale – Over several decades the forest industry has developed considerable expertise in the successful establishment and management of monoculture plantations. These are commonly based on non-native species which have benefited from extensive research and development efforts to improve key characteristics. The industry has the capacity to produce substantial amounts of planting material from its existing nursery infrastructure. Conversely, experience with the large-scale production of native species seedlings, together with their successful establishment and maintenance in mixed stands is very limited. This suggests that limiting ARR projects to native species will create a very significant bottleneck to their implementation. • Growth rates and land use efficiency – The non-native species used in monoculture plantations are generally associated with significantly faster tree growth rates than native species. This suggests that non-native monocultures are likely to achieve materially higher levels of carbon sequestration in the near term – and will contribute towards the material action that the IPCC is urging us to take now. It also means that the land area needed to sequester a given volume of carbon will be decreased, thereby limiting potential pressure on available land resources. • Biodiversity impact – Degraded agricultural land is by far the most common base from which monoculture plantations are developed. Such land typically has a relatively low biodiversity baseline and the use of non-native species does not represent a loss in existing ecosystem value. • Climate resilience – It is often suggested that forests comprising a mix of native species are more resilient to the effects of climate change than non-native monocultures. However, the species used in non-native monocultures are highly versatile, more so than most native species. This means they are

				better able to deal with changing climatic conditions. Regular harvesting activity in commercial plantations also affords the opportunity to re-establish sites with species better suited to evolving conditions. • Sustainable wood supply – Global demand for industrial roundwood is growing by more than 20 million m3 per annum. Many, including the UN's Food and Agricultural organisation, expect growth to accelerate further over the next 30 years as low-carbon timber products are used to substitute for more energy-intensive materials such as concrete or steel. At current rates, in just 6-7 years, the cumulative additional demand will be equivalent to the total production from Canada. Unless a large part of this demand growth can be met by planted forests, we run the risk of seeing increasing pressure being placed on natural forest resources to do so. Facilitating the creation of sustainably managed, monoculture plantations is therefore an important part of the overall goal of ecosystem conservation. In summary, the use of non-native monocultures represents an approach which is more likely to receive support from private sector capital, leverages current expertise and infrastructure to develop projects at scale, is efficient in terms of land use, resilient in the face of climate change, and fills a growing need for sustainably produced industrial roundwood.
67	Justin Mercer	New Forests	Singapore, Kenya, Australia, New Zealand, United States	Yes, provided invasive species are precluded, as suggested in the draft Standard 4.5. Given the increasing demand for wood fibre worldwide and anticipated upward trajectory in demand (e.g., FAO, 2022) with population growth and GDP per capita, plantations that comprise native or non-native monocultures protect biodiversity by providing timber / wood fibre that would otherwise be sourced from the selective harvest or clearance of natural forests (and note that selective harvest often leads to degradation and ultimate clearance anyway). Plantation species selection is based on a range of factors, including growth/yield and associated rotation duration, tree form, branch size and angle, disease and fire resistance, distance to processing and end market, market demand, and management costs associated with silvicultural application. The financial viability of commercial operations often requires the establishment of monoculture plantations comprising non-native species, with little to no room for increased costs associated with integrated mixed species planting nor potential decrease in harvest volumes. Given the rapid growth of many cultivars currently in use by commercial operators, these monoculture plantations rapidly sequester carbon (e.g. Waring et al, 2020 , Harris et al, 2021). Studies that compare sequestration and carbon storage in mixed species versus monoculture plantations are of little value to plantation managers without parallel analyses of the factors that drive long-term financial viability of the plantation operations.

				The commercial forestry operators that replace only highly degraded vegetation with low carbon stocks further enhance biodiversity protection by avoiding conversion of natural habitat or intact forest. Carbon finance provides an opportunity for those that operate under a more environmentally and socially sustainable manner (e.g., Forest Stewardship Council Forest Management certified) to better compete with those that intensively clear and convert natural forests or other ecotypes. We recommend that Verra consider alignment with FSC, the Programme for Endorsement of Forest Certification (PEFC) for sustainable forest management and consider inclusion of applicable conservation and restoration components of the International Finance Corporation (IFC) Performance Standards and / or ADB Safeguard Policy Statement to incorporate best management practices that have evolved significantly over time and seek to provide for environmental and social sustainability in a manner that is financially achievable. The costs associated with operating under a more environmentally and socially sustainable manner (e.g., overhead costs, opportunity costs, biodiversity protection and enhancement, livelihoods programs, certification audits) have never been routinely matched by an enhanced product value for certified timber. This competitive imbalance with operations that maximize ecosystem clearance and conversion to intensive monoculture plantations may be at least partially offset by carbon finance. Whether native or non-native, the plantations themselves are typically not of high biodiversity or habitat value. The critical factors in determining whether plantations protect and enhance biodiversity value are (a) the level of vegetative degradation (or otherwise) converted to plantation and (b) the approach to the greater landscape within which the plantation resides, with consideration to conservation and/or restoration. New Forest agrees with the proposed approach of allowing non-native monocultures, provided these replace degraded areas / intensive agriculture and require some level of conservation / restoration of natural habitat within the landscape, assuming VCUs may be generated from both to offset some of the costs. FAO. 2022. Global forest sector outlook 2050: Assessing future demand and sources of timber for a sustainable economy – Background paper for The State of the World's Forests 2022. FAO Forestry Working Paper, No. 31. Rome. https://doi.org/10.4060/cc2265en Waring et al, 2020. Forests and Decarbonization – Roles of Natural and Planted Forests. Frontier for Global Change, 08 May 2020. Sec. Forest and the Atmosphere. Volume 3 – 2020. https://doi.org/10.3389/ffgc.2020.00058

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68	Brett Hundley	Agroforestry Partners	United States	Yes, our company believes that certain instances of non-native monocultures should be eligible for the generation of carbon credits. Our particular interest relates to agricultural settings where intensive farming takes place. Farmers are increasingly looking for ways to diversify their income and rehabilitate their land. Broadly, native non-monoculture ARR activities cannot compete on economics with single staple crop plantings today, and so farmers/landowners are reluctant to convert land over to ARR systems that sequester carbon and restore soils. Non-native monoculture plantings like Chinese chestnut offer sizable gains in carbon sequestration relative to continued monoculture staple crop plantings like corn or soy, and they also allow farmers and landowners the ability to sell nutrient dense crops at attractive values, offsetting lost staple crop revenue and diversifying their income. Large commercial farmers and landowners prefer to focus on single crops in order to optimize production and income. We would advocate for a clearer definition of the word "monoculture" in the VCS Standard. For instance, tree plantings that coexist with year-round permanent ground cover in the form of grass, forbs, and legumes should not be considered a monoculture. On a case by case, bass, certain non-native species are also valuable additions to geographies where their native counterparts are no longer present. For instance, Chinese chestnut grows well in the Appalachia region of the U.S., replacing losses from the American chestnut. Chinese chestnuts are already established in this region and are not new to the local area or country.
69	Indradeep Das	ReNew	India	Yes, after disturbances in an ecosystem, it will be beneficial for the species and the overall ecosystem, if the area is restored quickly. Non-native species such as eucalyptus which can provide several benefits when managed responsibly can prove to be an excellent solution in such cases. Additionally, to ensure commercial viability of ARR projects, developers need to opt for a practical approach with short-cash cycles and easy availability of seeds. Planting non-native species can support farmers with extra amount of cash and at the same time, help achieve the ecosystem restoration objectives. Furthermore, high caliber ARR projects are in high demand from investors and these should be supported. Thus, using non-native monocultures should be an eligible activity for generating carbon credits since banning them would drastically limit the potential of nature-based solutions for climate change mitigation at a global scale. We propose to have some safeguards in place wherein there would be a cap of certain project area with non-native monoculture to ensure the leeway does not defeat the purpose.

70	Agustin Inthamoussu	CLIMIT	Uruguay	Certainly. A monoculture non-native plantation generates various benefits, not only due to its significant and cost-effective carbon sequestration capacity, which helps climate change and indirectly reduces deforestation-related emissions, but also because of its positive social and environmental impacts. A general negative impact from monoculture non-native afforestation with exotic species cannot be presumed. In Uruguay, a comprehensive legislative framework compels the forestry sector to produce in an environmentally and socially responsible manner. Moreover, over 80% of the country's forested area is certified under FSC and PEFC standards, ensuring adherence to sustainable management practices and principles such as the obligation to "maintain, conserve, and/or restore ecosystem services and environmental values of the Management Unit, and avoid, repair, or mitigate negative environmental impact." On the other hand, CLIMIT is currently undertaking a project that involves planting Eucalyptus spp. at an exceptionally low density of 250 trees per hectare "Silvopastoral project" (https://registry.verra.org/app/projectDetail/VCS/3786). This approach capitalizes on a demonstrated synergy between the existing grassland and the newly introduced trees. The creation of expansive tree-free rows allows the coexistence of grassland, fostering the generation of biomass for both animal feed and timber production. In addition to this, CLIMIT is actively engaged in a carbon credit project featuring the cultivation of small patches of Eucalyptus spp. within large farms. Our strategy entails planting 1,000 trees per hectare in various 1 to 2-hectare patches, encompassing less than 8% of the total farm area as permitted by legislation. These strategically dispersed tree clusters aim to uniformly provide shade and shelter for livestock across the entire farm while contributing to carbon credit initiatives. And this is permitted by law in Uruguay. This seems to be in line with Verra proposal that “for small landowners, planting non-native monocultures is a way to maximize efficiency and productivity of plantings”. However, what if a farmer has 1,263 ha of property (average size farm in Uruguay is around 1,000) and decides planning 8% of the land? The results are 101 ha planted. Why should this project become eligible only if complying with new Verra requirements (30% natural ecosystem restoration and degraded land or intensive agriculture for last 10 years). VCS definition for monoculture is: “a crop or a population of a single species”. In many projects we are developing, there is a combination of two species: Eucalyptus grandis and Eucalytus dunnii (the last one is on low areas because do not suffer the frost in winter). Because there are two species, will the project not be considered monoculture?

71	Jean	Beijing forestry university	China	I think using non-native monocultures can be considered as eligible activity for generating carbon credits. It is about what the afforestation activity plant(non-native trees) and how they are planted(monoculture). However, neither of them could be the rational reason for the carbon market to deny their contribution in the process of climate change migration. A review published in 2020 and has been cited 52 times talks about the growing NNT in European(Elisabeth Pötzelsberger, 2020) and draw a conclusion that the careful integration of a range of tested NNT also into future forest management planning shows a high potential for climate change adaptation and mitigation.
72	Jaan	Ecobase	Estonia	Using non-native monocultures is at times the only practical solution for a landowner wanting to do climate good: Land which due to degradation cannot support the native tree ecosystem right away. One to two rotations of non-native species need to be used in order to ready the soil for restoring the native forest ecosystem.
73	Jim Heyes	Criterion Africa Partners	South Africa	YES. Global production levels of industrial roundwood will need to increase by 55% to meet demand in 2050 with an additional 33 million hectares of plantations required. According to Food and Agriculture Organisation (FAO), global consumption of industrial round wood equivalent may increase at a compound annual growth rate (CAGR) of 1.0% or overall growth of 36.6% by 2050, driven by demand for wood-based panels such as veneer, plywood and particle / fibre board in the construction sector and consumer products (this growth is in-line with historical growth of 0.8% CAGR (1990-2020)). In sub-Saharan Africa it is forecasted to grow at a CAGR of 1.1% from 31 million m3 in 2020 to 43 million m3 in 2050 driven by veneer and particle / fibre board. In addition, in 2020, around 2.3 billion people depended on wood fuel (e.g., charcoal) as their key source of energy for cooking & heating. The key long-term drivers of fuel wood consumption are the long-term consumption trends of charcoal for household cooking in sub-Saharan Africa and Southern Asia and the usage of green fuelwood or biomass to generate renewable energy (e.g., wood chips). Currently fuel wood consumption in Africa is linked to significant and ongoing deforestation and conversion of woodlands to agriculture. Africa's population is expected to double by 2050, which will place increased pressure on Africa's diminishing natural habitats. The only way to offset deforestation and this increasing wood demand is the establishment of fast-growing non-native monocultures, which can produce much more wood on a much smaller footprint of land. However, Africa has struggled to attract sufficient finance to establish these plantations due to

				the extremely poor historical track record of forestry investment on the continent. According to forthcoming analysis by Criterion Africa Partners and the Gatsby Trust, in the last 30 years, only around 190,000 hectares of plantations have been established in Africa. Of the nearly $1.5 billion which has been invested in these plantations, the majority of commercial investment capital has been lost, creating significant challenges in attracting new finance to the sector. Carbon finance is the only incentive that is bringing new capital to the sector, and if plantations are disqualified from eligibility by Verra, these investors will not come to Africa. A typical large-scale greenfield project requires significant up-front investment capacity to cover establishment, maintenance and fixed overhead costs and a long-term investment horizon to realise revenues and reach cash flow break-even. Without early cash flows from carbon subsidies, investors are unable to realize a return on their early investments due to the risk profile and the resulting high cost of capital for Africa. Sustainably managed plantations also provide an economic engine that can help finance natural forest conservation over the long term, through conservation areas managed by forestry companies. For example, Kilombero Valley Teak Company in Tanzania has conserved 20,000 hectares of miombo woodland on its 28,000 hectare estate, while the area outside the company's control has seen almost complete deforestation over the past 30 years. Without KVTC as a responsible company protecting these lands, the natural woodland in this area would no longer exist. Lastly, supporting a tree plantation that has long term revenue streams from products other than carbon credits will support the permanence of the positive climate impacts. Since most carbon credit revenues come in the early years of plantation establishment, projects which rely only on carbon revenues will have limited ability to secure the long term protection of the biological resource, and little incentive to do so.
74	ANONYMOUS #31	N/A	N/A	A key improvement in the methodology lies in clearly defining monocultures and distinguishing between various types of plantations. The common practice among forestry companies involves adopting a system of mixed forests. In this scenario, plantings of non-native species occur in a monoculture format, but within the framework of forest mosaics that connect native forests through ecological corridors. In essence, the methodological refinement underscores the notion that the significance lies not only in the selection of plant species but also in the strategic integration of these plantations into the landscape. When non-native species cultivation is strategically implemented alongside the creation of these ecological corridors and the preservation of designated areas as per local legislation, it holds the

				potential to enhance biodiversity rather than diminish it. Especially in degraded areas, the purposeful introduction of non-native species proves to be a beneficial intervention, contributing to comprehensive ecological restoration within the broader system. Furthermore, certain non-native monocultures can exhibit a significant capacity for carbon sequestration. Some fast-growing species, despite being non-native, may absorb carbon dioxide from the atmosphere more rapidly than certain native species and also help them grow.
75	ANONYMOUS #32	N/A	N/A	Yes, especially for the restoration of degraded areas in the tropics, combined with native forests the use of non-native tree monocultures can provide additional income to local communities and also be a renewable source of firewood, especially in Africa. In these areas, it is possible to do restoration projects in the degraded areas combining natural forest with non-native tree monocultures, that can provide renewable sources of firewood, with the establishment of for example eucalyptus or acacia plantations. The carbon credits can be generated from the natural forest restoration plus the additional carbon from the avoided deforestation of existing natural forests by the supply of firewood provided by the non-native tree plantations. One important aspect of the use of non-native tree monocultures is that the selected exotic species must be non-invasive, to avoid the introduction of a problem in the ecosystem that will cause harm in the future.
76	ANONYMOUS #33	N/A	N/A	Yes. Non-native monoculture plantations, native monoculture plantations and mixed native restoration activities should be equally eligible to generate carbon credits under Verra. Our recommendation would be for Verra to align its standards with those operated in a number of compliance and voluntary carbon schemes in use internationally both in relation to (i) use of non-native species and (ii) the use of monoculture. We understand these international standards are based on the view that monoculture plantations can generate a number of biodiversity benefits, and that the definition of a species as "native" may not be helpful for a species which has been widely planted in a country for (say) over 100 years. Monoculture plantations, including non-native plantations, are eligible for carbon credits under the

				following schemes: 1. The New Zealand Emissions Trading Scheme (NZ ETS) is a regulated compliance carbon scheme which allows for forestry projects to generate carbon using radiata pine (a non-native species introduced into New Zealand in the 1850s, and now the dominant species in plantation forestry in NZ), as an example, within monoculture projects. 2. The Australian ACCU scheme is a regulated compliance carbon schemes in Australia which allows for forestry projects to generate carbon credits using radiata pine (a non-native species introduced into Australia in the 1850s), as an example, within monoculture projects. 3. The UK Woodland Carbon Code allows for the generation of carbon credits through the planting of Sitka spruce as an example (a non-native species, introduced into the UK in the 1830s) within monoculture projects. 4. The Gold Standard is a voluntary carbon scheme which allows for forestry projects to generate carbon credits using non-native monocultures (1). 5. The Clean Development Mechanism (CDM) allows reforestation projects to generation carbon credits and does not distinguish between mixed-native restoration and non-native monocultures. All reforestation projects have the equal opportunity to conduct validation and subsequent registration if proven additional. In parallel with these international standards, we note that global timber consumption has been growing steadily and is projected to continue. In order to meet this demand, it is important to create sustainable timber plantations to reduce or minimise harvesting of indigenous forestry. We consider the distinction between native and non-native species to be less relevant than the question of whether a species is invasive. Non-native monoculture plantations can also have CCB benefits and SDG contributions, particularly in those situations where the comparable BAU scenario would see no improvement of degraded land. We believe that non-native monoculture plantations should be eligible for carbon credits if they: - Do not introduce invasive species - Are designed and managed in cooperation with stakeholders

				- Generate income and jobs for local people - Maintain and manage water resources and soil nutrients - Sequestrate atmospheric carbon over and above the baseline scenario - Include corridors for wild animals. amd protect critical areas for plants and animals - Allocate a percentage of land for conservation and native species restoration - Obtain additional certifications for sustainable forest management (FSC, PEFC etc) - Obtain CCB or SD VISta label to ensure co-benefits are accurately identified and monitored. This list is based on Gold Standard requirements with the inclusion of CCB or SD VISta. (1): https://goldstandardhelp.freshdesk.com/support/solutions/articles/44001989678-what-role-do-plantations-play-in-gold-standard-land-use-activities-
77	ANONYMOUS #34	N/A	N/A	Yes. ARR projects already follow strict criteria to ensure integrity and generate a significant climate benefit, helping to mitigate climate change and preserving biodiversity. We consider these criteria robust enough to ensure that non-native monoculture projects do not bring along negative impacts on the environment and society. Excluding monocultures would be contradictory with the intent of the VCS Standard to help the global efforts to reach net-zero emissions as soon as possible. Serious and well-recognized multi-stakeholder initiatives have long debated the role of monocultures, and setting sustainability requirements for them. These initiatives concluded that the point should not be on monoculture per se, but rather on the way they are managed. Sustainability is a top priority of forestry companies' activities, which is directly reflected in how forests are managed. The great majority of planted forests in Brazil were established on previously degraded areas, such as pastures or pastureland. These planted forests have been managed in some cases for more than 20 years by the most stringent and internationally recognized sustainable forest management standards, such as FSC and PEFC. One of the most important sustainable features of plantation management in Brazil is landscape management, in which productive areas of different ages are intertwined with areas set aside for conservation purposes at the landscape level. This practice protects biodiversity and water availability, among many other benefits. Landscape management is a practice recognized by the UN in its guidelines for adapting to climate change (The United Nations World Water Development Report 2020). All the benefits generated by planted forests are observed by several studies, as indicated by Pádua and Chiaravalloti (2012), Gabriel et al.,(2013), Gabriel and Godoy (2019) and Homem et al., 2020,

				which proves the importance of planted forests in the conservation of biodiversity and in providing a myriad of other environmental and social benefits. From an economic standpoint, the restrictions on non-native monocultures may inadvertently create equity issues between the North and South. Given that non-native monocultures are more prevalent in the global South, excluding them from Verra could, in turn, limit their access to climate finance. References: GABRIEL, V. de A.; VASCONCELOS, A. A.; LIMA, E. F. de; CASSOLA, H.; BARRETTO, K. D.; BRITO, M. C. de. A importância das plantações de eucalipto na conservação da biodiversidade. Pesquisa Florestal Brasileira, [S. l.], v. 33, n. 74, p. 203–213, 2013. DOI: 10.4336/2013.pfb.33.74.435. Available at: https://pfb.cnpf.embrapa.br/pfb/index.php/pfb/article/view/435. Cláudio Benedito Valladares Pádua e Rafael Morais Chiaravalotti. Silvicultura e biodiversidade. Cadernos do Diálogo; v. 4, Diálogo Florestal. Rio do Sul, SC : APREMAVI, 2012. Available at: https://dialogoflorestal.org.br/wp-content/uploads/2018/05/cadernos-do-dialogo4-silvicultura-e-biodiversidade.pdf Gabriel, V. A.; Godoy, F. I. Community of birds in a mosaic of Eucalyptus and native vegetation in Três Lagoas, MS, Brazil. Oecologiaaustralis, v. 23, n. 3, 2019. Available at: COMhttps://revistas.ufrj.br/index.php/oa/article/view/15597UNIDADE DE AVES EM UM MOSAICO DE Eucalyptus E VEGETAÇÃO NATIVA EM TRÊS LAGOAS, MS, BRASIL | Oecologia Australis (ufrj.br). Homem, D. H.; Lima, E. F.; Nobre, R. A.; Colas-Rosas, P. F.; Trevelin, L. C.; Lima, A. L. A. Mammal fauna in Eucalyptus plantations and forest remnants in Três Lagoas, Mato Grosso do Sul State, Brazil. Oecologiaaustralis, v. 24, n. 1, 2020. Available at: MAMM https://revistas.ufrj.br/index.php/oa/article/view/22691AL FAUNA IN Eucalyptus PLANTATIONS AND FOREST REMNANTS IN TRÊS LAGOAS, MATO GROSSO DO SUL STATE, BRAZIL | Oecologia Australis (ufrj.br)
78	ANONYMOUS #35	N/A	N/A	Yes. Non-native monocultures offer a variety of benefits for people and climate. Non-native monocultures are often favored where they produce biomass and materials – and sequester carbon – at much higher rates than native species, which may allow for land sparing that supports conservation in other places. Well-managed non-native monocultures are not a threat to biodiversity or ecosystem resilience so long as (i) good management practices are followed, (ii) their utilization does not drive conversion of intact native ecosystems, and (iii) only non-invasive species are utilized. Non-native monocultures are critical tools for ecosystem restoration. Research in many parts of the world has demonstrated that non-native species can be effectively used to establish tree cover on

				highly degraded sites and provide nurse canopies to enable natural regeneration of native forests. (See, for example: Senbeta and Teketay. 2001. Regeneration of indigenous woody species under the canopies of tree plantations in Central Ethiopia. Tropical Ecology. 42: 175-185; Feyera et al. 2002. Exotic trees as nurse-trees for the regeneration of natural tropical forests. Trees, 16:245-249; Ashton et al. 2014. Restoration of rain forest beneath pine plantations: A relay floristic model with special application to tropical South Asia. Forest Ecology and Management, 329:351-359.) The global community has developed robust tools to guide sustainable management, such as Programme for Endorsement of Forest Certification (PEFC) and Forest Stewardship Council (FSC) certification, that address all three above-listed requirements for sustainable plantation establishment and management, though other tools can also be used. Exotic monocultures should be viewed for what they are: only one part of a broad system of human interactions with landscapes, and one that, when incorporating appropriate safeguards, can provide multiple benefits. These safeguards, which include no negative impacts to threatened native ecosystems; no negative impacts on rare, threatened or endangered species or habitats; no introduction of invasive species; and no damage to hydrological functions of native ecosystems, are already part of the VCS Standard (3.19.25-28). We urge Verra to take advantage of three decades of deep global expertise on forests and forest management offered by the global forest certification systems. FSC, for example, is explicitly designed to balance the three necessary pillars of sustainable forest management – environmental, social, and economic – and to balance representation between the Global North and the Global South through highly transparent processes incorporating enormous amounts of scientific and stakeholder input. These systems adapt a set of universal sustainability principles and criteria to widely varying local political, social, and ecological conditions and are designed to achieve durable consensus on complicated issues. It may be of some interest to Verra to examine the global FSC Principles and Criteria, available in its document catalogue, as a means of understanding more about what certified forest managers are expected to demonstrate. These principles and criteria are operationalized through FSC's International Generic Indicators. The level of detail in these documents (and others) is a testament to decades of deep engagement with experts and practitioners from all over the world. The consensus of those stakeholders – which includes scientists from a range of disciplines, professional foresters, environmental NGOs, community organizations, labor unions, assurance and verification organizations, and others – is that non-native monocultures, when established in the right places and managed correctly, have an important role to play in sustainable forest systems.

				Our view is further that significant limitations on non-native species in ARR projects would create important North-South equity concerns. Non-native species are planted extensively in the Global South. Excluding non-native monocultures from Verra methodologies would effectively exclude the Global South from accessing a significant portion of ARR climate finance. The only region in the world where plantation forests are almost entirely comprised of native species is North America. In the rest of the world, non-native species are a very important part of the plantation mix. Non-native species are 70% of tree farms in Africa and 97% in South America – the region identified in most analyses as having the greatest potential for natural climate solutions globally. The Global South has historically contributed the least to climate change; would benefit most from improved flows of mitigation and adaptation finance; and often presents the socioeconomic and biophysical conditions thought to be most favorable for NCS projects. There can be no justification for excluding these critically important regions from ARR climate finance.
79	ANONYMOUS #36	N/A	N/A	No. Non-native monocultures present several side-effects which are contrary to the objectives of bot EU2030 Forest and Biodiversity Strategies. Biodiversity is considerably lower, affecting several ecosystem components and functioning, and ecosystem services including carbon sequestration and storage as well biological diversity. Soil properties are affected in different ways, reducing carbon storage ability. This effect is particularly strong in non-native monocultures like eucalyptus plantations, subjected to short rotations (10 – 12 years), removing stand carbon stock, besides other side effects. With pine plantation monocultures, this kind of forests should also be discriminated, since they present lower capacity for carbon and biodiversity, and certain features of lower benefits, like lower soil quality, higher risk of burning and fire spread, fire severity, representing higher risk and interest regarding carbon. Besides, the type of harvested wood and use relates to short live products, which have a small or no contribution to carbon / CC mitigation. These pine plantations have an additional negative effect if subjected to rotational or clear-cut harvesting. A positive signal for change is needed, avoiding approaches currently known as "business as usual".
80	ANONYMOUS #37	N/A	N/A	Yes. ARR projects already follow strict criteria to ensure integrity and generate a significant climate benefit, helping to mitigate climate change and preserving biodiversity. We consider these criteria robust enough to ensure that non-native monoculture projects do not bring along negative impacts on the environment and society. Excluding monocultures would be contradictory with the intent of the VCS Standard to help the global

				efforts to reach net-zero emissions as soon as possible. Serious and well-recognized multi-stakeholder initiatives have long debated the role of monocultures, and setting sustainability requirements for them. These initiatives concluded that the point should not be on monoculture per se, but rather on the way they are managed. Sustainability is a top priority of forestry companies' activities, which is directly reflected in how forests are managed. The great majority of planted forests in Brazil were established on previously degraded areas, such as pastures or pastureland. These planted forests have been managed in some cases for more than 20 years by the most stringent and internationally recognized sustainable forest management standards, such as FSC and PEFC. One of the most important sustainable features of plantation management in Brazil is landscape management, in which productive areas of different ages are intertwined with areas set aside for conservation purposes at the landscape level. This practice protects biodiversity and water availability, among many other benefits. Landscape management is a practice recognized by the UN in its guidelines for adapting to climate change (The United Nations World Water Development Report 2020). All the benefits generated by planted forests are observed by several studies, as indicated by Pádua and Chiaravalloti (2012), Gabriel et al.,(2013), Gabriel and Godoy (2019) and Homem et al., 2020, which proves the importance of planted forests in the conservation of biodiversity and in providing a myriad of other environmental and social benefits. From an economic standpoint, the restrictions on non-native monocultures may inadvertently create equity issues between the North and South. Given that non-native monocultures are more prevalent in the global South, excluding them from Verra could, in turn, limit their access to climate finance. References: GABRIEL, V. de A.; VASCONCELOS, A. A.; LIMA, E. F. de; CASSOLA, H.; BARRETTO, K. D.; BRITO, M. C. de. A importância das plantações de eucalipto na conservação da biodiversidade. Pesquisa Florestal Brasileira, [S. l.], v. 33, n. 74, p. 203–213, 2013. DOI: 10.4336/2013.pfb.33.74.435. Available at: https://pfb.cnpf.embrapa.br/pfb/index.php/pfb/article/view/435 Cláudio Benedito Valladares Pádua e Rafael Morais Chiaravalotti. Silvicultura e biodiversidade. Cadernos do Diálogo; v. 4, Diálogo Florestal. Rio do Sul, SC : APREMAVI, 2012. Available at: https://dialogoflorestal.org.br/wp-content/uploads/2018/05/cadernos-do-dialogo4-silvicultura-e-biodiversidade.pdf

				Gabriel, V. A.; Godoy, F. I. Community of birds in a mosaic of Eucalyptus and native vegetation in Três Lagoas, MS, Brazil. Oecologiaaustralis, v. 23, n. 3, 2019. Available at: https://revistas.ufrj.br/index.php/oa/article/view/15597 Homem, D. H.; Lima, E. F.; Nobre, R. A.; Colas-Rosas, P. F.; Trevelin, L. C.; Lima, A. L. A. Mammal fauna in Eucalyptus plantations and forest remnants in Três Lagoas, Mato Grosso do Sul State, Brazil. Oecologiaaustralis, v. 24, n. 1, 2020. Available at: https://revistas.ufrj.br/index.php/oa/article/view/22691
81	ANONYMOUS #38	N/A	N/A	Yes. One of the reasons the forestry sector has chosen some species for centuries is due to the outstanding characteristics of many of these species, in terms of yield and growth for a sector that supplies the growing needs of wood around the world. Sole of these species are native to their location, such as some eucalyptus in Australia and America, teak in Asia, and many pines species in all temperate and subtropical zones. Some of these above-mentioned species have been planted in other locations, such as teak which has been widely planted in Central America, and it is considered to have acclimatised to this region. supplies the growing needs of wood around the world. Sole of these species are native to their location, such as some eucalyptus in Australia and America, teak in Asia, and many pines species in all temperate and subtropical zones. Some of these above-mentioned species have been planted in other locations, such as teak which has been widely planted in Central America, and it is considered to have acclimatised to this region. Species like this have demonstrated to have a high timber potential and not a risk of propagation into the natural forest or displacing other species, like other species have, such as some species of Acacia which is considered potentially invasive in some locations. The use of non native species is a practice that can be done with non potentially invasive species, as Verra mentioned, safeguarding the management plans and monitoring the species do not become potentially invasive. Similarly monocultures or the plantation of few species, and the timber sector have an important responsibility in keeping the supply of timber products in a world where there is an increasing demand. If commercial plantations were banned of incentives, such as carbon or similar, and their capacities were nor promoted to increase, the impact on natural forests, increase in forest concession and the increase of legal and illegal forest degradation and deforestation will increase. Therefore the

				leakage of other conservation projects such as REDD and IFM will increase if commercial plantations were not there to reduce the pressure on natural forest due to the increase of conservation projects (REDD+ and IFM). Monospecific plantations with non-native species, have a known technological and scientific research, that help them to grow faster (therefore, capture carbon at a higher rate), increase the cash flow linked to the first complex years of a plantation, and can drive advantages in terms of cash flow and permanence. This initial cash flow can sooner support other types of activities linked to community, biodiversity, ecosystem services, the environment, etc. In addition, carbon projects must also be attractive, in financial terms, for project owners.
82	ANONYMOUS #39	N/A	N/A	The non-native monocultures must remain as an eligible activity, following certain rules, as they constitute an alternative to more aggressive and less resilient crops or land uses , as well as a contribution to climate change mitigation and adaptation . Where ecosystems have been altered beyond their resilience , the most likely use will be to turn them into livestock fields with low intensity but high impact on soils, crops that will need a lot of agrochemicals to produce acceptable yields and or the introduction of invasive species that will compensate financially without internalizing the cost of remediation and future loss of native and endemic species and ecosystems 1. Not only from GHG point of view, but also from a biodiversity one, forest plantations including non-native monocultures, provide a valuable solution to the patches and islands of natural forest, following the principle of “continuum model” 1. Nevertheless, it is fundamental to considerate the “baseline” not only from alternative scenarios of land use, but also differentiating Afforestation, Forestation and Regeneration objectives, financials, communities, biodiversity, land scape and soil, in the long term, as successional phases of forest and ecosystems. The conversion of degraded non natural agriculture land to forest land can led to an ecological restoration and an improvement of bioindicators , it can also contribute to the improvement of livelihoods. Also, when the alternative scenarios led to a loss of soils an non-viable livelihood, growing wood products on degraded lands may also reduce pressure on natural forests. The ecological restoration of an ecosystem should be addressed in the long term. The vegetation restoration series and Bioclimatic belts are key elements to determine if the restoration with non-native plantations can be considered suitable for the ecological restoration of the ecosystem.

				Into this bigger landscape, the financial support coming from carbon credits is crucial. Brockerhoff, E et al. (2008) Plantation forests and biodiversity: oxymoron or opportunity? Biodivers Conserv 17:925–951 DOI 10.1007/s10531-008-9380-x Moon, H and Solomon, T. (2009) Forest Production, Restoration and Management under Climate Change. Greener Journal of Agricultural Sciences Vol. 9(3), pp. 337-343. : https://doi.org/10.15580/GJAS.2019.3.080719153 Liu T, Jiang K, Tan Z, He Q, Zhang H and Wang C (2021) A Method for Performing Reforestation to Effectively Recover Soil Water Content in Extremely Degraded Tropical Rain Forests. Front. Ecol. Evol. 9:643994. doi: 10.3389/fevo.2021.643994 DECEMBER 2002 Restoration Ecology Vol. 10 No. 4, pp. 703–713 Exotic Plant Species as Problems and Solutions in Ecological Restoration: A Synthesis Carla D'Antonio1,3,4 Laura A. Meyerson2,5
83	ANONYMOUS #40	N/A	N/A	If additionality is proven, yes. In consolidated agricultural areas, which are often degraded, planting non-native species can offer fewer negative impacts and even benefits to biodiversity/environment.
84	ANONYMOUS #41	N/A	N/A	Non-native monocultures do not be granted carbon credits. Their negative environmental impact outweighs alleged benefits as they do not address the global carbon cycle as, by design, leakage is inbuilt in plantation strategies. They also present permanence and technical/management problems such as soil erosion control, soil carbon depletion, soil fertility loss, soil contamination, accumulation of pesticide residues, soil structure changes, depletion of water (surface and groundwater) sources, etc. Eucalypt plantations also present allelopathic effects on local flora and associated fauna. Eucalyptus monocultures demand large quantities of pesticides and agrotoxins and end up largely as charcoal to dry grains of soybeans, corn, wheat and other agribusiness products.
85	ANONYMOUS #42	N/A	N/A	Those advocating the exclusion of non-native monocultures from carbon-benefits while requiring a 30% native ecosystem restoration target, seem to have forgotten the main drivers of deforestation: economically more attractive land use alternatives, plain satisfaction of basic needs and mere land speculation. For those in impoverished regions with heavily deforested and degraded lands, the activities related to many ARR-projects will have to provide a direct or indirect income to assure the financial feasibility and sustainability and hence long-term support of these projects. This accounts for the developers of these projects, private investors, landowners, neighbouring communities, local government, i.e., for all involved stakeholders. If this is possible through ARR-projects with native species: perfect. However, native species often lack

				the growth rates or do not provide the products and/or volumes that (inter)national markets require, and which may define the long-term success of an ARR-project. In other other cases, site conditions, like heavily degraded soils, do not allow for a successful establishment of native species in fist instance and an intermediate rotation with exotic species might be a way to restore those conditions and to initiate a process towards natural regeneration or cultivation of natives. When it comes to exotic species, there are many environmental safeguards that can be required to reduce or even avoid negative impacts and to assure a responsible management of those non-native monocultures. Where implemented correctly, these monocultures may become the connection between isolated native forest remnants and riparian zones, re-establishing the conditions for fauna migration, restoring forest landscape and the related climatic conditions on a larger scale which in the end will create the conditions for the restoration of native ecosystems and the return towards traditional land use systems. Yes, restored mangroves and native forests are great. But should these be compared on even terms with the restoration of vast areas of forest landscape through responsible management of non-native monocultures? Can't the latter have a huge positive impact on local conditions as well? Without the economics for private investment, great opportunities for reforestation will be lost; great opportunities for local communities will be lost; great opportunities for restoration of forest landscape and nature conservation will be lost. VCUs for non-native monocultures? Yes, these are currently often the accelerator for reforestation projects, the financial support enabling to take the hurdle of an investment with a long period of return on investment. Don't compare the benefits of native ecosystems, reforestation with native species or reforestation with exotic species. They are supplemental, not competition towards forest landscape restoration and combat of climate change.
86	ecosecurities	ecosecurities	Switzerland	In an era where climate change and biodiversity loss already pose existential consequences, only project activities that address both should be incentivized by the market to create carbon credits that truly represent environmental integrity. This restriction may be viewed to be limiting, but it is a necessary reservation to incentive actions that are ambitious and transformative. Therefore, we consider non-native monocultures should not be an eligible activity.
87	Matthew Kerr	New Zealand Carbon Farming	New Zealand	New Zealand Carbon Farming Group believe non-native monocultures should be an eligible activity for generating carbon credits. To date, New Zealand Carbon Farming Group has developed and currently manage over 100 carbon

				projects across over 100,000 hectares of land in New Zealand. We are currently one of the largest providers of compliance offsets in Australasia with our existing combined projects generating over 25 million removal offsets to date and are expected to produce more than 100 million removal offsets during their lifetime. Please see a link to our website, here: https://nzcarbonfarming.co.nz/. Our core afforestation projects to date involve the following types of afforestation projects: 1. Planting exotic species on lower productivity farmland or erosion prone land, and financing the transition of these forests to a permanent indigenous forest at maturity using financing from sales of New Zealand Units (NZUs) issued under the NZ Emissions Trading Scheme (NZ ETS). 2. Working with farmers to establish exotic forests on the degraded or less productive areas of their farmland to be managed perpetually for production forestry, financing the establishment using sales of NZUs up to the long-term average carbon stock. To date, nearly all of New Zealand Carbon Farming Group's projects have been compliance removal projects. However, we have identified the significant potential for our activities above to be funded by the Voluntary Carbon Market (VCM). Both project activities above provide significant benefits to landowners and local communities, optimize land use, significantly improve biodiversity, all whilst creating a positive impact for the climate. As these principles are strongly aligned with Verra's, both activities should be able to be credited under the VCS standard as outlined below: 1. Transitional Afforestation (Exotic to Native) Indigenous forest species in New Zealand are slow growing, difficult (high mortality), and expensive to establish on bare land. As a result, it is both financially and practically unfeasible to establish native forests at scale. As outlined in our Transitional Afforestation project recently listed in the VCS Pipeline (Link: https://registry.verra.org/app/projectDetail/VCS/4652), NZCF establishes an exotic nurse crop of Pinus radiata for both initial rapid sequestration and to provide cover to enhance the regeneration of indigenous undergrowth. Over time the indigenous forest species are managed to succeed the exotic through the creation of light wells, pest and predator eradication, seed island planting and gradual selective thinning of exotics. Not only does this activity create significant biodiversity additionality (from a baseline of degraded pasture), but also new employment opportunities in ecological forest management for local communities, as well as a diversified income for landowners.

				Much of the low-grade farmland in New Zealand has originated from historically clearing or burning large areas of indigenous forest that was never suitable for agricultural production, which this project activity is reversing. NZCF has established and manages 26,000 hectares of forest on lower productivity farmland this way, which has only been possible due to usage of an initial Pinus radiata nurse crop. 2. Rotational Afforestation (averaging) on lower productivity or erosion prone farmland NZCF also works with landowners to develop afforestation carbon projects on areas of farmland classified by the New Zealand government as “Non-Arable” (https://ourenvironment.scinfo.org.nz/maps-and-tools/app/Land%20Capability/lri_luc_mainwant). This allows landowners to diversify their income by planting Pinus radiata forests in only the least productive areas while keeping more productive areas in pasture for sheep and beef farming. The forests are then grown for a full rotation at which point the landowner retains the option to either harvest and replant the trees in perpetuity (i.e. there is a requirement to keep the area forested in perpetuity), in which case the credits are only issued to the long-term average carbon stock, or to manage the forest to remain permanent and transition to native over time. Afforestation in these areas has a very small impact to overall food production in these farms due to their low productivity, and often create more employment under forest management. From a biodiversity perspective, afforestation of Pinus Radiata even under rotational management is still an improvement from the original land use of sheep and beef farming. Pinus radiata forests make up the vast majority of commercial timber forests in NZ and would still host more species per unit area than the previous management under sheep and beef farming. By using exotic forest species, New Zealand Carbon Farming Group manages over 60,000 hectares of transitioning native forest in this way and is the largest planter per annum of forest in the country. Since 2019 we also operate the largest pest animal eradication program in New Zealand across over 50 forests engaging a team of pest contractors that have removed 50,000 pest/predator animals from our forests to date. Allowing afforestation of non-native monocultures to be an eligible activity under VCS will allow us to further scale the work we do towards creating positive change to the environment for future generations.

88	Charlie Sichel	Forestry Linked Securities / Radius Zero	Switzerland / Paraguay	Yes, non-native monoculture forests play a key role in: (a) avoiding further deforestation of existing forests (especially natural forests), which, when cut, release substantial amounts of CO2 into the atmosphere; and (b) sequestering today's high level of atmospheric CO2 through reforestation and afforestation. These are key objectives of both VERRA, and FLS Group AG (Forestry Linked Securities), a developer and investor in sustainable forestry, who enable large institutional investors to gain access to the asset class, offering them exposure to sustainable forestry, social impact and biodiversity. i) Substitution effect / protection of native forestry Substantial commercial reforestation is required, in order to fill a growing gap in global supply of sustainable wood and is urgently necessary to halt, or at least reduce the rate of deforestation of native forests. In many locations, the economics of a commercial model are not viable without carbon finance. Let us take the example of Paraguay: Deforestation in Paraguay is amongst the highest in the world, totalling about 9.5 m ha, that is 33% of the entire territory, from 1990 to 2020, mainly due to agricultural expansion. Deforestation has historically progressed from the East of the country, which offers the most productive conditions for agriculture and also has the highest density of population, to the West. Paraguay has domestic biomass (firewood) consumption of ~14 m tons per annum. 51% is used for residential/domestic purposes, while 44% is used within the industrial sector; specifically, for agricultural production (e.g., soya, corn, ethanol). Of this consumption, an estimated 79% historically derives from native forests, only 21% coming from forestry plantations. This supply split is clearly not sustainable, and has significant negative ecological repercussions. The Paraguay Government introduced a law in 2020 to start to phase out the use of biomass from native forestry . The law completely prohibits the use of biomass obtained from non-plantation trees for industry by the year 2023, which has proven very hard to police. Consequently, the Paraguay

				government is in urgent need of alternative supply in order to prevent further deforestation. This ideally requires fast-growing non-native species (such as Eucalyptus), a proven species in Paraguay, well adapted to the country's temperature and precipitation patterns. The Paraguay government urgently needs the support of the carbon markets to encourage private investment into sustainable forestry (ideally with fast-growing species), without which deforestation will continue. ii) Need for commercially viable forests The world is running out of wood supply. At the same time reforestation, both natural and commercial, has the potential to capture substantial amounts of CO2 from the atmosphere and is to date, the cheapest, most effective and proven method of carbon removal. In order to dramatically increase the volume of investment into sustainable forestry operations, especially greenfield ARR projects, non-native monocultures are key to ensure a commercially viable forest which often requires single species management due to several factors such as ecological suitability, availability of seedlings or clonal cuttings, commercial viability, downstream processing facilities (saw mills and pulp mills for example), and the end markets. Commercially viable forests bring with them great longevity, long-term employment opportunities, social impact through engagement with local communities, fire protection, and therefore ongoing sustainable forestry management. Raising financing for such investments in a country like Paraguay is not currently viable without offering carbon financing. iii) Land improvement In many jurisdictions, much of the land targeted for conversion is degraded, anthropized, and very few crops will grow in the soil. Because many non-native species have robust attributes enabling them to grow in harsher conditions, they can in fact improve the soil quality. In the example of Paraguay, some of the land targeted for afforestation desperately requires eucalyptus or equivalent species to reduce the effects of soil compaction. iv) Existing standards FSC and equivalent standards are the results of decades of feedback, fine-tuning and exception

				handling loops. Its implementation is already a taxing and costly endeavour, especially for smaller operators. It is nevertheless required to access the larger and more sophisticated end markets, where sustainability certificates are required. It is questionable, how the introduction of new generic, one-size-fits-all standard can improve on country-specific standards like FSC's and in what measure such additional hurdles may add value, be it ecological, social, occupational or procedural. A monoculture plantation is, by the say of experts, the most efficient way of producing the largest amount of wood on a given surface of land, minimizing land occupation. That is definitely a factor in all countries where the population is seen as growing substantially over the next generation. A monoculture therefore minimizes land usage, a factor seen as desirable by some governments of the Global South.
89	Beatriz Zavariz	Manulife Investment Management Timberland and Agriculture	United States	Yes, non-native monocultures should be eligible for generating carbon credits. The pace at which trees grow and therefore carbon is captured in plantations is faster than in natural forests. This is one tool for climate change mitigation that we cannot afford to exclude from the mitigation tool deck. It is possible to use additional monoculture plantations to rapidly capture carbon while mitigating any potential negative impacts. Multiple publications provide arguments to how monoculture plantations can be used to deliver goods and values while mitigating any negative impacts. Some sources that reference plantation good practices and benefits and that we recommend reviewing are in the following links: https://www.wri.org/insights/can-plantations-help-restore-degraded-and-deforested-land https://newgenerationplantations.org/multimedia/file/3ab82968-74a2-11e3-92fa-005056986313/ Some examples of plantation benefits we can highlight are the following: a) Carbon finance can help develop new timber and fiber markets where industries are not yet developed. The carbon incentive can help address an investor's risk perception from an uncertain revenue stream when timber and fiber destination industries are not yet developed at the time of planting. As a timber investment management organization, we consider carbon projects involving plantations in frontier timber markets additional. b) Enhance soil restoration and prevent soil erosion: generally, establishment of trees over bare soils can help prevent soil erosion. Plantations can serve as protective cover for the soil.

				https://newgenerationplantations.org/multimedia/file/3ab82968-74a2-11e3-92fa-005056986313/ https://www.cabidigitallibrary.org/doi/book/10.1079/9781845935641.0000 c) Plantations can have better capacity to provide habitat for some species than degraded lands. For example, falcon and kiwi populations in New Zealand have been restored thanks to radiata pine monocultures. https://www.rnz.co.nz/national/programmes/ourchangingworld/audio/2018675137/nz-falcons-thriving-in-logged-pine-plantations https://nzfoa.org.nz/138-news/foa-news/foa-media-releases-2023/1714-kiwi-milestone-made-possible-through-forestry d) The public comments received in the June 2023 Verified Carbon Standard consultation related to plantations and monocultures do not necessarily imply that monoculture plantations should not be eligible. The comments generally mention that monoculture plantations should not be claimed to deliver ecosystem restoration benefits. Delineating a differentiation between afforestation and restoration should be allowed. The carbon benefit of additional plantations should not be negated.

2) The area limit intends to allow smallholders to undertake projects that include non-native monocultures, as these projects are unlikely to have significant negative ecosystem impacts. Is 100 ha an appropriate limit for project activity instances that use non-native monocultures? If not, is a smaller area more appropriate? Please justify.

#	Name	Organization	Country	Comment
90	ANONYMOUS #1	N/A	N/A	No
91	ANONYMOUS #2	N/A	N/A	No. 100ha is a big place in many countries. It goes against any goal of encouraging the largest number of small developers to create healthy, long-lived, sustainable forests.
92	Luiz G. De Oliveira Filho	Tiete Agricola Ltda	Brazil	It depends on the region, for example, in Amazon region 100 há is ok, but in southern Brazil It should be around 30 hectares- the land is already quite devided.

93	Laszlo balog	Bloomair Zrt	Hungary	In our opinion, the 100 hectare limit should be increased, not decreased. Economical sizes should be set so that it is motivating and economical to start a project. Below 100 hectares, there is a minimal return on investment, which would reduce the number of projects and thus the carbon sequestration.
94	Michael Spandern	freelance	Germany	No. 100 HA appears somewhat populistic, arbitrary and simplistic. Tree species, topography, soil type, climate, proximity to water bodies and valuable biotopes should be taken into context. The result can be 10 or 1000 ha
95	Mads Asprem	NewAfrica Bioenergy Ltd	United Kingdom	Looking at the agricultural sector in Europe and North America, it is difficult to find non-natives monocultures that are smaller than 100ha. Should we pull up the maize, wheat and potato fields of Europe? Or, shall we allow the global South some of the benefits we Northerners already have allowed ourselves? A 1,000 ha compartments, when established within FSC guildelines, will have a significant positive effect on ecosystems. A 1,000 ha monoculture within a 2,000 ha landscape in Africa is likely to have larger biodiversity than any 2,000 ha agricultural area in France, Germany the UK or the US. It is funny how 100,000s of ha non-native monucultures are OK within forestry in Europe and North America - even the case for carbon projects in NA. The establishment of non-native monocultures in the South requires rural workers, while the NA carbon projects require city workers. Carbon credit projects can create huge co-benefits. The majority of carbon credits have so far created co-benefits for city workers. It is time for the carbon industry to start generating larger benefits for rural workers.
96	Satinder Mohan Singh	Sequoia Plantation	Gabon	As long as gallery forests, native forests, water bodies, biodiversity are preserved , there should be no limit on the size of project area for monocultures of exotic species. Large-scale projects have a more substantial impact on carbon sequestration, effectively mitigating climate change by sequestering significant volumes of carbon dioxide. This scalability is particularly significant in the fight against global climate change.
97	ANONYMOUS #3	N/A	N/A	I don't think there should be a limit imposed to non-native plantations. Reason is a fit-for-all rule is unlikely to be applicable in every environmental condition one can find. Also, it needs to address the eventual utilization of the wood, in the case of the continuum of the forest management (harvests + replantings).

98	ANONYMOUS #4	N/A	N/A	No, 100ha would not be a small-holder size plot. Even if aggregated across many land holders in a community-wide activity, it then becomes a commercial venture. I don't know what the exact size limit should be but something more like 10ha of discontinuous plantations might be reasonable.
99	ANONYMOUS #5	N/A	N/A	I do think that smaller projects should be exempt though most likely a single project with "small" land sizes will have many instances, so in aggregate you could imagine a project that has the same or more amount of total area than a large project that has the nonnative restrictions in place. Is it better from a restoration perspective to have lots of small nonnative parcels in a mosaic landscape? Probably but it might get a bit fuzzy. Also, while it's not easy to determine a smallholder threshold for land size, 100ha in most countries esp in the Global South I think would not be a smallholder, that would already be a larger landowner. A more realistic smallholder size would be 10-20ha. Though in the Global North that might be too small. You could consider using LDC or some other designations to have different thresholds based on country development status.
100	R. Sanjay Mishr	Callirius AG	Switzerland	We find that the 100-hectare limit for project activity instances using non-native monocultures is still too large, as it may not provide sufficient protection against negative ecological impacts, as non-native monocultures can have negative impacts on biodiversity, ecosystems, and water resources and it could lead to significant changes in local ecosystems, especially if these projects are numerous. Moreover, we think that the smallerholders understand the growth dynamics of the native tree species very well and hence, we should encourage them to plant the native tree species (refer to the feedback 3 below for more information). (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4705065/)
101	Vitor Vannozzi Brito	hummingbirds	France	In our opinion, 100 ha is an appropriate limit. However, we would like to propose that those smaller areas would also need to meet conditions similar to the areas larger than 100 ha. Our proposal includes: “For ARR and WRC project activity instances smaller than 100 ha in which the project introduces non-native monocultures, the following conditions are met: At least 10 percent of the project area is designated for the establishment of native species during project activities, and 2) The area of the project to be populated by non-native monoculture(s) either: a) Is classified in scientific literature or by national or local governments as degraded or b) is classified as an agricultural land.” Besides this proposal, we also find paramount to establish a mechanism in which the land tenure of

				those smaller project instances will be diligently checked, in order to avoid big forest owners to divide their pieces of land in 100 ha instances to plant monocultures. A possibility would be geospatial analysis to be sure that those areas are not adjacent to each other.
102	Guy Pinjuv	Pachama	United States	One hundred ha is not an appropriate limit for project activity instances that use non-native monocultures, we believe monocultures should not be allowed regardless of size. This requirement could easily be sidestepped by designing projects to include smaller project activity instances (< 100 ha) within a grouped project.
103	Otto Beukes	ClimatePartner Impact GmbH	Germany	A fixed figure restriction is non-contextual. Projects are often made up of numerous "small" land holdings extending across significant scale. This would raise equitable access restrictions as an instance may comprise dozens if not hundreds of land parcels and stakeholders. If the limit of the project instance is 100ha, other stakeholders under the same instance lose access and participation. The scale and extent of non-native ARR is nuanced and should be considered more extensively before applying restrictions. Stakeholders, land ownership and distribution, habitat type and species, and regulation and policy should be considered holistically and in context if such spatial restrictions are to be applied.
104	Marcelo Schmid	Arvor Business Advisory	Brazil	The average size of rural properties in Brazil varies from region to region but, in general, the average forest property has an area greater than 100 hectares. I think larger areas should be considered, even with the two exceptions of 3.19.28.
105	ANONYMOUS #6	N/A	N/A	This is appropriate size, particularly in India where the average landholding just above than 1ha. To reach 100 ha size, a project developer or project proponent need to integrate no of farmer under one umbrella and prepare the documents as needed. On the same time the benefit will are also in a executable size so that all stakeholder will get benefited by the carbon credits.
106	Richard Zell Donovan	n/a - independent	USA (Vermont)	I think this area limit should be defined by country. The FSC system has already put in place these parameters for all the countries where it has standards, and Verra could just capitalize on those. I would think 10 hectares could be a minimum, but in some countries a higher limit might be used, a la what FSC is doing.
107	Danny Torres	Saltus	Colombia	Is not appropriate to limit the area to 100ha, a better approach could be to limit the area to a percentage of the watershed in which it is established (for example not more than 2% of the

				watershed area). In addition, is different if the area is planted in a single piece of land than in different discrete plots scattered in the watershed.
108	Jacob Penner	The Nature Conservancy	United States	The 100-ha limit for project activity instances seems reasonable, but Verra should draft further language to ensure that projects don't simply divide large project activity instances into smaller project activity instances to get around this criterion. The language should reflect a percentage of the project area that non-native monocultures can be planted on. For instance, Verra could limit the total area eligible for the planting of non-native monocultures in a given project to 30% and thereby ensure that the majority of the project area is devoted to the restoration of native tree species.
109	ANONYMOUS #7	N/A	N/A	It depends on the total project area extension and distribution. 100 ha is too big, plus many 100 ha instances that are located close to each other could be considered as a big area that leads into a large-scale project.
110	ANONYMOUS #8	N/A	N/A	I don't think there needs to be a particular area limit. Smaller and bigger is possible. Smaller areas would possibly be more expensive to develop and manage per hectare compared to large ones. If biodiversity is an issue connected with the large project areas, then one should instead of prohibiting use of non-native tree species (as justified above), require specific biodiversity measures to be taken to improve biodiversity within the project. There is plenty of forest management and forest ecology science from monoculture forestry around the world that could serve as inspiration and guide.
111	Lucio Pedroni	Carbon Decisions International (CDI)	Colombia	No, 100 ha is an arbitrary number that cannot be justified. There should be no upper limit to the area in which non-native monocultures can be developed. However, if VERRA decides to adopt an upper limit, our suggestion would be a much larger number, such as 1,000 ha. Justification: a. As explained previously, there should be no limit for the area on which non-native monocultures can be established, only safeguards when monocultures are established and incentives for establishing more biodiverse ARR projects that can compete with the economic incentives that currently exist for establishing monocultures. (i) Any limit or restriction to the use of non-native monocultures will result in the loss of mitigation and

				sustainable development opportunities. (ii) As elaborated below, defining the criteria that should be used to enforce the limits is problematic and will add unnecessary complexity to an already very complex validation, registration, monitoring, and verification system. b. The concepts of “native” and “non-native” species are fuzzy and require a precise definition, but finding one that works is a challenge: (i) A species may be native to a country but no longer exists there due to habitat loss or overexploitation and not appear on government lists of "native species" for this reason. (ii) A species may have been native to a given ecoregion on geological time scales, but after the ice ages it may not have been able to recolonize the entirety of its original range due to geographic barriers or other types of constraints. (iii) A species may be native to a country and thrive well in a particular ecoregion of the country in which it does not occur naturally. (iv) The areas in which a species exist are not and have never been static. Over centuries and millennia, the geographical distribution of species has changed dramatically even without human intervention. The longer the time scale considered, the more diffuse the concept of “native species” becomes (after all, all humans have African ancestors, does this mean that all people not living in Africa today are “non-native?”). (v) A species can exist in different places in the world. Over millennia, the evolutionary determinants in these different places may have been dissimilar, leading to the formation of populations with different characteristics and adaptations. Therefore, individuals of the same species may respond differently to local environmental conditions if they come from different populations. Individuals of a native species from a non-local population may behave as non-native species do. (vi) Due to climate change, it is possible that many species native to a place will not be able to adapt to the new conditions and that their ecological niches will be occupied by other species that are today considered non-native.

				(vii) In the current context of a changing climate, the introduction of non-native species may be a necessary conservation strategy for these species, as they may not be able to survive in the places where they exist today. c. The concept of "monoculture" does also require an unambiguous definition, but finding one that works is problematic: (i) Let's assume that "monoculture" is defined as "any monospecific tree plantation above 100 (or 500, or 1000) hectares". • With this definition, planting one single tree of a different species for each 100 (or 500, or 1000)-hectare plot in which there is a monospecific plantation would be sufficient to not classify the planted area as "monoculture". Obviously, something more must be added to the definition. • An option is to complement the definition of "monoculture" by specifying how many trees, or percentage of trees, or percentage of planted area (the latter is recommended) with at least one (or X) species different from the main one must exist in the plantation for a planted area larger than 100 (or 500, or 1000) hectares not to qualify as "monoculture". Any number chosen to define the minimum percentage of the non-main species will be arbitrary and difficult to justify. However, without it, there would be a loophole that would allow the establishment of de facto monocultures much larger than what VCS intends to tolerate. • If a definition like the above were adopted, its arbitrariness could easily be questioned because any percentage of species other than the main one that would have to be mixed in the plantation to avoid the planted area being classified as "monoculture" would say nothing about the potential impacts of the plantation. Indeed, the purpose of a definition is to avoid the negative impacts of "monocultures," but an impact-based definition of "monocultures" cannot have universal validity, as it would require a theory of impacts and a case-by-case evaluation, which would be very complex to implement in the context of a standard serving the carbon market. • If the definition of "monoculture" would include a minimum percentage of species other than the main one, it would also be necessary to specify whether this minimum percentage must be met in each hectare or if it could also be met for every 100 (or 500, or 1000) hectares planted (the latter is recommended). For example, if the minimum percentage were 20%, option 1 would imply that in each planted hectare there should be at least 0.2 hectares planted with one (or more) species other than

				the main species, while option 2 would imply that within a planted area of 100 (or 500, or 1000) hectares there should be at least 20 (or 100, or 200, respectively) hectares planted with species other than the main one. • To enhance productivity, nitrogen fixing legumes or crops are sometimes planted between the trees. Would a monospecific tree plantation above 100 (or 500, or 1000) hectares in which a non-tree species has been planted between the trees not be a "monoculture"? (ii) Let's assume that a project establishes monospecific plantations in plots that are smaller or equal to 100 (or 500, or 1000) hectares in order not to qualify the individual plots as "monoculture". • What should be the minimum distance between the plots in order not to qualify adjacent plots planted with the same species as a "monoculture"? Is the separation of plots by roads and firebreaks sufficient to evaluate each plot separately or should a greater distance be considered? Again, any definition of a minimum distance between monospecific plots will be arbitrary and difficult to justify, but without it, there would be a loophole that would allow the establishment of de facto monocultures much larger than what VCS considers tolerable.
112	ANONYMOUS #9	N/A	N/A	We are not aware of any science supporting a limit of 100 hectares for such projects; this seems to be an arbitrary choice. It is unclear what problem this restriction is trying to solve, but it would impose severe costs on smallholders and others who already face significant barriers to develop ARR projects. Given the discussion above, that there is not evidence that non-native monocultures cannot be managed responsibly with environmental integrity, we do not believe there should be a limit on the size of a non-native (or native for that matter) monoculture. Smallholder participation in climate finance already often limited by lack of access to seedlings, inputs, expertise, capacity, finance, and insurance. Many of these constraints can only be overcome by economies of scale, which leads to project aggregation. Smallholders' ability to access important economies of scale can make the difference between a competitive and viable project and one that is doomed to failure. In this context, non-native species can be extremely important for smallholders. Many of their projects, especially in aggregation, already exceed areas of 100 ha. Furthermore, the 100 ha proposed limit would disregard or restrict activities by Indigenous Peoples and Local Communities (IPLC) that operate on communal land, such as concessions or native title, which are typically denominated under larger land titling that would not enable any disaggregation at a scale of less than 100 ha. We do not believe

				Verra wishes to limit smallholder or IPLC project feasibility, and this would be an unintended consequence of an arbitrary limitation on non-native monoculture scale.
113	Zoltan Kun	Great Lakes and Wetlands Association (Forest Defenders Alliance)	Hungary	The proposal states that "these projects (non-native monocultures below 100 hectares) are unlikely to have significant negative ecosystem impacts". What research evidence proves this statement? Is there any scientific literature indicating the 100 hectares as an acceptable limit? Vu Ho et al (2023, https://www.sciencedirect.com/science/article/pii/S0378112723000221) for instance found that plantations have serious negative effects on certain ecosystem properties. Pinus plantations in Hungary proved especially harmful to the local and regional water balance, as they desiccated both the lower soil layers and the topsoil. Tölgyesi et al. (2020) showed that the humus content of the topsoil was higher in near-natural poplar forests than in Pinus or Robinia plantations. Non-native plantations even on a small scale can become problematic invaders. Therefore, we do not support the unjustified 100 hectares limit, and do not support the eligibility of non-native monoculture plantations for carbon credit.
114	ANONYMOUS #10	N/A	N/A	We have no particular view on the optimal size of smallholder plantations however we would like to point out that smallholder success is often coupled to the existence of larger nucleus plantations that can form the basis of investments in wood processing industries that will ultimately create value for all forest developers. We feel that there is a tension between allowing smallholder plantings and excluding large scale plantation developments – 100's or 1,000's of smallholder plantations add up to the same as a single large-scale plantation but often does not include the same rigour and scrutiny that large scale plantations are under and rarely include sizeable areas of conservation
115	ANONYMOUS #11	N/A	N/A	We disagree with the underlying assumption that all monocultures have "significant negative ecosystem impacts". Ecosystems, and the net effect of plantations within these ecosystems, are variable. Well managed projects should have no significant effect or have beneficial effects. This is recognized in the concept note issued by UNFCCC regarding the analysis of different removal categories under Art 6.4 (3). Regarding the extension question, the limit should be higher, at least 500 has. Fixed costs for developing an adequate carbon project are high, validation, verification and monitoring activities have a disproportional impact on small areas such as the one proposed. Moreover, imposing a low target area effectively raises the breakeven price of credits for the project to be feasible. In summary it

				raises the additionality threshold to levels only achievable with very high, and currently nonexistent, credit prices. (3) UNFCCC - Concept note: Removal activities under the Article 6.4 Mechanism 1.0 -- pp13 – 61, 63, 64. https://unfccc.int/sites/default/files/resource/a64-sb001-aa-a05.pdf "3.4.7. Avoidance of negative environmental and social impacts -- 61. Risks of removal activities for ecosystems, biodiversity and people depend on the method, site-specific context, implementation, and scale of the activity. 63. Activities of afforestation and management of soils in agricultural fields and pastures can potentially cause adverse environmental and socioeconomic impacts, including impacts on biodiversity, food and water security, local livelihoods and the rights of indigenous peoples. 64. Sustainable forest management activities can prevent and reduce land degradation, maintain land productivity, and sometimes reverse the adverse impacts of climate change on land degradation, thus contributing to adaptation."
116	Spencer Meyer	BeZero Carbon	U.S.	We recommend that methodologies disclose how arbitrary thresholds such as the '100 hectare benchmark' are estimated for area limits for smallholders and how these are linked to financial viability at the project level. Furthermore, we recommend that methodologies acknowledge if there is potential for this threshold to change in the future, or be variable depending on other variables such as the country where the project is located. Further, we recommend that methodologies detail how grouped projects can apply such thresholds and what the safeguards are for grouped projects. We recommend that the methodology require projects to report whether buffers are applied to prevent adjacent land being planted. This would enable further disclosure relating to adjacent landholdings, and provide useful information on the likelihood of expansion of non-native monocultures unrelated to a carbon project.
117	ANONYMOUS #12	N/A	N/A	100ha limit may be appropriate on a case-by-case basis, provided the economic and social benefits to smallholders can be shown to outweigh any potential negatives of single species planting . However, having a fixed threshold can present problems. For example, when an area of land greater than 100ha has been severely degraded, the original conditions that allowed native species to thrive may have been lost, making it expensive or difficult to reintroduce native species through planting, and placing an area size limit could exclude potential ARR areas from the project. In such circumstances, non-native species that have evolved in similar environmental conditions like those found on the degraded lands should be allowed to be considered, providing they can be demonstrated to provide positive impacts to the local biodiversity and are climate change resilient. This will increase the likelihood of

				tree establishment, making this a realistic option to make an ARR project technically and financially viable.
118	Jeremy Kaufman	Propagate Group PBC	United States	A 100 hectare project area is a feasible size for a single farm, but it shouldn't be limited to the overarching project developer in a given region. Meaning if you have 10 farms in a 30 mile radius, the 10 farms should be viewed as individual projects rather than the whole of the 10 farms as 1 project. This would ensure that project developers can aggregate projects across a region without restriction in the aggregate.
119	ANONYMOUS #13	N/A	N/A	We are not aware of any science supporting a limit of 100 hectares for such projects; this seems to be an arbitrary choice. It is unclear what problem this restriction is trying to solve, but it would impose severe costs on smallholders and others who already face significant barriers to develop ARR projects. Given the discussion above, that there is not evidence that non-native monocultures cannot be managed responsibly with environmental integrity, we do not believe there should be a limit on the size of a non-native (or native for that matter) monoculture. Smallholder participation in climate finance already often limited by lack of access to seedlings, inputs, expertise, capacity, finance, and insurance. Many of these constraints can only be overcome by economies of scale, which leads to project aggregation. Smallholders' ability to access important economies of scale can make the difference between a competitive and viable project and one that is doomed to failure. In this context, non-native species can be extremely important for smallholders. Many of their projects, especially in aggregation, already exceed areas of 100 ha. Furthermore, the 100 ha proposed limit would disregard or restrict activities by Indigenous Peoples and Local Communities (IPLC) that operate on communal land, such as concessions or native title, which are typically denominated under larger land titling that would not enable any disaggregation at a scale of less than 100 ha. We do not believe Verra wishes to limit smallholder or IPLC project feasibility, and this would be an unintended consequence of an arbitrary limitation on non-native monoculture scale.
120	Cyril Melikov	EP Carbon	United States of America	EP Carbon asserts that if establishing non-native monocultures is deemed an eligible activity, it should not be subject to any size limitations when being implemented in a small-holder setting, as long as it is coupled with native ecosystem restoration (as highlighted in our response to Question four), adheres to the safeguard requirements outlined in our response to question one, and shows that the

				plantations are in a subsistence, non-commercial setting. Rather than imposing requirements on small-holder settings based on pre-defined area limits, we recommend creating a ratio for calculating allowable area limits based on the projected demand for fuel and fiber for subsistence purposes. For example, managed wood-lots for fuel-replacement are commonly prescribed in certain small-holder settings as a way of addressing immediate economic need or to promote permanence of GHG removals (or reductions) created by a project implementing other types of ARR or conservation activities. It would be a mistake to artificially set a strict area limit for non-native monocultures in these settings because the size of a PAI can vary widely, as could the concentration of land users in or around the PAI for whom viable activities for ensuring project permanence are needed. Therefore, artificially restricting non-native plantations in small holder settings could unnecessarily restrict a valuable project activity and create a mismatch between the PAI conditions and ARR activities that could be a legitimate tool for addressing serious unsustainable economic and land use patterns. A possible related requirement to mitigate the concern for gaming this requirement would be to justify the size of managed non-native woodlots by first demonstrating the demand from local populations versus the supply needed from managed non-native wood lots, combined with an upper allowable limit.
121	CASSAGNE Morgan	FRM COMMITMENT	FRANCE	Such an area threshold opens the door to large grouped projects that could lead to monoculture over very large areas. Suppose, for example, a project proponent seeking to promote teak in a valley inhabited by small farmers, the entire valley could become occupied by teak, each farmer having his plot of less than 100 ha, but the total area of teak in the valley could exceed a continuous estate of 1,000 ha. For us this is no different from a project carried out by a single owner.
122	Laurent Valiergue	THE SHARED WOOD COMPANY	FRANCE	The proposal aiming at discriminating certain types of project owners/proponents is not a good idea under the VCS Program, mission of which is to promote sound investments bolstering carbon storage in the field according to general principles which should apply to all. Such differentiation, if any or wished by VERRA, would be more appropriate under the CCB Program all the more that, according to FAO, the vast majority of smallholders have less than 5 hectares of lands (except in Brazil). As a proposal, we suggest that: - no upper limit affects the use of non-native monocultures under the VCS Program; and that

				- the CCB Program adds such an upper limit (probably to be reduced) as a criterion for achieving the Biodiversity / Community Gold Level.
123	Santiago Castelo	Carbosur	Uruguay	The problem this restriction seeks to address is not clear, and we are not aware of any scientific data supporting a limit of 100 hectares for this type of project; it appears to be an arbitrary choice. However, we do not oppose this aspect of the proposed amendment for this public consultation. Since we lack an understanding of the problem this restriction aims to solve, we are uncertain about how to contribute to optimizing this particular point of the proposed modification.
124	ANONYMOUS #14	N/A	N/A	We fail to comprehend the need for imposing a limit. We do not see the benefit; instead, it would present more challenges for small-scale reforesters. The involvement of smallholders in climate finance is frequently constrained by their limited access to seedlings, inputs, expertise, capacity, finance, and insurance. Overcoming many of these challenges necessitates economies of scale, prompting the aggregation of projects. The capacity of smallholders to tap into crucial economies of scale can be the decisive factor between a competitive and viable project and one destined for failure.
125	Cliff Massey	Burapha Agroforestry Co. Ltd	Lao PDR	DO NOT AGREE Data suggest that as of the late 1970s Lao PDR was predominantly forested and has been reduced to its current forest cover of approximately 58.0 % (as of 2015), with accelerated pace of forest loss towards the late 1990s and 2000s . The official data from the National Reconnaissance Survey show that the total forest cover was about 11.2 million ha (47%) in 1989, and if compared with the unofficial data from the Forest Cover Project, forest cover decreased to 9 .06 million ha in 1997 (39.4%). During a nine-year period, about 2,140,000 ha of the forest area was lost (237,000 ha per year). The main causes of deforestation are as a result of many factors: (1) shifting cultivation (2) forest fire (3) logging (4) population increase. Burapha only establishes plantations on lands that have been previously cleared (>10y), predominantly swidden. In provinces were Burapha operates, its been estimated that around 48,000 families (Households) practice swidden with an average annual natural forest cover loss of 4.8% . Utilisation of the significant area of degraded lands for plantations is an opportunity for Burapha's business and long-term work opportunities for remote communities, while protecting remaining natural forest cover. Additionally, ARR projects by long-term rotational tree crops present potential mitigation strategies as carbon credit for many countries to meet their commitments of greenhouse gas emissions reductions.

				Besides even if the cap were to be placed at 100ha, small holders do not have the capacity, financial or otherwise to go through the IRR/VCU application requirements. The 100 ha limit makes no sense in the Lao context. Loa PDRs forest resources are under increasing threat due to the rapid expansion of fallow farming, shorter fallow periods and encroachment by farmers on neighboring intact forests. Pressure on natural forests will remain a significant issue unless alternative land use options, such as plantations, are realized. In the Lao context a 100ha limitation will never facilitate sustainable forestry and will only lead to increases forest loss.
126	ANONYMOUS #15	N/A	N/A	The ability to demonstrate responsible forestry practices and mitigation of potential negative impacts is more important than the size of individual projects. WWF FF recommends a landscape approach and not looking at individual plots and projects in isolation.
127	ANONYMOUS #16	N/A	N/A	This question makes no sense. Either you have monoculture or not. Again the purpose of carbon credits is to sequester carbon. This should be done in a sustainable way. The best way to do this is with large scale monoculture plantations,
128	Marlène Ramón Hernández	Carbon Market Watch	Belgium	We find it inaccurate to assume that non-native monoculture projects are unlikely to have significant negative ecosystem impacts and would, therefore, not support such activities, regardless of the size. The literature has vastly documented why non-native monocultures threaten biodiversity (IPCC, 2022). As explained previously, monocultures show poor resilience, increase soil acidity, and are highly flammable. They also require artificial and mineral input, consume vast amounts of water, and reduce the number of species that will find an area habitable. Similarly, non-native species in semi-arid or arid regions can deplete soil water resources if they have high evapotranspiration rates (ibid.), which is particularly problematic considering potential global warming impacts on precipitation and water availability. It is also difficult to guarantee that non-native species do not become invasive, particularly when introduced into delicate contexts. Nonetheless, there may be instances where non-native species polycultures are preferred due to the inherent difficulty in restoring native species, for instance, when native seed sources in the degraded land are absent. Where seeds actually exist, these must be planned and sourced well in advance, and expertise and processing tools are required (Meyer and Lindon, 2023). Another reason for non-native use might be that new climate conditions prevent native species from growing. In any case, when non-native species are introduced, selecting species with complementary structural and functional traits

				such as shade tolerance, (height) growth rate, crown structure, foliar and root phenology, root depth, life span, as well as nitrogen and non-nitrogen fixing capacity is crucial (Ching Liu et al.,2018). Ultimately, the use of non-native tree species should depend on their ecological functions, the services they provide, their suitability to future climatic conditions, and their potential harm to the environment (Messier et al.,2021). This positioning also answers questions 3), 4), and 5) of the survey. As to 3) and 5) since we believe that restoration activities should not include non-native monocultures, determining their eligibility is irrelevant. As to 4) the need for a tailor-made approach and the potential for native restoration to be impossible in a particular land or context renders designating a certain threshold for native ecosystem restoration artificial. As a general rule, however, native restoration should be favoured. IPCC (2022), Climate Change and Land An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems, Chapter 1, p.98 https://www.ipcc.ch/site/assets/uploads/sites/4/2022/11/SRCCL_Full_Report.pdf IPCC (2022), Climate Change and Land An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems, Chapter 6, p.596 https://www.ipcc.ch/site/assets/uploads/sites/4/2022/11/SRCCL_Full_Report.pdf Meyer, V. and Lindon L. (2023), Why Native Restoration Matters https://21080104.fs1.hubspotusercontent-na1.net/hubfs/21080104/white-papers/terraformation-why-native-forest-restoration-matters.pdf Ching Liu, C.L. et al. (2018), Mixed-species versus monocultures in plantation forestry: Development, benefits, ecosystem services and perspectives for the future https://www.sciencedirect.com/science/article/pii/S235198941830088X
129	ANONYMOUS #17	N/A	N/A	please refer to answers provided by FIA and BTG

130	ANONYMOUS #18	N/A	N/A	A 100-ha size is reasonable for smallholder projects including non-native tree monocultures. But also it is important to have the exception for larger areas as included in the proposed 3.19.28. Where there is the possibility to use non-native tree monocultures for ARR projects in areas larger than 100 ha when at least 30% of the project area will be used for native ecosystem restoration and the rest of the area where the use of non-native tree monoculture will be used is considered as degraded or have been used for intensive agriculture in the past 10 years.
131	ANONYMOUS #19	N/A	N/A	The importance of the area with non-native monocultures will be context dependent. The suitable size of a monoculture plantation should be considered within the broader landscape and social context, taking in consideration local ecological conditions, conservation goals, sustainable forestry practices, etc. Special consideration must be given for projects in areas endangered ecosystems (e.g., Atlantic Forest in Brazil), where restoration is critical and a large non-native monoculture plantation is occupying space that could be used for critical habitat. The distribution of the land parcel size (e.g., few, large landowners vs. many small/medium landowners) should also be considered, given the impact that very large non-native monoculture plantations established by well-funded forestry companies could have on local dynamics of land availability and displacement of rural communities. Large, extensive plantations may also have more impact in smaller countries (e.g., Central America), where 20 ha may be a “large” plot, versus large countries (e.g., Brazil), where 100 ha might a medium or small plot. The area limit for monoculture projects must carefully consider context; a one-size-fits-all approach may not be appropriate. Regardless of the approach or number ultimately chosen, VCS must include a strong justification in the text of the Standard documents to support its decision, especially that the rationales for VCS’s many rules have rarely been included in other versions of the Standard. In this regard, even though 100ha seems like a completely arbitrary value it does provide a reasonable upper boundary.
132	Shermila Weragoda	stx commodities b.v	Netherlands	According to section 2.2 of the proposal for public consultation, it is mentioned that for small landowners, planting non-native monocultures is a way to maximize the efficiency and productivity of plantings. Small-scale use of non-native monoculture species can generate livelihood benefits and enable conservation or restoration activities with little to no negative impact. It is unclear if the proposed 100 ha limit is for one large land parcel in one instance or a collection of smallholder farmers to create one project instance with a 100 ha land limit. The 100 ha limit cannot be considered a smallholder farmer's land because a smallholder farmer typically constitutes 0.5—10 hectares of land parcel. If a collection of smallholder farmers creates one project instance, there should not be a 100-ha limit for a project instance (the limitation of one land parcel should be aligned

				with the country's smallholder farmer definition). For example, there is a project in the Verra registry (ID 2577, Project status: Under Validation), and this project is a non-native monoculture plantation. This project has been implemented on 3000 ha of degraded lands owned by smallholder farmers. The primary purpose is to improve the livelihood of poor local farmer communities and enhance tree cover in the project area. The project has been developed as one instance, and the size of one land parcel is approximately 0.5 to 2 ha. (this tree is well established). If the new proposal looks at smallholder and environmental benefits, such projects should be allowed to generate carbon credits.
133	Shauna	The ForestLink	Italy	This again, is highly nuanced. It absolutely depends on the forest landscape, the biological, climatic, geological, and socioeconomic conditions of the area. The compartment size and species selected for a site needs to reflect the context of the site. "100 hectares" as a blanket requirement is an arbitrary number, and by no way gives way to indicate a high-integrity credit, as it is not scientifically based. A high-integrity credit would demonstrate that the species used and in the configuration applied are appropriate for the site and its conditions (scientifically and socioeconomically).
134	ANONYMOUS #20	N/A	N/A	There should not be a limiting area for carbon credit projects, even when it comes to projects with non-native monoculture plantations, firstly, as we should not influence the limitation of carbon removals from the atmosphere when the carbon emissions scenario Greenhouse gases have been reaching increasingly high levels in recent years. And observing in a larger context where the Science Base Target initiative (SBTi) will only accept carbon credits from removal as part of achieving goals, it is necessary to guarantee the availability of this type of carbon credit on the market, so that companies can offset your emissions. The limitation of access for small producers in carbon credit projects is not related to the size of the project area itself but to the costs involved in preparing the Project Document Design (PDD), validation and verification audits, and certifier fees. If the project proponent does not have the initial capital or a financier to finance this initial process of a carbon credit project, there will be no point in having an area size limitation. Furthermore, it would be more effective to promote the inclusion of small farmers if the certification body encouraged the development of grouped projects instead of limiting the size of project areas. In this way, it is possible that the costs involved in the project can be diluted among more than one producer, and in this way achieve the economic viability of the projects. All human activity generates impacts, whether positive or negative in different aspects, especially environmental, social, and economic. It is important to highlight that all projects that aim for carbon credits must present project designs that aim for sustainable development, which by definition aim to

				mitigate negative impacts and enhance positive impacts. For projects where non-native monoculture will be practiced, the requirement for complementary forest certification can be implemented in order to guarantee the health of the ecosystem, which is independent of the size of the forest area. We already operate internationally with the Forest Stewardship Council (FSC) and the Program for the Endorsement of Forest Certification (PEFC), in addition to other regional forestry certifications. FSC certification, for example, is a certification that also functions as a tool for sustainable development and environmental management that combats deforestation, contributes to the responsible use of forest resources, and promotes the maintenance or improvement of ecosystem services, such as water supply. , carbon stock and cultural values, helps in the conservation and regeneration of natural forests and wildlife, respects the well-being, dignity, and rights of workers, local communities, and indigenous peoples, and adds great socio-environmental value to certified products.
135	Tony Knowles	Cirrus	South Africa	As long as additionality criteria are met and appropriate biodiversity and social safeguards are adhered too (including not planting into indigenous ecosystems), one may question why there is a 100ha limit. Larger projects, often managed by commercial entities, typically follow the FSC principles and are well managed.
136	Thurstan Wright	SilviCarbon	Netherlands	We propose that the limit should be raised to 250 ha. This is because, due to economies of scale, the limit of 100 ha is quite small if one considers the transaction costs related to carbon certification. Moreover, we work with community projects in South East Asia where whole villages contribute land to reforestation activities as part of a diversification of their income generation activities. The biggest of such areas can go up to 500 ha (with total village communal land around 10,000 ha). Because these projects are often agroforestry projects (i.e., intercropping and the grazing of animals), the reforestation areas are more extensive than in typical ARR projects.
137	ANONYMOUS #21	N/A	N/A	This should be analyzed at a regional scale. One thousands of small non-native monoculture effects are similar to a large sale monoculture project. May be a lower threashold should be applied, like 5% of the area with native species should be planted.
138	ANONYMOUS #22	N/A	N/A	The 100-hectare limit proposed for projects involving non-native monocultures might pose an excessive restriction. Increasing this limit could encourage greater participation of sustainable

				projects, as it would allow medium to large-scale projects to be presented, providing a valuable contribution in terms of restoration and carbon capture. These projects would participate without compromising the ecological integrity of the areas where they are established.
139	ANONYMOUS #23	N/A	N/A	NO 100 ha does not seem an appropriate threshold, no justification is given to support the proposition of this threshold. Smallholder projects are a very positive approach to develop plantations projects, but can be very complex to implement. Outgrowers and smallholders schemes often needs to be complemented/coupled with core/nucleus plantations so the whole set-up is economically viable on the long run, one key factor to ensure the permanence of the carbon sinks created. Again, we understand the rational behind VERRA's proposition, but we believe that setting such stringent parameters is going to extremely narrow down the potential to deploy ARR projects at scale.
140	ANONYMOUS #24	N/A	N/A	The definition of small scale can vary significantly across geographies. 100 ha seems large enough to include different types of smallholders, and small enough to exclude medium and large players, or more commercial initiatives.
141	María Claudia Pittamiglio	Sociedad de Productores Forestales	Uruguay	It is not feasible to argue for a specific (maximum) project size given the complex dynamics of this biological ecosystem and its interaction with others. A sustainable managed area larger than 100 hectares may have a lower impact than a very poorly managed area smaller than 100 hectares. Nevertheless, the requirement aligns with the National Environmental Authorization, which mandates an Environmental Impact Assessment before implementing any afforestation project when its larger than 100 hectares. The project developer must conduct this assessment and seek permission for tree planting. The authorization may be either denied or granted, with or without modifications, contingent upon the specific characteristics of the project. Below, you can see everything needed to complete an environmental impact assessment. As it will be noticed, the study is thorough and detailed. Therefore, if the Ministry of the Environment approves the project, it serves as strong evidence that the country supports it and its contribution to sustainable development, climate change mitigation, job creation, and various other benefits. In response to the feedback requested, a larger area of 100 ha should also include non-native monocultures and be approved by VCS if complies with an Environmental Impact Assessment. On the other hand, the "Long term climate strategy for a low GHG emissions and climate resilient

				development in Uruguay" is considering Eucalyptus and Pinus plantations as part of our CO2 neutrality towards 2050. "In order to support the decarbonization of CO2-emitting sectors and on the path towards CO2 neutrality by 2050, the agricultural and land use sector presents various scenarios for carbon sequestration. These scenarios are particularly linked to increases in the area of native forests, shelter and shade forestland for livestock, and forest plantations for sawn timber and other industrial uses" (6). The report considers two scenarios, the first is a trend scenario which considers an increase of 105,000 ha until 2050. The second scenario is a more optimistic scenario and considers an increase of 235,000 ha until 2050. Environmental Impact Assessment decree: According to the decree, the Environmental Impact Assessment must encompass the project and its potential area of influence, including a general macro-environmental framework. This involves conducting an objective comparison between the conditions before and after the project's execution, spanning its construction, operation, and abandonment phases. The document summarizing the results of the Environmental Impact Assessment must include, at a minimum, the following sections: Part I (Characteristics of the receiving environment): This section will outline the main features of the surroundings, assess existing impacts, and identify sensitive or at-risk areas. All of this will be analyzed in three aspects: a) Physical environment: water, air, soil, landscape, etc. b) Biotic environment: fauna, flora, aquatic biota, etc. c) Anthropogenic environment: population, health, activities, land use, Sites of historical and cultural interest, etc. Part II (Identification and assessment of impacts): in which environmental impacts, both negative and positive, will be identified and evaluated, taking into consideration the following aspects: a) Anticipation of direct and indirect impacts, both singular and cumulative, as well as the assessment of risks arising from the resulting environmental situation of the project's execution. b) Prediction of the evolution of negative environmental impacts, comparing the environmental conditions with and without the project's implementation. c) Quantification of identified environmental impacts, both geographically and temporally. d) Comparison of the results with the current situation and accepted standards Part III (Determination of mitigation measures): in which the mitigation measures to be adopted will be

				identified and developed, and the calculation of residual environmental impact will be presented in case the measures are implemented. The following aspects must be considered: a) The mitigation measures to be implemented to reduce the identified environmental impacts. b) Plans for risk prevention and contingencies; compensatory or restorative measures that will need to be adopted; c) Environmental management plans for the project; and d) Abandonment programs that will need to be adopted. Part IV (Monitoring, Surveillance, and Audit Plan): where a monitoring plan for relevant environmental factors within the project's area of influence will be presented. Part V (Information and Participating Experts): The Environmental Impact Assessment must clearly outline any deficiencies in information or foundational knowledge, as well as uncertainties encountered during its development. Additionally, all professionals involved in its preparation will be identified. If the project has been categorized as "B," the Environmental Impact Assessment must place greater emphasis on the elements or the sector specifically highlighted, while maintaining the structure outlined in this article, as relevant. (6) https://www.gub.uy/ministerio-ambiente/sites/ministerio-ambiente/files/2021-12/Estrategia_Clim%C3%A1tica_de_Largo_Plazo_Uruguay%202021.pdf
142	Thais Stoppe	Geonoma	Brazil	Yes, we believe 100 ha is an appropriate limit for the Brazilian context.
143	ANONYMOUS #25	N/A	N/A	Yes, this area is appropriate, as smallholder sizes may vary significantly among different countries.
144	ANONYMOUS #26	N/A	N/A	The requirement of a Prior Environmental Authorization (PEA), which implies undertaking an Environmental Impact Assessment before implementing any afforestation project larger than 100 hectares, ensures the environmental feasibility and sustainability of these larger plantations. The project developer must conduct this assessment and seek permission for tree planting. The authorization may be either denied or granted, with or without modifications, contingent upon the specific characteristics of the project.

				All the items to be assessed to obtain a PEA are described in the Appendix copied at the end of this response. As it will be noticed, the study is thorough and detailed. Therefore, if the Ministry of the Environment approves the project, it serves as strong evidence that the country supports it and its contribution to sustainable development, climate change mitigation, job creation, and various other benefits. In response to the feedback requested, due to the reasons already stated, there is no reason to define an area threshold for VCS to approve plantation projects with single an exotic species, provided that these projects comply with the existing legislation in Uruguay. Furthermore, the “Long term climate strategy for a low GHG emissions and climate resilient development in Uruguay” is considering Eucalyptus and Pinus plantations as part of our CO2 neutrality towards 2050. “In order to support the decarbonization of CO2-emitting sectors and on the path towards CO2 neutrality by 2050, the agricultural and land use sector presents various scenarios for carbon sequestration. These scenarios are particularly linked to increases in the area of native forests, shelter and shade forestland for livestock, and forest plantations for sawn timber and other industrial uses” . The report considers two scenarios, the first is a trend scenario which considers an increase of 105,000 ha until 2050. The second scenario is a more optimistic scenario and considers an increase of 235,000 ha until 2050. Appendix: Main requirements on the Environmental Impact Assessment decree (Uruguay) The Environmental Impact Assessment must encompass the project and its potential area of influence, including a general macro-environmental framework. This involves conducting an objective comparison between the conditions before and after the project's execution, spanning its construction, operation, and abandonment phases. The document summarizing the results of the Environmental Impact Assessment must include, at a minimum, the following sections: Part I (Characteristics of the receiving environment): This section will outline the main features of the surroundings, assess existing impacts, and identify sensitive or at-risk areas. All of this will be analyzed in three aspects: a) Physical environment: water, air, soil, landscape, etc. b) Biotic environment: fauna, flora, aquatic biota, etc. c) Anthropogenic environment: population, health, activities, land use, Sites of historical and cultural interest, etc. Part II (Identification and assessment of impacts): in which environmental impacts, both negative and positive, will be identified and evaluated, taking into consideration the following aspects:

				a) Anticipation of direct and indirect impacts, both singular and cumulative, as well as the assessment of risks arising from the resulting environmental situation of the project's execution. b) Prediction of the evolution of negative environmental impacts, comparing the environmental conditions with and without the project's implementation. c) Quantification of identified environmental impacts, both geographically and temporally. d) Comparison of the results with the current situation and accepted standards Part III (Determination of mitigation measures): in which the mitigation measures to be adopted will be identified and developed, and the calculation of residual environmental impact will be presented in case the measures are implemented. The following aspects must be considered: a) The mitigation measures to be implemented to reduce the identified environmental impacts; b) Plans for risk prevention and contingencies; compensatory or restorative measures that will need to be adopted; c) Environmental management plans for the project; and d) Abandonment plan that will need to be adopted. Part IV (Monitoring, Surveillance, and Audit Plan): where a monitoring plan for relevant environmental factors within the project's area of influence will be presented. Part V (Information and Participating Experts): The Environmental Impact Assessment must clearly outline any deficiencies in information or foundational knowledge, as well as uncertainties encountered during its development. Additionally, all professionals involved in its preparation will be identified. If the project has been categorized as "B," the Environmental Impact Assessment must place greater emphasis on the elements or the sector specifically highlighted, while maintaining the structure outlined before, as relevant.
145	ANONYMOUS #27	N/A	N/A	We believe the area limitation for a project activity instance should not be defined. In Uruguay, forest plantations cover an average of 60% of the total area, and this area is not distributed as a uniform block, but is the sum of smaller areas that are surrounded or crossed by non-forested areas. In the non-forested areas there are many (hundreds) of different species of grasses, trees and shrubs, and the aim is for them to be connected to each other and to the environment to favour connectivity between environments, which is of great importance for the fauna. In this line, the diversity of the system or project should not be measured only where the plantation is made, but in the project as a whole. This is due to the fact that biodiversity is a complex system where different biomes interact with each other and its richness is that which arises from the parts as a whole.

				Companies have measured impacts on flora and fauna biodiversity over the years. This monitoring is carried out by experts in flora and fauna, and is recorded in reports that are submitted to the FSC (Forest Stewardship Council). These measurements are taken in areas defined by the companies as conservation areas, which include native forest, wetlands, grasslands, stony areas with park-like native forest and riparian forests. These areas are monitored yearly to evaluate the number, characteristics and frequency of fauna and flora species. In Uruguay, these studies have been a valuable contribution of the productive sector to the knowledge and conservation of natural resources, generating valuable scientific information. The results have shown an increase in biodiversity in the vast majority of cases. In addition, new plant species have been discovered and a greater frequency of species that were not seen before the plantations were established has begun to be recorded. At the basin level, at the request of the Ministry of the Environment, the evolution of those basins with the highest percentage of forested area is monitored. In addition, the companies grouped under the Society of Forestry Producers have commissioned studies from international specialists to monitor the impact of planted forests on the most important watersheds. These studies show a buffering effect of the forest, delaying and lowering the speed of water when very heavy rains occur (which results in less erosion). They also generate an increase in soil infiltration. On the other hand, the negative impact could be that in times of drought, the trees intercept part of the water that rains and this can lower the flow of the basin by up to 20%.
146	ANONYMOUS #28	N/A	N/A	Projects should have the option to include non-native monocultures according to the project scales already defined in the methodologies. However, we do not consider it pertinent to exclude monocultures of non-native species if an area limit is exceeded, but rather to ensure that there are no significant negative impacts, or they are effectively mitigated by including requirements on safeguards that allow an evaluation of the impacts and the design and implementation of control or management measures.
147	James Hewitt	independent	United Kingdom	A Small holders should never be accorded special status in connection with replacing natural biomes with non-native plantations. The products of those plantations would almost invariably be procured by large enterprises for conversion and often (not always) export. Those large enterprises would have established mills or other units in locations where they hope small-holders can be induced to carry out the required land-use change, including where they do not have rights.

				B The trend in international trade regulations is to regard a change in land use from natural forest to plantations as degradation akin to deforestation - including in relation to the supply of feedstock for wood pellets destined to be burned in power stations in order to generate lucrative subsidies. (Fraudulent claims are all too frequent - justifying (i) repeated, probably superficial, investigations by the UK government and, (ii) in the USA, class-action law-suits.) Amongst other things, this trend reflects the probability that permanent sequestration by the planted trees before the global carbon budget (for well below 2C) is exhausted will be less than if the natural forest were not clear-felled. Small holders in countries which supply most of the wood pellets which power stations burn tend not to be compensated sufficiently to ensure that the carbon sequestration capacity of their land is restored and there may be insufficient regulatory incentive for restoration to take place.
148	Nadine Block	Sustainable Forestry Initiative	United States and Canada	No. SFI would not support the use of any size cap for non-native species in monoculture. The use of an arbitrary size cap is not based in science. Also, for economic viability an ARR project(s) could require area(s) larger than 100 hectares. Ultimately, adopting a size cap could result in fewer ARR projects. Regardless of size, the use of non-native species should be allowed provided the negative ecological impacts of deployment have been assessed for and the risks mitigated.
149	Camilla Marangon	Ibá - Brazilian Tree Industry	Brazil	All projects with 100ha or less should be eligible without conditions, even if they are part of a grouped project with more than 100ha in the total sum of areas. The size of the area on non native monoculture doesn't matter as long as sustainable forest management is applied. ARR project criteria already ensure sustainability. There is no scientific basis known to us that supports a 100 hectare limit; this appears to be an arbitrary decision. "The planted forests in Brazil, for the most part, are managed sustainably, thus ensuring a positive impact on the ecosystem. Studies conducted in Eucalyptus spp. plantations in Brazil revealed that a total of 156 birds (50.6%), distributed among forest and grassland species, were found in Eucalyptus plantations. This attests that birds can adapt and utilize this type of environment, depending on the height or age of the Eucalyptus trees in each area (Gabriel and Godoy, 2019). A nine year study conducted on a Eucalyptus spp. farm recorded 69 mammal species, including 23 bats, 14 nonvolant small sized mammals, and 32 medium to large sized mammals. Twelve of these species are under the threat of extinction. The findings of this study significantly contribute to understanding the local fauna, highlighting the importance of this farm for mammal conservation in the region. (Homem et al., 2020)". References: Gabriel, V. A.; Godoy, F. I. Community of birds in a mosaic of Eucalyptus and native vegetation in Três Lagoas, MS, Brazil. Oecologiaaustralis, v. 23, n. 3, 2019. Available at:

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150	ANONYMOUS #29	N/A	N/A	All projects with 100ha or less should be eligible without conditions, even if they are part of a grouped project with more than 100ha in the total sum of areas. The size of the area on nonnative monoculture doesn't matter as long as sustainable forest management is applied. ARR project criteria already ensure sustainability. There is no scientific basis known to us that supports a 100-hectare limit; this appears to be an arbitrary decision. "The planted forests in Brazil, for the most part, are managed sustainably, thus ensuring a positive impact on the ecosystem. Studies conducted in Eucalyptus spp. plantations in Brazil revealed that a total of 156 birds (50.6%), distributed among forest and grassland species, were found in Eucalyptus plantations. This attests that birds can adapt and utilize this type of environment, depending on the height or age of the Eucalyptus trees in each area (Gabriel and Godoy, 2019). A nine-year study conducted on a Eucalyptus spp. farm recorded 69 mammal species, including 23 bats, 14 nonvolant small-sized mammals, and 32 medium to large-sized mammals. Twelve of these species are under the threat of extinction. The findings of this study significantly contribute to understanding the local fauna, highlighting the importance of this farm for mammal conservation in the region. (Homem et al., 2020)". References: Gabriel, V. A.; Godoy, F. I. Community of birds in a mosaic of Eucalyptus and native vegetation in Três Lagoas, MS, Brazil. Oecologiaaustralis, v. 23, n. 3, 2019. Available at: COMhttps://revistas.ufrj.br/index.php/oa/article/view/15597UNIDADE DE AVES EM UM MOSAICO DE Eucalyptus E VEGETAÇÃO NATIVA EM TRÊS LAGOAS, MS, BRASIL | Oecologia Australis (ufrj.br). Homem, D. H.; Lima, E. F.; Nobre, R. A.; Colas-Rosas, P. F.; Trevelin, L. C.; Lima, A. L. A. Mammal fauna in Eucalyptus plantations and forest remnants in Três Lagoas, Mato Grosso do Sul State, Brazil. Oecologiaaustralis, v. 24, n. 1, 2020. Available at: MAMM https://revistas.ufrj.br/index.php/oa/article/view/22691AL FAUNA IN Eucalyptus PLANTATIONS AND

				FOREST REMNANTS IN TRÊS LAGOAS, MATO GROSSO DO SUL STATE, BRAZIL | Oecologia Australis (ufrj.br)
151	ANONYMOUS #30	N/A	N/A	We are not aware of any science supporting a limit of 100 hectares for such projects; this seems to be an arbitrary choice and a skewed question which suggests this must be an upper limit. It is unclear what problem this restriction is trying to solve, but it would impose severe costs on smallholders and others who already face significant barriers to develop ARR projects and pays no attention to the specifics of any landscape wide activity. There is not evidence that non-native monocultures cannot be managed responsibly with environmental integrity, and therefore there not be a limit on the size of a non-native (or native for that matter) monoculture. Smallholder participation in climate finance is already often limited by lack of access to seedlings, inputs, expertise, capacity, finance, and insurance. Many of these constraints can only be overcome by economies of scale, which leads to project aggregation. Smallholders' ability to access important economies of scale can make the difference between a competitive and viable project and one that is doomed to failure. In this context, non-native species can be extremely important for smallholders. Many of their projects, especially in aggregation, already exceed areas of 100 ha. Furthermore, the 100 ha proposed limit would disregard or restrict activities by Indigenous Peoples and Local Communities (IPLC) that operate on communal land, such as concessions or native title, which are typically denominated under larger land titling that would not enable any disaggregation at a scale of less than 100 ha.
152	Tobias Dorenkamp	DEG	Germany	No area limit should be established. To our knowledge there is not evidence that non-native monocultures cannot be managed responsibly with environmental integrity. Therefore no limit on the size of a non-native monoculture should be placed. Smallholder participation in climate finance already often limited by lack of access to seedlings, inputs, expertise, capacity, finance, and insurance. Many of these constraints can only be overcome by economies of scale, which leads to project aggregation. Smallholders' ability to access important economies of scale can make the difference between a competitive and viable project and one that is doomed to failure. In this context, non-native species can be extremely important for smallholders. Many of their projects, especially in aggregation, already exceed areas of 100 ha. Furthermore, the 100 ha proposed limit would disregard or restrict activities by Indigenous Peoples and Local Communities (IPLC) that operate

				on communal land, such as concessions or native title, which are typically denominated under larger land titling that would not enable any disaggregation at a scale of less than 100 ha. We do not believe Verra wishes to limit smallholder or IPLC project feasibility, and this would be an unintended consequence of an arbitrary limitation on non-native monoculture scale.
153	Yann-Olivier de Jouvancourt	Terraformation	United States	The proposed requirement would mean that projects smaller than 100 hectares could use only non-native monocultures as a project activity in a project activity instance. This would not be beneficial to the ecosystems, there should at least be room for mandatory requirements of native restoration for areas smaller than 100 hectares as well. 100 hectares could be an acceptable limit for large projects, but a smaller limit, based on %, should be enforced for small projects (<1000ha). The rule could therefore be something like : maximum of 10% of the project area, with a cap at 100ha.
154	MaryKate Bullen	Forest Investment Associates	United States	We are not aware of any science supporting a limit of 100 hectares for such projects; this seems to be an arbitrary choice. It is unclear what problem this restriction is trying to solve, but it would impose severe costs on smallholders and others who already face significant barriers to develop ARR projects. Given the discussion above, that there is not evidence that non-native monocultures cannot be managed responsibly with environmental integrity, we do not believe there should be a limit on the size of a non-native (or native for that matter) monoculture. Smallholder participation in climate finance already often limited by lack of access to seedlings, inputs, expertise, capacity, finance, and insurance. Many of these constraints can only be overcome by economies of scale, which leads to project aggregation. Smallholders' ability to access important economies of scale can make the difference between a competitive and viable project and one that is doomed to failure. In this context, non-native species can be extremely important for smallholders. Many of their projects, especially in aggregation, already exceed areas of 100 ha. Furthermore, the 100 ha proposed limit would disregard or restrict activities by Indigenous Peoples and Local Communities (IPLC) that operate on communal land, such as concessions or native title, which are typically denominated under larger land titling that would not enable any disaggregation at a scale of less than 100 ha. We do not believe Verra wishes to limit smallholder or IPLC project feasibility, and this would be an unintended consequence of an arbitrary limitation on non-native monoculture scale.
155	Marek Guizot	Stafford Capital Partners	United Kingdom	No. It seems unlikely that an individual project would be developed for an area of less than 100 ha given the lack of scale relative to likely development costs. Far more probable is that smallholders in a

				given region will participate in a grouped project. There are many examples of where large numbers of small growers (each with well under 100 ha) collectively account for substantial areas of non-native monoculture plantations (e.g. Vietnam, Portugal, Brazil). We believe that an arbitrary limit on the area that an individual smallholder can plant is fairly meaningless unless the aggregate impact of multiple such smallholders on a regional landscape can be considered.
156	Justin Mercer	New Forests	Singapore, Kenya, Australia, New Zealand, United States	This area is an appropriate limit for single household or individual smallholders, but collectives or otherwise aggregated smallholders would be left out and the overall impact of this sector would be restricted. In some regions communal land still exists. Community plantation operations are in effect an aggregate of smallholders, with land use decisions typically voted on across village representatives, and each family in the community owning a share. These community forests may significantly exceed 100 ha in our experience. The most significant constraint to implementing plantation forestry in smallholder or communal village production forest is the length of rotation. The individual / community is less incentivized to implement a plantation wherein they see financial returns only at the end of rotation, and instead turn to cash crops (cassava being a prime example now in SE Asia) due to the annual revenue. The associated negative impacts include (a) enhanced harvest of natural forests to meet timber needs; (b) soil degradation / nutrient loss, erosion, and soil carbon loss from intensive farming; and (c) lower levels of carbon sequestered and maintained in a landscape. The annual or periodic revenue from carbon finance has the potential to provide the incentive necessary to expand such operations, for communities as well as individual smallholders.
157	Brett Hundley	Agroforestry Partners	United States	We think that 100 ha is an appropriate size limit for a single farm, however we would advocate for multiple farms of this size in a given region being able to stand alone as individual projects, such that project developers can aggregate projects together without any restrictions pertaining to the total.
158	Indradeep Das	ReNew	India	From biodiversity and ecosystem perspective as long as no clearing of existing forest is involved, or, no ecosystem conversion into planted forest of commercial species is involved, then integrating carefully managed non-native plantations can align with overall biodiversity and ecosystem objectives.

				Since there is no minimum threshold limit available for small farmers, the 100 ha limitation may also pose as a hurdle for farmers globally. Thus, we recommend that until a standard baseline is established for small farmers, we should allow more than 100 ha cultivation of non-native monoculture in project activity.
159	Agustin Inthamoussu	CLIMIT	Uruguay	It is not feasible to argue for a specific (maximum) project size given the complex dynamics of this biological ecosystem and its interaction with others. A sustainable managed area larger than 100 hectares may have a lower impact than a very poorly managed area smaller than 100 hectares. Nevertheless, the requirement aligns with the National Environmental Authorization in Uruguay, which mandates an Environmental Impact Assessment before implementing any afforestation project when its larger than 100 hectares. The project developer must conduct this assessment and seek permission for tree planting. The authorization may be either denied or granted, with or without modifications, contingent upon the specific characteristics of the project. Below, you can see everything needed to complete an environmental impact assessment. As it will be noticed, the study is thorough and detailed. Therefore, if the Ministry of the Environment approves the project, it serves as strong evidence that the country supports it and its contribution to sustainable development, climate change mitigation, job creation, and various other benefits. In response to the feedback requested, a larger area of 100 ha should also include non-native monocultures and be approved by VCS if complies with an Environmental Impact Assessment.
160	Jean	Beijing forestry university	China	I think certain area might not a suitable limit. Maybe it is better to set up a proportion of area of the total area as a fair limit for all project, for example ,20 percent of the total area.
161	Jaan	Ecobase	Estonia	If the 100 hectares is calculated on a project instance basis and not on a project level, this would suffice as the goal of limiting the capabilities of monoculture tree plantations to be set up to earn carbon income. It'd be complex to practically define what a smallholder is so we'd presume this limitation would not be defined by landowner type.
162	Jim Heyes	Criterion Africa Partners	South Africa	Small holder is a term referring to a large range of ownerships on land of varying size. The intent is always to allow for this range to enter a certification/carbon system, which is practical and relevant while at the same time limiting ecosystem impacts. The reality is that small holder areas are normally always already completely transformed.

				Like commercial-scale plantations, smallholder projects also face economic challenges which impact their viability and particularly the long term permanence of the biological resource. Arbitrary constraints on eligibility of these project, whether based on area or other criteria, will limit the viability of and the potential impact of forestry investments as a climate mitigation tool. Ultimately we do not support any such limit for the use of non-native monocultures, for the reasons outlined earlier.
163	ANONYMOUS #31	N/A	N/A	The concern here is to prevent the fragmentation of large monoculture areas, where they might be subdivided into smaller plots and subsequently submitted for carbon credit projects. In this context, the limit should depend on the land use of the surrounding areas. If smallholders operate in an area predominantly characterized by diverse land use, the limit could be applicable. However, if the surroundings are dominated by monoculture plantations, then it wouldn't be applicable.
164	ANONYMOUS #32	N/A	N/A	A 100-ha size is reasonable for smallholder projects including non-native tree monocultures. But also, it is important to have the exception for larger areas as included in the proposed 3.19.28. Where there is the possibility to use non-native tree monocultures for ARR projects in areas larger than 100 ha when at least 30% of the project area will be used for native ecosystem restoration and the rest of the area where the use of non-native tree monoculture will be used is considered as degraded or have been used for intensive agriculture in the past 10 years.
165	ANONYMOUS #33	N/A	N/A	We have no view on this point.
166	ANONYMOUS #34	N/A	N/A	All projects with 100ha or less should be eligible without conditions, even if they are part of a grouped project with more than 100ha in the total sum of areas. The size of the area on non-native monoculture doesn’t matter as long as sustainable forest management is applied. ARR project criteria already ensure sustainability. There is no scientific basis known to us that supports a 100-hectare limit; this appears to be an arbitrary decision. "The planted forests in Brazil, for the most part, are managed sustainably, thus ensuring a positive impact on the ecosystem. Studies conducted in Eucalyptus spp. plantations in Brazil revealed that a total of 156 birds (50.6%), distributed among forest and grassland species, were found in Eucalyptus

				plantations. This attests that birds can adapt and utilize this type of environment, depending on the height or age of the Eucalyptus trees in each area (Gabriel and Godoy, 2019). A nine-year study conducted on a Eucalyptus spp. farm recorded 69 mammal species, including 23 bats, 14 nonvolant small-sized mammals, and 32 medium to large-sized mammals. Twelve of these species are under the threat of extinction. The findings of this study significantly contribute to understanding the local fauna, highlighting the importance of this farm for mammal conservation in the region. (Homem et al., 2020)". References: Gabriel, V. A.; Godoy, F. I. Community of birds in a mosaic of Eucalyptus and native vegetation in Três Lagoas, MS, Brazil. Oecologiaaustralis, v. 23, n. 3, 2019. Available at: COMhttps://revistas.ufrj.br/index.php/oa/article/view/15597UNIDADE DE AVES EM UM MOSAICO DE Eucalyptus E VEGETAÇÃO NATIVA EM TRÊS LAGOAS, MS, BRASIL | Oecologia Australis (ufrj.br). Homem, D. H.; Lima, E. F.; Nobre, R. A.; Colas-Rosas, P. F.; Trevelin, L. C.; Lima, A. L. A. Mammal fauna in Eucalyptus plantations and forest remnants in Três Lagoas, Mato Grosso do Sul State, Brazil. Oecologiaaustralis, v. 24, n. 1, 2020. Available at: MAMM https://revistas.ufrj.br/index.php/oa/article/view/22691AL FAUNA IN Eucalyptus PLANTATIONS AND FOREST REMNANTS IN TRÊS LAGOAS, MATO GROSSO DO SUL STATE, BRAZIL | Oecologia Australis (ufrj.br)
167	ANONYMOUS #35	N/A	N/A	We are not aware of any science supporting a limit of 100 hectares for such projects; this seems to be an arbitrary choice. It is unclear what problem this restriction is trying to solve, but it would impose severe costs on smallholders and on the sector as a whole – particularly those located outside North America. To repeat: the global consensus of multistakeholder, multi-decade processes to define sustainable forest management have concluded that well-managed, non-native monocultures are perfectly suitable for sustainable forest management. We are not aware of evidence indicating that non-native monocultures in and of themselves are likely to have significant negative ecosystem impacts, so long as good management practices are followed, their utilization does not drive conversion of intact native ecosystems, and only non-invasive species are used. We believe the burden of proof to demonstrate that non-native monocultures are in some way more detrimental than native monocultures has not been met. Given these facts, we do not believe there should be a limit on the size of non-native (or native for that matter) monocultures. Smallholder participation in climate finance is already often limited by lack of

				access to seedlings, inputs, expertise, capacity, finance, and insurance. Many of these constraints can only be overcome by economies of scale, which leads to project aggregation. Smallholders' ability to access these important economies of scale can make the difference between a competitive and viable project and one that is doomed to failure. In this context, non-native species can be extremely important for smallholders. Many of their projects, especially in aggregation, already exceed areas of 100 ha.
168	ANONYMOUS #36	N/A	N/A	100 ha is still too large. A more maximum appropriate surface would be 50 ha. Besides it has to be considered the accumulated or side forest composition. Since adjacent properties together may have over 50 ha.
169	ANONYMOUS #37	N/A	N/A	All projects with 100ha or less should be eligible without conditions, even if they are part of a grouped project with more than 100ha in the total sum of areas. The size of the area on nonnative monoculture doesn't matter as long as sustainable forest management is applied. ARR project criteria already ensure sustainability. There is no scientific basis known to us that supports a 100-hectare limit; this appears to be an arbitrary decision. "The planted forests in Brazil, for the most part, are managed sustainably, thus ensuring a positive impact on the ecosystem. Studies conducted in Eucalyptus spp. plantations in Brazil revealed that a total of 156 birds (50.6%), distributed among forest and grassland species, were found in Eucalyptus plantations. This attests that birds can adapt and utilize this type of environment, depending on the height or age of the Eucalyptus trees in each area (Gabriel and Godoy, 2019). A nine-year study conducted on a Eucalyptus spp. farm recorded 69 mammal species, including 23 bats, 14 nonvolant small-sized mammals, and 32 medium to large-sized mammals. Twelve of these species are under the threat of extinction. The findings of this study significantly contribute to understanding the local fauna, highlighting the importance of this farm for mammal conservation in the region. (Homem et al., 2020)". References: Gabriel, V. A.; Godoy, F. I. Community of birds in a mosaic of Eucalyptus and native vegetation in Três Lagoas, MS, Brazil. Oecologiaaustralis, v. 23, n. 3, 2019. Available at: https://revistas.ufrj.br/index.php/oa/article/view/15597 Homem, D. H.; Lima, E. F.; Nobre, R. A.; Colas-Rosas, P. F.; Trevelin, L. C.; Lima, A. L. A. Mammal fauna in Eucalyptus plantations and forest remnants in Três Lagoas, Mato Grosso do Sul State, Brazil.

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170	ANONYMOUS #38	N/A	N/A	2. In terms of smallholders, yes a small area for commercial plantation between 300 and 500 ha could be an appropriate limit. 100 ha, from our experience, is not really feasible for an ARR project. More than a numerical criterion to define the limit area, what is important is the potential impact that the practice may generate on the environment. For example, can't an acacia plantation be important in terms of recovering soils degraded by mining, where nothing else could grow?while also capturing carbon?
171	ANONYMOUS #39	N/A	N/A	If the alternative scenario is degraded land, then there should not be a limited surface. It it is important to consider the grouped projects, where the only option to access this type of support, is by putting together small landowners. It is still not clear how this will be taken into account under the grouped project. 100 ha is a very reduced surface for an ARR project and could make a non-economical viable project. The criteria of 100 ha as the maximum should be removed. If non negative impact is demonstrated and the wood products are an economic rural alternative with a positive impact in the long term for the communities, there should not be a limited area.
172	ANONYMOUS #40	N/A	N/A	I believe that more than fixing an area, allowing the maximum size comes from the definition of "small landowner", if such a definition exists. In other words, when there is a national, state or municipal definition of "small landowner", this should take precedence over what is determined in the Standard (of 100 hectares). In Brazil, for example, each municipality has a definition of area for "small landowner", which corresponds to "4 fiscal modules". The fiscal module is one of the Basic Cadastral Indices used by Incra to establish parameters for the characterization and classification of rural properties per municipality according to their size and regional layout. The current indices were defined by Incra through Special Instruction No. 5 of 2022. (https://www.gov.br/incra/pt-br/assuntos/governanca-fundiaria/modulo-fiscal>)
173	ANONYMOUS #41	N/A	N/A	In this case, size does not matter. The problem is that the combined synergetic effect of small plantations is a high-risk bet, increasing climate/environmental vulnerability at all levels. But the gravest adverse effects of these strategies are that peasants relinquish their control on their land and, in the end, are stuck with the negative impacts of plantations (mentioned above). Landscape

				fragmentation is also an issue. Furthermore, the strategy to reduce atmospheric carbon through this activity opens the doors to massive global carbon accounting fraud and speculation, as has been proven on numerous occasions. So, no, bad idea! The equation is simple. The greater the expansion of eucalyptus plantations, the less land for peasant and indigenous families and communities, loss of food security and sovereignty, loss of economic and yield-generating opportunities for communities, and increased social vulnerability of future generations
174	ANONYMOUS #42	N/A	N/A	Project activities should not be evaluated nor be limited on basis of size, but on basis of impact.
175	ecosecurities	ecosecurities	Switzerland	ecosecurities consider monoculture should not be eligible for carbon credits. While we acknowledge the importance of monoculture for the society, we consider carbon credits should not be assigned to it.
176	Matthew Kerr	New Zealand Carbon Farming	New Zealand	There should be no limit – see reference to above.
177	Charlie Sichel	Forestry Linked Securities / Radius Zero	Switzerland / Paraguay	In our view, (a) there is no scientific basis for such a limit, and therefore there should be no limit on the size of a non-native, or native monoculture; (b) a limit will severely impede the scaling up of any reforestation or afforestation effort, urgently required to reduce deforestation as we discussed above; (c) in the (plausible) case of smallholders aggregating land holdings into one greater, single piece of land to enjoy (highly desirable) economies of scale with respect to access roads, machinery, communal fire prevention measures etc., it would be illogical to assume that a 3,000 ha piece of land, planted as a monoculture by a group of 30 smallholders, would be any more sustainable and bio-diverse than a 3,000 ha piece of land owned by one single party who is complying with the current FSC requirement of having a conservation area of at least 20% and with IFC PS 6.

				We therefore think it is a dangerous and, likely, counter-productive as well as arbitrary, fallacy to limit carbon certificates only to smallholders with areas of land of relatively small size. We think Verra would be well-advised not to ignore the accepted practice by global standards such as FSC without (i) very hard scientific evidence, (ii) analysing and quantifying the trade-offs involved (the more restrictions Verra imposes on giving value to commercial forests, the longer deforestation of native trees will continue and the less carbon will be naturally sequestered at a time when NBS are required to save any hope of still complying with the Paris agreement); and (iii) giving careful thought about arguments we have personally heard in South American ministries, with respect to accusations of neo-colonialism by Western NGO. The latter issue is being dealt with rather elegantly by FSC's country-specific recommendations, and at the end of the day, by respect for the sovereignty of each country of the Global South in deciding which factors are best suited to reach its environmental goals. In other words, we would suggest latitude being given to each individual country, possibly in combination with a recommendation regarding the percentage of land that a commercial reforestation/afforestation project should put under total conservation, which would significantly dilute any argument against monoculture plantations, both from a biodiversity and a fire hazard perspective, especially when the starting point – which in our view matters very much - is compacted, possibly severely degraded cattle land with a yearly 'slash and burn' practice.
178	Beatriz Zavariz	Manulife Investment Management Timberland and Agriculture	United States	We have no comment to make as we are a large scale landmanager.

3) To be eligible to plant non-native monocultures, should a project need to meet both conditions (1) and (2) in the proposed 3.19.28? Please justify why or why not.

#	Name	Organization	Country	Comment

179	ANONYMOUS #1	N/A	N/A	No, I don't believe they should be considered additional.
180	ANONYMOUS #2	N/A	N/A	neither, as indicated above. making non-native monocultures eligible is counter-productive.
181	Luiz G. De Oliveira Filho	Tiete Agricola Ltda	Brazil	Yes. And the main reason for that is when one is producing wood where there was nothing, you are efectily avoiding deforestantion due to the surplus offer of wood at any market. The teak production for exemplo, in Amazon wasted pastores, avoid deforestation at a proportion of 1 to 30. That means 1 hectare of teak avoids the deforestation of 30 hectares of native jungle- its a production of 300 cubic meters per hectare that are offered to the market instead of native species
182	Laszlo balog	Bloomair Zrt	Hungary	Point 1 is an unnecessary restriction. If point 2 is defined as a degraded area, it is unnecessary to impose the planting of indigenous crops in the 30% area, which have already died out on their own, because the area has been degraded. Perhaps in 10% of the area, the creation of a more biodiverse area is conceivable.
183	Michael Spandern	freelance	Germany	Yes. Condition 1) is essential also for credibility and public acceptance. Condition 2) allows for corrective actions where wrong choices were mad in the past. The form of transition however should follow sensible principles (intercropping vs. clearance etc) and respect newly established habitats.
184	Mads Asprem	NewAfrica Bioenergy Ltd	United Kingdom	The purpose of carbon credits must be to sequestrate CO2. This is urgent. The objective must be to mitigate climate change, right now. While doing this in a responsible and sustainable way, the carbon sequestration should be maximised.
185	Satinder Mohan Singh	Sequoia Plantation	Gabon	Yes both are important as it is important to justify why a land is degraded or bereft of its natural ecosystem. As long as Project activity has not caused clearance of natural ecosystem or it occurred more than 10 years ago - this provides substantial logic to put the land to non native monoculture forestry plantation. This ensures no malpractice by project developer, also providing for best utilization of available land providing benefits to community , economy and sequestering carbon for mitigating climate change.

186	ANONYMOUS #4	N/A	N/A	These items are confusing and conflict with each other in terms of 1) only being about the project can't do the clearing and 2) is about timing of clearing or that its OK if its invasive species but then that doesn't qualify under number 1 anyway. A few more issues: A) "degraded" as defined is seen as useless land that should be converted to monocultures without harm instead of an area still retaining some species and processes that should be restored, B) I've never agreed with the "10 years prior" time restriction--I understand this is to keep associated entities from doing the clearing for some economic benefit then replanting to get credits but it defeats rapid restoration of places that were cleared by unassociated entities (e.g., some ill-conceived government program clears land for farming in an area unsuited to it--do we leave it a wasteland for the next 10 years?) How about just requiring proof that clearing was conducted by unaffiliated entities and skip the timeline? and C) projects that "restore" an area denuded from floods or fires with exotic monocultures should not be eligible. Often these areas will restore on their own or with some assistance back to a natural ecosystem. Verra should only allow restorative projects in those cases with native mix.
187	ANONYMOUS #5	N/A	N/A	No. Condition 2 around "intensive agriculture" is a bit fuzzy and I don't fully understand the motivation for it. The use of machines and inputs does not always mean the land is degraded. Most of the VM42 projects under development would qualify as "intensive ag," and they're implementing practices known to build SOC stocks and reduce emissions, even with machinery and inputs. Overall I question Condition 2 and if that should even be an option and/or if it's worded properly. I think Condition 1 around reversing degradation is the more important point, and degradation can happen without intensive ag. A good example is over-grazing which is a big degradation driver and probably wouldn't meet the intensive ag definition. And if intensive ag is well-managed and producing food efficiently, it could actually not be the best thing to take it out of production for ARR activities. This is my main point in submitting feedback on this rule change.
188	R. Sanjay Mishr	Callirius AG	Switzerland	We at Callirius maintain our position that non-native monocultures pose ecological risks. However, we acknowledge the stipulations provided in VCS Standard v4.5 (chapter 3.19.28), ensuring that project areas were not cleared of natural, non-degraded ecosystems as a result of project activities. It is crucial that any introduction of non-native monocultures is accompanied by rigorous evidence that the land was previously degraded or the clearing occurred due to natural causes unrelated to the project. Given these stringent conditions, the 100-hectare limit may be an acceptable compromise (as mentioned in feedback 2 above), provided that there is a robust monitoring framework in place to continuously assess and mitigate potential negative ecological impacts. This limit should also be reviewed periodically to ensure it remains aligned with evolving scientific understanding and

				ecological best practices. (https://ec.europa.eu/research-and-innovation/en/horizon-magazine/rise-and-fall-monoculture-farming)
189	Vitor Vannozzi Brito	hummingbirds	France	Yes, projects larger than 100 ha should meet both conditions, but the conditions could be finetuned. Our proposal can be found below. Condition (1): We agree with a minimum threshold of native ecosystem restoration, but we suggest that the methodology should aim for 50%, taking this as an opportunity to foster native ecosystem restoration within the ARR projects worldwide. Condition (2): Option a): Yes, this condition should be applied, and the definition of a degraded ecosystem should be present in the VCS Program Definitions. Option b): our understanding is that the areas should not necessarily be used for intensive agriculture, as it is a very difficult term to define. Intensive agriculture has the potential to be very detrimental to ecosystems when using a large quantity of chemical pesticides, fertilizers, and machinery, but this is not always the case. Permaculture, agroforestry or organic intensive systems that use a large number of inputs (e.g. organic fertilizer, biological control, eventually machinery) can be very good and support the regeneration of the ecosystem. And from the definition proposed by Verra, they would fall within intensive agriculture as well. Also, some degraded areas can also be under extensive agriculture use (e.g. very low productive, degraded pastures in Latin America or slash-and-burn agriculture in Sub-Saharan Africa, for example). Therefore, we suggest substituting intensive agriculture for agricultural lands. Our suggestion is: “2) The area of the project to be populated by non-native monoculture(s) either: a) Is classified in scientific literature or by national or local governments as degraded or b) is classified as an agricultural land.” Nonetheless, we believe that projects of 100 ha or less should also meet certain criteria, as we propose in the previous topic and reproduce below: “For ARR and WRC project activity instances smaller than 100 ha in which the project introduces non-native monocultures, the following conditions are met: 1) At least 10 percent of the project area is designated for the establishment of native species during project activities, and 2) The area of the project to be populated by non-native monoculture(s) either: a) Is classified in

				scientific literature or by national or local governments as degraded or b) is classified as an agricultural land."
190	Guy Pinjuv	Pachama	United States	Conditions (1) and (2) from proposed section 3.19.28 are not sufficient as many potential project areas could meet these definitions and would not require non-native monocultures to establish forest cover.
191	Otto Beukes	ClimatePartner Impact GmbH	Germany	I believe that both conditions 1 and 2 have not been considered holistically and are not equitable. The rules-based approach should be substituted by a process-based approach, whereby the use of non-native monocultures is justified and substantiated through existing VCS programs and methodologies, specialist third party consultation and aligned with national and regional policy and land use strategies and objectives. By replacing the rules-based approach with a process-based approach, proponents and stakeholders are not further restricted from participation in the VCM and may gain equitable access to both finance and the resulting co-benefits of a peer reviewed land-use.
192	Marcelo Schmid	Arvor Business Advisory	Brazil	Yes. However one important piece is missing on conditon (1): when the condition says that "evidence indicating that clearing occurred in the pre-project land use due to natural disasters such as hurricanes or floods" it must includes a mechanism that considers the area eligible if the clearing occured before the project developer takes control of the property. This is similar to the eligibility criteria used by FSC and it is pretty fair, if the project developer can demonstrate that the cleaning was not caused by him or his business.
193	Richard Zell Donovan	n/a - independent	USA (Vermont)	(1) is a bit confusing to me. The e.g. states that the clearing occurred in the pre-project land use due to natural disasters. I do not think that post-disaster plantings of non-native species should be the answer in the case of natural disasters. But perhaps I don't understand the proposed approach. Frankly here is another case where IF the operation at the FMU can be FSC certified, it would meet my requirements for these scenarios. Meeting FSC would also address (2) under 3.19.28.
194	Danny Torres	Saltus	Colombia	Yes, if the monoculture area is bigger than the limit established. Nevertheless some clarifications should be provided: if a project proponent plants a mix of two non-native species, wouldn't this be a monoculture and is the rule respected? That is, if the project activity includes a mix plantation of two exotic species in the same area, is the rule respected?

195	Jacob Penner	The Nature Conservancy	United States	Yes, projects should need to meet both conditions. TNC would support the addition of a third condition for project proponents to demonstrate that the planting of native species is not feasible and would still not be feasible with carbon finance. Projects should be expected to seriously consider native species whenever possible.
196	ANONYMOUS #7	N/A	N/A	Yes, both conditions are independent and complementary. 3.19.28 1) could be considered as a compensatory measure when planting non-native monocultures and 2) ensures that the planting is carried out on degraded land.
197	ANONYMOUS #8	N/A	N/A	Condition 1) should be met. There should be no clearance of existing natural and non-degraded ecosystems. There should be guidance on how to prove this.
198	Lucio Pedroni	Carbon Decisions International (CDI)	Colombia	No, meeting one of the two conditions is already excessive, so if a choice must be made, meeting one condition is sufficient. Justification: a. Condition a ("At least 30 percent of the project area is designated for native ecosystem restoration to be carried out by the project proponent during project activities") suggests that it is implicitly assumed that the establishment of non-native monocultures is environmentally harmful and that, therefore, some form of preventive environmental compensation through "restoration of native ecosystems" should be required. (i) This implicit assumption is questionable, because it says nothing about the baseline conditions of the lands in which the non-native monocultures will be established. • It may well be that the baseline conditions are degraded lands and that non-native monocultures will improve soil, enhance biodiversity, and provide better livelihood opportunities for local communities. In such a case, there should be no requirement to dedicate at least 30% of the project area to "native ecosystem restoration", because non-native monoculture will cause no harm and will produce environmental and other benefits. • It may also be that the baseline conditions are not degraded lands and that planting non-native monocultures does not harm the environment, biodiversity, and local livelihoods and that doing so is,

				at the same time, the best option to generate carbon credits and other goods and services. In that case, there should also be no mandatory restoration requirement because non-native monoculture will not cause any harm, so burdening the ARR project activity with the costs of “native ecosystem restoration” is not justified. • The assumption that dedicating 30% of the project area to “native ecosystem restoration” is a good thing is incorrect; It may well encounter opposition from local communities and cause negative socio-economic impacts. • Finally, it is possible that the project and its non-native (or native) monocultures could cause negative impacts on the environment, biodiversity or local livelihoods that were not anticipated or were not adequately mitigated. In that case, corrective actions should be required and, where appropriate, dedicating a portion of the project area to “native ecosystem restoration” may be the appropriate remediation. (ii) “Restoration of native ecosystems” can involve significant costs. If restoration of 30% of the project areas becomes mandatory for projects that cannot meet investment thresholds without non-native monocultures, many good projects may not happen due to the cost burden associated with the mandatory restoration. (iii) If VERRA maintains this requirement, it will be important to define “native ecosystem restoration” more precisely and include passive restoration and other low-cost options in the set of eligible restoration strategies. b. Condition b (“The area of the project to be populated by non-native monoculture(s) either: a) Is classified in scientific literature or by national or local governments as degraded or b) Has been used for intensive agriculture in the past ten years”) suggests that it is implicitly assumed that non-native monocultures on degraded lands or on areas that have been used for intensive agriculture (and livestock ranching!) in the past ten years are unlikely to be harmful to the environment and that therefore some form of preventive environmental compensation through "restoration of native ecosystems” may not be a necessary requirement. (i) While this implicit assumption is less questionable than that made under condition a, the possibility of detrimental consequences of non-native monocultures established on degraded lands or lands that have been used for intensive agriculture (and livestock!) in the last ten years cannot be ruled out.

				Consequently, the need to adopt corrective measures should not be ruled out either. (ii) The conditions under which an area can be classified as "degraded" are too restrictive. See more proposed options under question 6.
199	ANONYMOUS #9	N/A	N/A	Condition 1 is not appropriate. "30% of the project area" is not an appropriate threshold. Applying a 30% restoration objective to all private projects is arbitrary and not based on science. Furthermore, the "30x30 initiative" referenced in the consultation document is a target agreed to by the parties to the Convention on Biological Diversity (which are all national governments and not private actors). The initiative targets a high-level objective for conservation rather than for ARR or WRC, and it is therefore not a relevant supporting argument for the proposed 30% threshold. Furthermore, at the project level, such a target simply does not work. A 30% target would make many ARR projects financially unviable. In practice, the design and layout of land uses within an ARR project requires careful consideration of numerous factors, such as soil condition, quality, hydrology, topography, site/species selection, supporting infrastructure, and compliance with best management practices and local regulations. The result of these dynamic factors can mean that far more than 30%, or less, can be left for purposes complementary to the core ARR activity. Applying a blanket threshold is therefore arbitrary and does not consider local conditions, which are critical for sustained project impact and performance. We understand the intent of the requirement but would point out again that Verra has not demonstrated any meaningful difference between native and non-native monocultures, and that pursuing this distinction does not align with the stated Verra or VCS objectives. These programs already include sufficient environmental safeguards to prevent against risk of environmental harm, and the CCB Standard and SDVista address ways to verify environmental benefits beyond carbon outcomes. A requirement to restore land using one type of species and not another does not make sense. Outcome- or performance-based targets, such as a requirement to demonstrate that project activities will significantly enhance one or more ecosystem processes or functions, may make sense, but they should apply equally to all species – and across AFOLU project types – if implemented. As noted above, CCB and SDVista may be better places for such distinctions and for verification of outcomes that are complementary to emissions reductions and carbon removals.

				Condition 2 is partially appropriate as currently written. It would be suitable provided that Verra makes this condition both feasible (see our response to Question 6 on classifications and data sources) and practicable (see our response to Question 7 on including pastureland in the land-use/land-cover types available for restoration activities). We encourage Verra to modify 3.19.28 to remove condition 1 and to amend condition 2 as follows: 3.19. 28 The area of the project to be populated by non-native monoculture(s) meets the definition of a "degraded ecosystem," as defined by the VCS Program Definitions. The proposed language, as currently written in the consultation document, may also inadvertently exclude other types of land cover from ARR projects, such as mine reclamation sites, disused rights of way, etc. We do not see a carbon accounting, equity, or safeguards rationale for restricting ARR projects to only certain categories of degraded land or agricultural land. The Verra focus regarding site selection should be ensuring that threatened native ecosystems are not converted for the purposes of instituting AFOLU projects, and conditions of the standard and methodologies should encourage the improved productivity or conservation value of land in ways in that are consistent with climate mitigation outcomes without compromising other essential ecosystem functions. Seemingly, by attempting to restrict certain types of forest activities disfavored by a vocal segment of stakeholders (and which runs counter to well respected experts on sustainable forestry, such as FSC and PEFC), Verra is at risk of creating conditions that further disincentivize ARR projects, which the organization has acknowledged have historically had a low rate of adoption relative to global potential.
200	Zoltan Kun	Great Lakes and Wetlands Association (Forest Defenders Alliance)	Hungary	Our position is clear: non-native monocultures should NOT be eligible for carbon credit at all. Condition 1 does not justify the reason for suggesting 30% for native ecosystems, but could result in planting non-native monocultures well above 100 hectares. Condition 2 offers a false solution to restore degraded land with non-native monocultures. Based on the CBD Global Biodiversity Framework (https://www.cbd.int/gbf/introduction/) and the FAO principles of ecosystem restoration (https://www.fao.org/3/cb6591en/cb6591en.pdf), the restoration of degraded ecosystems should aim at the highest level of recovery of biodiversity and ecosystem integrity. The promotion of non-native monocultures as a false climate solution does not fit into this principle.
201	ANONYMOUS #10	N/A	N/A	We would recommend that VERRA aligns its conditions to those of the Forest Stewardship Council that prescribes 10% of the total landholding to be dedicated to conservation or restoration; an area of as much as 30% may deter project developers although it would depend on the type of restoration activities deployed.

				Plantations should only be established on degraded areas irrespective of the nature of the crop.
202	ANONYMOUS #11	N/A	N/A	Either of the conditions should be met for projects to exceed the 100 has threshold. While the criteria seem simple, there are many grey areas which would result in impossible thresholds if both restrictions were imposed together. - Native ecosystem restoration can have different meanings for different ecosystems. See question 4 for further explanation. - Degradation is a very broad concept, not always interpreted at a local level as defined by Verra. It is also poorly documented throughout the world. Degradation levels are highly variable and, in many instances, initial conditions to compare against are non-existent. As such, project proponents should be able to demonstrate either through publications, government classifications or adequate data and support that site degradation is prevalent. (see question 6) - The agriculture definition does not capture other relevant degrading and disturbance activities which are more frequent in geographies with carbon potential. (see question 7)
203	Spencer Meyer	BeZero Carbon	U.S.	For condition (1), we recommend that sufficient information is provided to justify why a threshold of 30 percent of the project area was chosen. Further, if this were to be a condition, we would recommend that proponents are required to provide scientific or financial sources for support. Furthermore, we would like to see greater specification around what would qualify as 'native ecosystem restoration'. In particular, transparency should be provided on whether the planting of a native monoculture, or the introduction of commercial harvest in the areas of native ecosystem restoration. Further clarification is requested regarding whether there is a limit on how close to the monoculture plantation the natural ecosystem restoration is required to be. Further clarification around safeguards to reduce the potential leakage risk of harvesting non-native monocultures on the native ecosystem restoration area are recommended In order to reduce information risk, we recommend that projects be required to provide spatial files delineating the areas under different planting schemes to increase transparency. We also request clarity on what monitoring mechanisms will be in place for the restoration. In the case where native ecosystem restoration is not successfully implemented, but the non-native monoculture area is, what are the procedures for MRV for the project? For example, this will enable transparency on the success of implemented ecosystem restoration if most degraded land plots were selected.

				For condition (2), it is not clear why prior land use is a suitable justification for conversion to non-native monocultures.
204	ANONYMOUS #12	N/A	N/A	Yes, both conditions should be met to provide assurances to the markets and stakeholders that projects are of high quality. Native restoration planting must also show benefits to the biodiversity within the region. Poorly designed native planting can have an adverse effect on native ecosystems.
205	Jeremy Kaufman	Propagate Group PBC	United States	To be eligible to plant non-native monocultures, a project should meet one of the two conditions (1 OR 2) in the proposed 3.19.28 — Not both. Requiring a farm to have 30% of the project designated for native ecosystem restoration would likely exclude the majority of agricultural land from participating in projects and disincentivize farms from doing conversions, especially to agroforestry. Requiring 5% of the project area for native ecosystem restoration would be more appropriate for land that was in intensive agriculture due to the true opportunity cost for conversion that would limit adoption. It's critical that we establish the program in a way that enables farmland to participate. The amount of acres and potential for carbon sequestration is too great to exclude.
206	ANONYMOUS #13	N/A	N/A	Condition 1 is not appropriate. "30% of the project area" is not an appropriate threshold. Applying a 30% restoration objective to all private projects is arbitrary and not based on science. Furthermore, the "30x30 initiative" referenced in the consultation document is a target agreed to by the parties to the Convention on Biological Diversity (which are all national governments and not private actors). The initiative targets a high-level objective for conservation rather than for ARR or WRC, and it is therefore not a relevant supporting argument for the proposed 30% threshold. Furthermore, at the project level, such a target simply does not work. A 30% target would make many ARR projects financially unviable. In practice, the design and layout of land uses within an ARR project requires careful consideration of numerous factors, such as soil condition, quality, hydrology, topography, site/species selection, supporting infrastructure, and compliance with best management practices and local regulations. The result of these dynamic factors can mean that far more than 30%, or less, can be left for purposes complementary to the core ARR activity. Applying a blanket threshold is therefore arbitrary and does not consider local conditions, which are critical for sustained project impact and performance. We understand the intent of the requirement but would point out again that Verra has not demonstrated any meaningful difference between native and non-native monocultures, and that

				pursuing this distinction does not align with the stated Verra or VCS objectives. These programs already include sufficient environmental safeguards to prevent against risk of environmental harm, and the CCB Standard and SDVista address ways to verify environmental benefits beyond carbon outcomes. A requirement to restore land using one type of species and not another does not make sense. Outcome- or performance-based targets, such as a requirement to demonstrate that project activities will significantly enhance one or more ecosystem processes or functions, may make sense, but they should apply equally to all species – and across AFOLU project types – if implemented. As noted above, CCB and SDVista may be better places for such distinctions and for verification of outcomes that are complementary to emissions reductions and carbon removals. Condition 2 is partially appropriate as currently written. It would be suitable provided that Verra makes this condition both feasible (see our response to Question 6 on classifications and data sources) and practicable (see our response to Question 7 on including pastureland in the land-use/land-cover types available for restoration activities). We encourage Verra to modify 3.19.28 to remove condition 1 and to amend condition 2 as follows: 3.19. 28 The area of the project to be populated by non-native monoculture(s) meets the definition of a “degraded ecosystem,” as defined by the VCS Program Definitions. The proposed language, as currently written in the consultation document, may also inadvertently exclude other types of land cover from ARR projects, such as mine reclamation sites, disused rights of way, etc. We do not see a carbon accounting, equity, or safeguards rationale for restricting ARR projects to only certain categories of degraded land or agricultural land. The Verra focus regarding site selection should be ensuring that threatened native ecosystems are not converted for the purposes of instituting AFOLU projects, and conditions of the standard and methodologies should encourage the improved productivity or conservation value of land in ways in that are consistent with climate mitigation outcomes without compromising other essential ecosystem functions. Seemingly, by attempting to restrict certain types of forest activities disfavored by a vocal segment of stakeholders (and which runs counter to well respected experts on sustainable forestry, such as FSC and PEFC), Verra is at risk of creating conditions that further disincentivize ARR projects, which the organization has acknowledged have historically had a low rate of adoption relative to global potential.

207	Cyril Melikov	EP Carbon	United States of America	EP Carbon strongly supports the project's need to meet both conditions (1) and (2) as outlined in the proposed 3.19.28. The 30% native restoration rule not only enhances natural habitats but also extends the carbon impact beyond non-native monocultures, promoting vital habitat connectivity. When it comes to the second condition, we believe that ensuring that areas designated for non-native monocultures are classified as degraded land or sites with a history of intensive agricultural use within the past 10 years provides crucial assurance. Planting trees in these areas ensures atmospheric carbon removal, especially where the alternative is the ongoing use of the land in its current state. This confirmation of degradation is essential to establish the activity's additionality. Nevertheless, EP Carbon suggests exploring additional permitted sources or references beyond the proposed two sources to justify the characterization of land as degraded. Considering the definition of a degraded ecosystem provided by the VCS program, we advocate for including expert judgment as one possible data source to justify the classification of an area as degraded. See our response to question six of this Public Consultation for further elaboration and our rationale on the recommended data sources we suggest for classifying areas as 'intensively used for agricultural purposes' and 'degraded'. It is noteworthy that the VCS Standard itself relies on expert judgment to define a degraded ecosystem. Instead of mentioning expert judgment as an eligible data source in the definition of a degraded ecosystem, we recommend directly incorporating it into the requirement, as shown below: 2) The area of the project to be populated by non-native monoculture(s) either: a) Is classified in scientific literature or by national, local governments or experts as degraded or b) Has been used for intensive agriculture in the past ten years. In addition, we have noted that the current VCS Standard 3.28.3 specifies that “Where the project restores degraded lands through ARR and WRC activities, the project proponent shall demonstrate that the project activity restores the project area to a native ecosystem type represented in the same ecoregion as the project. Such demonstration shall use remote sensing, aerial imagery, modeling, or other relevant literature.” Considering the proposed changes presented in this public consultation, EP Carbon seeks clarification on whether this requirement will be updated to distinguish between ARR and WRC as individual project activities, or whether it refers to combined ARR+WRC project activities (i.e. ARR on wetlands), as these proposed updates suggest they will enable the approval of non-native monocultures under the VCS as an ARR activity.

208	CASSAGNE Morgan	FRM COMMITMENT	FRANCE	The following reasons lead us to believe that compliance with only one of the conditions (1) or (2) of § 3.19.28 is sufficient to guarantee ecosystem health and project eligibility: - Condition (2a) seems redundant with condition 3.19.28 of Verra standard 4.5: « Activities that convert natural non-degraded ecosystems [...] are not eligible under the VCS Program » => Any ARR or WRC project (monoculture or not) must be carried out on a degraded ecosystem to comply with the Verra standard, regardless of this new condition (2a). - Condition (2b) seems redundant with condition (2a): by nature, plots used for intensive agriculture in the past 10 years should be classified as degraded. - Furthermore, in some countries, the demonstration of the degraded nature of an ecosystem can only be established by studies carried out for the project but were not published (e.g. diachronic analysis by remote sensing), due to the lack of scientific publications or national data: a project could therefore find itself in a situation where it complies with condition (2a) without being able to demonstrate it. - Condition (1) would already be a very strong commitment for project proponents and in itself guarantees the good health of the ecosystem and the protection/conservation/restoration of biodiversity. The implementation of a dedicated management plan managing several “sectors” (plantation, conservation, “social” areas, etc.) and in particular for these protected areas should then be required. We therefore propose that projects respect condition (1) OR condition (2), or even we propose to remove condition (2) which is already taken into account via § 3.19.28 of standard 4.5.
209	Laurent Valiergue	THE SHARED WOOD COMPANY	FRANCE	No, proposed conditions do not properly respond to the underlying concerns. We understand that the condition 1) (“At least 30 percent of the project area is designated for native ecosystem restoration to be carried out by the project proponent during project activities”) aims at diversifying the composition of forest stands at the landscape level. If this is something which can be considered in a system of monocultures renewed in the same way after clear cut, it does not make sense when non-native monocultures are established as a vegetational succession towards restoration of native or diverse stands through selective cutting. The condition 2) (“The area of the project to be populated by non-native monoculture(s) either: (a) Is classified in scientific literature or by national or local governments as degraded or; (b)has been used for intensive agriculture in the past ten years”) as proposed will hinder the potential of non-native monocultures to support and finance additional activities focused on communities and biodiversity, and The Company does not think that this is the spirit of such a condition. The use of non-native

				monocultures is indeed usually considered to optimize carbon sequestration due to expected yields with the view to (i) securing the financial viability of the project in the long run; while (ii) financing additional activities of interest to biodiversity and/or communities . By imposing non native monocultures on degraded lands, , value added of non-native monocultures will vanish because of a lower growth, as well as the ability to finance additional activities of critical importance for communities and biodiversity. For that reason, The Company proposes altering the non-native monoculture requirement as follows: The Company proposal: When project introduces non-native monocultures, at least 30 percent of the project area dedicated to non-native monocultures shall be managed through selective cutting favoring natural regeneration (associated to enriching) of native tree, monocultures becoming vegetational succession towards native or diverse ecosystem restoration and/or a native ecosystem that could be found in the same ecological region.
210	Santiago Castelo	Carbosur	Uruguay	We believe that none of these points should be adhered to in their current form, and the approach for project eligibility concerning non-native monocultures should be revised. The inclusion of the first condition ("At least 30 percent of the project area is designated for native ecosystem restoration to be carried out by the project proponent during project activities") seems to convey the notion that a forestry project involving non-native species is inherently harmful (a concept lacking scientific rigor and applicability to specific cases). Thus, it is suggested that such a project must offset its impact by restoring the native ecosystem. Additionally, the "30% of the project area" threshold is deemed inappropriate. Imposing a 30% restoration goal on all private projects appears arbitrary and lacks a scientific basis. It might be more suitable to designate restoration/conservation areas based on individual project analyses. Furthermore, the concept of "ecosystem restoration" is not clearly defined, and there is no clarity on how this aspect will be monitored or what the recommended practices would be. We propose a more fitting approach, such as incorporating a project plan designed to reverse biodiversity loss and enhance connectivity in high conservation value areas. Regarding the second condition ("The area of the project to be populated by non-native monoculture(s) either: a) Is classified in scientific literature or by national or local governments as degraded or b) Has been used for intensive agriculture in the past ten years"), we find it partially appropriate. While it is crucial to demonstrate that the project will be carried out on degraded lands, the key concern should be to avoid replacing an intact native ecosystem.

211	ANONYMOUS #14	N/A	N/A	If the "30x30 initiative" referenced in the consultation document is the target agreed to by the parties to the Convention on Biological Diversity (attended by national governments and not private actors). Then we disagree. The initiative targets a high-level objective for conservation rather than for ARR or WRC, and it is therefore not a relevant supporting argument for the proposed 30% threshold.
212	Cliff Massey	Burapha Agroforestry Co. Ltd	Lao PDR	DO NOT AGREE Refer to responses.
213	ANONYMOUS #15	N/A	N/A	The ability to demonstrate responsible forestry practices and mitigation of potential negative impacts is more important than the size of individual projects. WWF FF recommends a landscape approach and not looking at individual plots and projects in isolation.
214	ANONYMOUS #16	N/A	N/A	No. The purpose of carbon credits are to sequester carbon. Large scale monoculture plantation are the best way to do it sustainanly.
215	ANONYMOUS #17	N/A	N/A	please refer to answers provided by FIA and BTG
216	ANONYMOUS #18	N/A	N/A	Yes, for areas larger than 100 ha, but no for areas smaller than that. For areas larger than 100 ha, it is important to have a % of the area dedicated for native ecosystem restoration, using native tree species. And for the rest of the area can utilize non-native tree monocultures as long as it is a non invasive exotic species and the area is considered degraded, following the definition of an ecosystem where ecosystem function is disrupted to an extent where it can no longer sustain its biotic and abiotic characteristics as demonstrated by peer-reviewed literature or expert judgment.
217	ANONYMOUS #19	N/A	N/A	It should comply with both 1 and 2 otherwise the situation will arise again where native grasslands are planted under monocultures. Note that it is important to clarify what degraded applies to, is it in this context a native ecosystem that has not been subjected to intensive agriculture, but has undergone other forms of transformation through continuous fire, wood extraction, alien species invasion, wetland draining and severe overgrazing etc. Please provide further clarity. It is important to provide further detail to exactly what a degraded area is.

218	Shermila Weragoda	stx commodities b.v	Netherlands	If it is a large-scale non-native monoculture, the project needs to meet both conditions 1 and 2 while considering the answer of the 2nd question above. The nonnative monoculture should support the re-establishment of degraded lands
219	Shauna	The ForestLink	Italy	Regarding Point 1: 1) Evidence shall be provided in the project description that any ARR, ALM, WRC or ACoGS project areas were not cleared of existing natural non-degraded ecosystems due to the project activity (e.g., evidence indicating that clearing occurred in the pre-project land use due to natural disasters such as hurricanes or floods). ->It should be accepted that in restoration activities, it is often needed to perform some clearing of the site to facilitate planting and survival of trees. It should be permitted to clear small woody biomass (not significant trees) as part of site preparation activities. There is no need to clear large trees or pockets of trees. It should be evidenced that large trees or pockets of trees are not cleared. Regarding Point 2: 2) Such proof is not required where such clearing or conversion took place at least 10 years prior to the proposed project start date, or where the dominant land cover is an invasive species and threatening ecosystem health as demonstrated using the Global Invasive Species Database and supporting documents such as evidence from peer reviewed literature or expert judgement. ->In many regions, degradation is gradual - especially when induced by smallhold subsistence farmers. It can be very difficult to indicate a particular point in time where the clearing or conversion took place. In such cases - the 10 year requirement is arbitrary and not applicable. Relating to the invasive species - with disclosure that I don't know non-native species that are officially classified as invasive - the project developer should at a minimum have a plan in place to ensure that non-native species do not invade areas outside of the non-native management area.
220	ANONYMOUS #20	N/A	N/A	To be eligible, the reforestation project with non-natives should not apply the proposed condition (2), and review the description of condition (1). Condition (1) imposes that 30% of the project area be covered by planting native species, mainly aiming to maintain the ecosystem's biodiversity. To meet the requirement, we can either require the planting of the area with native species, carrying out environmental restoration in addition to reforestation, or guarantee forest preservation if preserved areas already exist within the project area.

				To increase biodiversity, the creation of ecological corridors between these preservation areas can be encouraged, which is more effective than having these areas restored. In condition (2) nothing to add, since the condition aims to reinforce issues relating to additionality.
221	Tony Knowles	Cirrus	South Africa	I agree with condition (1). Condition (2) may need clarification. If a forest area is cleared, but is not cultivated and remains in an open state and can be restored back to an indigenous forest, should it not be restored back to that indigenous foreststate? If the area was cleared and converted into cultivated land or another form of non-indigenous land cover (in which the biodiversity value has been lost), then non-native monocultures could be permitted.
222	Thurstan Wright	SilviCarbon	Netherlands	Rather than needing to meeting both conditions (1) and (2) in the proposed 3.19.28, we believe that, for ARR and WRC activities, the project shall not introduce non-native monocultures in project activity instances larger than 250 hectares, except where the following conditions are met: 1) Projects are CCB certified; AND at least one of the conditions set out in 2a) or 2b) below are met: 2a) At least 30 percent of the project area is designated for native ecosystem restoration to be carried out by the project proponent during project activities, and the area of the project to be populated by non-native monoculture(s) is a modified habitat; OR 2b) The area of the project to be populated by non-native monoculture(s) either: i) Is classified in scientific literature, expert judgement or by national or local governments as degraded or ii) Has been used for intensive agriculture in the past ten years. We define modified habitats, as referred to above, as “areas that may contain a large proportion of plant and/or animal species of non-native origin, and/or where human activity has substantially modified an area’s primary ecological functions and species component” as per the 2019 IFC Performance Standard definition. Justifications (see below at other questions)

223	ANONYMOUS #21	N/A	N/A	Condition (2) is getting a bit old as carbon credits are now older, ten years seems a short period to analyse bad intentions (clearing for later afforestation and certification). Both conditions should be met. And also condition (2) may require a 20 year period of analysis instead of 10.
224	ANONYMOUS #22	N/A	N/A	In the consideration of planting non-native monocultures, imposing a minimum area for eligibility could discourage viable projects that could significantly contribute to restoration and carbon capture. Relaxing this condition could promote the participation of well-managed projects without compromising environmental objectives
225	ANONYMOUS #23	N/A	N/A	NO Non-native monocultures projects should not have to meet both conditions for the following reasons: - The level of degradation might be so important that the Native ecosystem restoration is not possible and may the most effective option to restore ecosystem services and ensure their long-term maintenance through the generation of financial and non-financial co-benefits for local stakeholders - The anticipated local climate changes make the natural restoration not relevant (local species are expected not adapted)
226	ANONYMOUS #24	N/A	N/A	Proving (2) will be difficult in many cases. It would be advisable to adjust it to accept other sources of information to prove that the land is degraded and to add cattle grazing as a potential land use. Provided that these adjustments are done, both requirements could be maintained to ensure that the project will not harm natural ecosystems, and at the same time encourage additional efforts to achieve additional restoration benefits. It would be important to clarify how this requirement is compatible with 3.19.28 (3) which indicates that projects restoring degraded lands should always restore the area to a native ecosystem.
227	María Claudia Pittamiglio	Sociedad de Productores Forestales	Uruguay	We understand that both conditions should not be met. The first condition assumes that the planting of non-native monoculture is causing harm to the environment, therefore a "compensation" is requested with at least 30% of the project area dedicated to the restoration of the native ecosystem. Assuming the condition is accepted, what is the exact definition of “project area”? Does the project developer need to reduce the planted area of at least 30% for a restoration project? As it has been explained before, every farm in Uruguay is planted at maximum at 60%-65%, does the rest of the area apply for a restoration project? What if a farm does not have a native ecosystem to be restored? Does

				the farm become not eligible for the implementation of an afforestation carbon credit project? What is the exact meaning of restoration and how VCS will monitor the evolution of it? With regards to the second requirement, it is understood to be more reasonable. In fact, in the origin of carbon credits projects under the CDM, the methodology requested demonstrating the degradation of project sites. Moreover, this point would be useful to evidence that the project will not be replacing a healthy native ecosystem, so it is understood that the project will serve for restoration and the positive impacts will be at all levels. However, the definition “ecosystem function is disrupted to an extent where it can no longer sustain its biotic and abiotic characteristics” sounds like a catastrophe, unrealistic, or impractical. Can you give examples of this?
228	Thais Stoppe	Geonoma	Brazil	Yes, both conditions are necessary to ensure there is no negative impact on ecosystems.
229	ANONYMOUS #25	N/A	N/A	Yes, it's the basis of eligibility for ARR projects.
230	ANONYMOUS #26	N/A	N/A	The first condition assumes that the planting of non-native monoculture is causing harm to the environment, therefore a "compensation" is requested with at least 30% of the project area dedicated to the restoration of the native ecosystem. Based on the previous answers to (1) and (2) we disagree with the pre-assumption that forest plantations are harmful to the environment and therefore we believe that there should be no request for a fixed restoration percentage, additional to the normal proportion of native vegetation that is always kept in forest plantation projects in Uruguay. Regarding the second requirement, it is understood to be more reasonable. In fact, in the origin of carbon credits projects under the CDM, the methodology requested demonstrating the degradation of project sites. Moreover, this point would be useful to evidence that the project will not be replacing a healthy native ecosystem, so it is understood that the project will serve for restoration and the positive impacts will be at all levels. However, the definition “ecosystem function is disrupted to an extent where it can no longer sustain

				its biotic and abiotic characteristics" sounds too extreme and difficult to demonstrate. We therefore agree that this definition (footnote) is not to be included in the VCS Standard.
231	ANONYMOUS #27	N/A	N/A	Demonstration that the area is degraded or under intensive agriculture/cattle grazzing would still be paramount in order to demonstrate that no natural non-degraded ecosystems was converted, as well as for any other AFOLU project to be applicable. In the case of 30% restoration this should include the non-productive area if not, the area available for project activity would be greatly limited in some cases, reducing the project´s feasibility because of low net GHG removals.
232	ANONYMOUS #28	N/A	N/A	It should meet at least one of the 2 conditions to avoid restrictions on reforestation that demonstrates that it generates climate, biodiversity, and social well-being benefits and that demonstrates that it does not generate any significant negative impact. The proposed conditions promote best practices on degraded lands and ecosystem restoration but are not restrictive for the generation of other benefits.
233	Nadine Block	Sustainable Forestry Initiative	United States and Canada	The first condition should not be required. Adopting a minimum size threshold of 30 percent for native ecosystem restoration for the ARR project area is not based in science and is therefore not appropriate. Also, from an economic perspective requiring at least 30 percent for restoration of native ecosystems could render some ARR project nonviable reducing the total number of ARR projects. For the second condition, this would be appropriate, assuming (a) there is credible scientific literature available and/or designation by national/local governments of lands as degraded or (b) the land has been used for intensive agriculture in the past 10 years.
234	Camilla Marangon	Ibá - Brazilian Tree Industry	Brazil	It depends on how the conditions will be set. The key conceptual issue is the fact that such monocultures can indeed be established on a wide range of previous land uses, as long as it is done so on a sustainable basis. We believe the most important aspect is to ensure that it does not occur on lands previously covered by native forests or ecosystems. In fact, such a principle is already adopted under VERRA's guidance through the 10 year restriction. In our view, the conditions should consider not only the restoration of native ecosystems but also conservation activities. The establishment of a percentage for such activities is ok, as long as the proposed percentage is reviewed and considers local regulations (see answers 4 and 5 below). In other words, if the instance has already conservation activities in the scope, it would need to undergo restoration just to complement and reach the percentage threshold. If the instance already

				has areas conserved meeting the percentage threshold, it should only meet condition 2 in the proposed 3.19.28. And, regarding condition 2, it should consider pasture lands as intensive agriculture (see answer 7 below).
235	ANONYMOUS #29	N/A	N/A	It depends on how the conditions will be set. The key conceptual issue is the fact that such monocultures can indeed be established on a wide range of previous land uses, as long as it is done so on a sustainable basis. We believe the most important aspect is to ensure that it does not occur on lands previously covered by native forests or ecosystems. In fact, such a principle is already adopted under VERRA's guidance through the 10-year restriction. In our view, the conditions should consider not only the restoration of native ecosystems but also conservation activities. The establishment of a percentage for such activities is ok, as longas the proposed percentage is reviewed and considers local regulations (see answers 4 and 5 below). In other words, if the instance has already conservation activities in the scope, it would need to undergo restoration just to complement and reach the percentage threshold. If the instance already has areas conserved meeting the percentage threshold, it should only meet condition 2 in the proposed 3.19.28. And, regarding condition 2, it should consider pasture lands as intensive agriculture (see answer 7 below).
236	ANONYMOUS #30	N/A	N/A	"30% of the project area" is not an appropriate threshold. Applying a 30% restoration objective to all private projects is arbitrary and not based on science. Furthermore, the "30x30 initiative" referenced in the consultation document is a target agreed to by the parties to the Convention on Biological Diversity (which are all national governments and not private actors). The initiative targets a high-level objective for conservation rather than for ARR or WRC, and it is therefore not a relevant supporting argument for the proposed 30% threshold. Furthermore, at the project level, such a target is simply impractical. A 30% target would make many ARR projects financially unviable. In practice, the design and layout of land uses within an ARR project requires careful consideration of numerous factors, such as soil condition, quality, hydrology, topography, site/species selection, supporting infrastructure, and compliance with best management practices and local regulations. The result of these dynamic factors can mean that far more than 30%, or less, can be left for purposes complementary to the core ARR activity.

				Verra has not demonstrated any meaningful difference between native and non-native monocultures, and pursuing this distinction does not align with the stated Verra or VCS objectives. These programs already include environmental safeguards to prevent against risk of environmental harm, and the CCB Standard and SDVista address ways to verify environmental benefits beyond carbon outcomes. A requirement to restore land using one type of species and not another is inconsistent. Outcome- or performance-based targets, such as a requirement to demonstrate that project activities will significantly enhance one or more ecosystem processes or functions, may make sense, but they should apply equally to all species – and across AFOLU project types – if implemented. As noted above, CCB and SDVista may be better places for such distinctions and for verification of outcomes that are complementary to emissions reductions and carbon removals. Condition 2 is partially appropriate as currently written. It would be suitable provided that Verra makes this condition both feasible and practicable. We encourage Verra to modify 3.19.28 to remove condition 1 and to amend condition 2 as follows: 3.19. 28 The area of the project to be populated by non-native monoculture(s) meets the definition of a "degraded ecosystem," as defined by the VCS Program Definitions. The proposed language, as currently written in the consultation document, may also inadvertently exclude other types of land cover from ARR projects, such as mine reclamation sites, disused rights of way, etc. We do not see a carbon accounting, equity, or safeguards rationale for restricting ARR projects to only certain categories of degraded land or agricultural land. The Verra focus regarding site selection should be ensuring that threatened native ecosystems are not converted for the purposes of instituting AFOLU projects, and conditions of the standard and methodologies should encourage the improved productivity or conservation value of land in ways in that are consistent with climate mitigation outcomes without compromising other essential ecosystem functions.
237	Tobias Dorenkamp	DEG	Germany	3.19.28 (proposed): For ARR and WRC activities, the project shall not introduce non-native monocultures in project activity instances larger than 100 hectares, except where the following conditions are met: 1) At least 30 percent of the project area is designated for native ecosystem restoration to be carried out by the project proponent during project activities, and

				2) The area of the project to be populated by non-native monoculture(s) either: a) Is classified in scientific literature or by national or local governments as degraded or b) Has been used for intensive agriculture in the past ten years Condition 1 is not appropriate. "30% of the project area" is not an appropriate threshold. Applying a 30% restoration objective to all private projects is arbitrary and not based on science. Furthermore, the "30x30 initiative" referenced in the consultation document is a target agreed to by the parties to the Convention on Biological Diversity (which are all national governments and not private actors). The initiative targets a high-level objective for conservation rather than for ARR or WRC, and it is therefore not a relevant supporting argument for the proposed 30% threshold. Furthermore, at the project level, such a target simply does not work. A 30% target would make many ARR projects financially unviable. In practice, the design and layout of land uses within an ARR project requires careful consideration of numerous factors, such as soil condition, quality, hydrology, topography, site/species selection, supporting infrastructure, and compliance with best management practices and local regulations. The result of these dynamic factors can mean that far more than 30%, or less, can be left for purposes complementary to the core ARR activity. Applying a blanket threshold is therefore arbitrary and does not consider local conditions, which are critical for sustained project impact and performance. We understand the intent of the requirement but would point out again that Verra has not demonstrated any meaningful difference between native and non-native monocultures, and that pursuing this distinction does not align with the stated Verra or VCS objectives. These programs already include sufficient environmental safeguards to prevent against risk of environmental harm, and the CCB Standard and SDVista address ways to verify environmental benefits beyond carbon outcomes. A requirement to restore land using one type of species and not another does not make sense. Outcome- or performance-based targets, such as a requirement to demonstrate that project activities will significantly enhance one or more ecosystem processes or functions, may make sense, but they should apply equally to all species – and across AFOLU project types – if implemented. As noted above, CCB and SDVista may be better places for such distinctions and for verification of outcomes that are complementary to emissions reductions and carbon removals. Condition 2 is partially appropriate as currently written. It would be suitable provided that Verra makes

				this condition both feasible (see our response to Question 6 on classifications and data sources) and practicable (see our response to Question 7 on including pastureland in the land-use/land-cover types available for restoration activities). We encourage Verra to modify 3.19.28 to remove condition 1 and to amend condition 2 as follows: 3.19. 28 The area of the project to be populated by non-native monoculture(s) meets the definition of a "degraded ecosystem," as defined by the VCS Program Definitions. The proposed language, as currently written in the consultation document, may also inadvertently exclude other types of land cover from ARR projects, such as mine reclamation sites, disused rights of way, etc. We do not see a carbon accounting, equity, or safeguards rationale for restricting ARR projects to only certain categories of degraded land or agricultural land. The Verra focus regarding site selection should be ensuring that threatened native ecosystems are not converted for the purposes of instituting AFOLU projects, and conditions of the standard and methodologies should encourage the improved productivity or conservation value of land in ways in that are consistent with climate mitigation outcomes without compromising other essential ecosystem functions. Seemingly, by attempting to restrict certain types of forest activities disfavored by a vocal segment of stakeholders (and which runs counter to well respected experts on sustainable forestry, such as FSC and PEFC), Verra is at risk of creating conditions that further disincentivize ARR projects, which the organization has acknowledged have historically had a low rate of adoption relative to global potential.
238	Yann-Olivier de Jouvancourt	Terraformation	United States	No, these conditions are not strict enough and would allow most projects to have up to 70% of non native palnations, which is not acceptable. 30% of native ecosystem restoration is not enough. At least 50-70% should be dedicated to native restoration (see rationale in next answer). Condition 2 will be true for most restoration project, and is therefore not limiting in any way.
239	MaryKate Bullen	Forest Investment Associates	United States	Condition 1 is not appropriate. "30% of the project area" is not an appropriate threshold. Applying a 30% restoration objective to all private projects is arbitrary and not based on science. Furthermore, the "30x30 initiative" referenced in the consultation document is a target agreed to by the parties to the Convention on Biological Diversity (which are all national governments and not private actors). The initiative targets a high-level objective for conservation rather than for ARR or WRC, and it is therefore not a relevant supporting argument for the proposed 30% threshold. Furthermore, at the project level, such a target simply does not work. A 30% target would make many ARR projects financially unviable. In practice, the design and layout of land uses within an ARR project requires careful consideration of numerous factors, such as soil condition, quality, hydrology,

				topography, site/species selection, supporting infrastructure, and compliance with best management practices and local regulations. The result of these dynamic factors can mean that far more than 30%, or less, can be left for purposes complementary to the core ARR activity. Applying a blanket threshold is therefore arbitrary and does not consider local conditions, which are critical for sustained project impact and performance. We understand the intent of the requirement but would point out again that Verra has not demonstrated any meaningful difference between native and non-native monocultures, and that pursuing this distinction does not align with the stated Verra or VCS objectives. These programs already include sufficient environmental safeguards to prevent against risk of environmental harm, and the CCB Standard and SDVista address ways to verify environmental benefits beyond carbon outcomes. A requirement to restore land using one type of species and not another does not make sense. Outcome- or performance-based targets, such as a requirement to demonstrate that project activities will significantly enhance one or more ecosystem processes or functions, may make sense, but they should apply equally to all species – and across AFOLU project types – if implemented. As noted above, CCB and SDVista may be better places for such distinctions and for verification of outcomes that are complementary to emissions reductions and carbon removals. Condition 2 is partially appropriate as currently written. It would be suitable provided that Verra makes this condition both feasible (see our response to Question 6 on classifications and data sources) and practicable (see our response to Question 7 on including pastureland in the land-use/land-cover types available for restoration activities). We encourage Verra to modify 3.19.28 to remove condition 1 and to amend condition 2 as follows: 3.19. 28 The area of the project to be populated by non-native monoculture(s) meets the definition of a “degraded ecosystem,” as defined by the VCS Program Definitions. The proposed language, as currently written in the consultation document, may also inadvertently exclude other types of land cover from ARR projects, such as mine reclamation sites, disused rights of way, etc. We do not see a carbon accounting, equity, or safeguards rationale for restricting ARR projects to only certain categories of degraded land or agricultural land. The Verra focus regarding site selection should be ensuring that threatened native ecosystems are not converted for the purposes of instituting AFOLU projects, and conditions of the standard and methodologies should encourage the

				improved productivity or conservation value of land in ways in that are consistent with climate mitigation outcomes without compromising other essential ecosystem functions. Seemingly, by attempting to restrict certain types of forest activities disfavored by a vocal segment of stakeholders (and which runs counter to well respected experts on sustainable forestry, such as FSC and PEFC), Verra is at risk of creating conditions that further disincentivize ARR projects, which the organization has acknowledged have historically had a low rate of adoption relative to global potential.
240	Marek Guizot	Stafford Capital Partners	United Kingdom	We do not see meeting both conditions as a necessity for ensuring that no negative impact on biodiversity and ecosystems occurs. The VCS Standard already precludes conversion of natural, non-degraded ecosystems (Section 3.19.28) which suggests that any project meeting this condition will either maintain its baseline ecosystem value status, or improve upon it. Our comments on Condition 1 are hampered by the definition of “Native ecosystem restoration” (i.e. returning to a landscape composed of naturally occurring and self-sustaining biotic and abiotic components demonstrated by peer-reviewed literature, expert judgment, or government registry), which is rather vague. We would like to see a more explicit statement as to whether it includes the preservation of existing, non-degraded ecosystems, or is limited to the active restoration of degraded ecosystems? If the former, then at the very minimum (i.e. if the 30% requirement equates to the area of existing natural, non-degraded ecosystems) the project will maintain its baseline ecosystem value. If the latter (i.e. the 30% must represent an area of land to be restored over and above any existing natural, non-degraded ecosystems) then a substantial net positive impact on ecosystem value would result, irrespective of previous land use! On its own, Condition 2 infers that since the land is either degraded or subject to intensive agriculture use, it is in a condition where conversion to non-native monocultures will not result in any deterioration or loss in ecosystem value. This on its own seems like an effective minimum safeguard. However, the reality is it is probably conservative. Our experience of developing monocultures on degraded land, in line with industry best practice guidelines and the requirements of forest certification programs, has been that the typical outcome is a positive impact on ecosystem diversity and quality.
241	Justin Mercer	New Forests	Singapore, Kenya, Australia, New	Yes, the project proponent should meet both conditions, however the 30% restoration requirement should be reduced. While dedicating some portion of the project area to native forest ecosystem restoration will be costly, and potentially cost prohibitive for developing the project under the 30% scenario, dedicating area to natural habitat conservation and / or restoration is part of the landscape

			Zealand, United States	approach to forestry that we vigorously support and currently implement. Plantations should only be established on degraded landscapes, whether they comprise native or non-native crops. Protecting intact high biodiversity values is a critical component of sustainable commercial forestry.
242	Brett Hundley	Agroforestry Partners	United States	Eligible projects should meet one of the two conditions, instead of both conditions simultaneously. As noted in my answer to the first question, farmers and landowners need options for converting intensive agricultural lands to projects and systems that offer income replacement alongside soil rehabilitation and carbon sequestration opportunities. In reality, non-native and/or monoculture plantings will sometimes offer the best near-term options for success and execution, while creating an immediate ecological improvement relative to staple crop production of corn or soy. For this reason, it is important to take a more specific view on the definitions of "non-native" and "monoculture". Is the species not endemic to the region but already present and suitable? Does the species coexist with other types of ground cover year-round? More clarity is needed on definitions within the Standard.
243	Indradeep Das	ReNew	India	For point no.1 (3.19.28 as proposed), we principally agree with the notion of having dedicated project area in Hectares for native ecosystem conservation, however, we believe that without any benchmark data for degradation, it is difficult to arrive at a percentage number. We further understand the requirement of having country wise minimum threshold requirement for native ecosystem conservation. The project should certainly meet point no. 2 of the proposed 3.19.28. If a native grassland was converted to a cropland without any crop rotation and has remained so for the last 10 years, then, due to the extent of damage, its restoration will require the use of non-native plants. Along with scientific literature and reports by national or local governments, regional analysis and assessments of local and/or indigenous experts as well as reliable institutions documents should also be included while classifying the land as ‘degraded’.
244	Agustin Inthamoussu	CLIMIT	Uruguay	CLIMIT understands that both conditions should not be met. The first condition assumes that the planting of non-native monoculture is causing harm to the environment, therefore a "compensation" is requested with at least 30% of the project area dedicated to the restoration of the native ecosystem. Assuming the condition is accepted, what is the exact definition of “project area”? Does the project developer need to reduce the planted area of at least 30% for a restoration project? As it has been explained before, every farm in Uruguay is planted at maximum at 60%-65%, does the rest of the area

				apply for a restoration project? What if a farm does not have a native ecosystem to be restored? Does the farm become not eligible for the implementation of an afforestation carbon credit project? Or does the farmer need to implement a restoration area outside its property? What is the exact meaning of restoration and how VCS will monitor the evolution of it? With regards to the second requirement, it is understood to be more reasonable. In fact, in the origin of carbon credits projects under the CDM, the methodology requested demonstrating the degradation of project sites. However, the definition "ecosystem function is disrupted to an extent where it can no longer sustain its biotic and abiotic characteristics" sounds like a catastrophe, unrealistic, or impractical. Can you give examples of this?
245	Jean	Beijing forestry university	China	3.19.28 requires the project to meet the two conditions at the same time. However, it is difficult. First, it is hard to demostration what the native ecosystem before the activities is: some land is destoryed in very long time ago(e.g,50 years ago) and there exists no clear satellite imagine in the history and it is the same to demostrate the intensive agriculture activities in the past then years for it is hard to get continuous satellite imagines or certain year satellite imagine. Second, researches(literatures) about the ecosystem in impoverished areas is limited. Maybe it is more practical for the new standard to ask the project to meet conditions (1) or (2).
246	Jaan	Ecobase	Estonia	If the project foresees conversion of a larger area to the natural ecosystem but needs to use non-native species across the whole area as pioneer species then right now a project instance which is larger than 100 hectares wouldn't qualify to the project? As long as this longer-term conversion to native ecosystem while using a non-native pioneer on degraded land counts into the 30% rule, this suffices. If not, the current proposal would set up a strange situation where larger areas where pioneer species must be used cannot enrol as the native ecosystem restoration from the start is impossible there due to degradation.
247	Jim Heyes	Criterion Africa Partners	South Africa	Yes. Plantation establishment with non-native monocultures has the potential to provide significant landscape ecosystem benefits to areas which are not planted. These restoration activities should form part of the commitment to good forestry management. This includes not allowing any additional deforestation or conversion of areas of High Conservation value or high value natural ecosystems, and therefore a commitment to only establish mono-cultures on degraded sties, or areas of previous agriculture (already degraded) is acceptable. However, any thresholds should be inclusive of any regulatory or other external or internal

				requirements for conservation set-asides. It would unfairly punish projects in jurisdictions with high existing conservation standards to impose additional set-asides on top of the legal minima. Also, relying on scientific literature or local government classifications of the land as degraded may prove to be an operational challenge, since in many developing countries, there is not granular enough scientific study to be applicable at the project scale, and local governments may not have the capacity to make these determinations in line with global best practices.
248	ANONYMOUS #31	N/A	N/A	Yes, a project should be required to meet both conditions (1) and (2) as outlined in the proposed 3.19.28 to be eligible for planting non-native monocultures. Condition 1 ensures that a substantial portion (at least 30 percent) of the project area is dedicated to native ecosystem restoration, contributing to environmental conservation and biodiversity enhancement. This requirement aligns with sustainable practices and promotes the overall health of ecosystems. Condition 2 requires that the area set for non-native monocultures is scientifically recognized or officially acknowledged by governments as degraded. This ensures that non-native species are introduced in areas where their cultivation is environmentally justifiable and contributes to ecosystem health.
249	ANONYMOUS #32	N/A	N/A	Yes, for areas larger than 100 ha, but no for areas smaller than that. For areas larger than 100 ha, it is important to have a % of the area dedicated for native ecosystem restoration, using native tree species. And for the rest of the area can utilize non-native tree monocultures as long as it is a noninvasive exotic species and the area is considered degraded, following the definition of an ecosystem where ecosystem function is disrupted to an extent where it can no longer sustain its biotic and abiotic characteristics as demonstrated by peer-reviewed literature or expert judgment.
250	ANONYMOUS #33	N/A	N/A	Condition 1. At least 30 percent of the project area is designated for native ecosystem restoration to be carried out by the project proponent during project activities. We think it essential for sustainable projects to include corridors for wildlife, protect critical habitats

				for plants and animals and maintain and manage water resources within project areas. To enable these ecosystem services, projects should allocate a percentage of land to native restoration. However, for the reasons outline in answer 4 below, we think Verra should align its requirements to those of another globally recognised standard, i.e., the Forest Stewardship Council (FSC), and require a minimum of 10% of land to be allocated to conservation/restoration. Condition 2. The area of the project to be populated by non-native monoculture(s) either: a) Is classified in scientific literature or by national or local governments as degraded or b) Has been used for intensive agriculture in the past ten years. We agree with condition 2. We believe that when evaluating each ARR and/or WRC project, classification using scientific literature or by or by national or local governments as degraded is important. Any ARR or WRC project seeking carbon revenue should only be implemented on degraded land that does not contain any forest for at least 10-years before the project start date. This will eliminate the risk of a project clearing out any existing land for the purpose of creating a carbon credit project. Any land that can be revegetated without human intervention should not be eligible for ARR and/or WRC carbon credits. We also agree with the condition to include project areas that have been used for intensive agriculture in the past 10 years, since intensive, unsustainable agriculture can lead to further land degradation.
251	ANONYMOUS #34	N/A	N/A	It depends on how the conditions will be set. The key conceptual issue is the fact that such monocultures can indeed be established on a wide range of previous land uses, as long as it is done so on a sustainable basis. We believe the most important aspect is to ensure that it does not occur on lands previously covered by native forests or ecosystems. In fact, such a principle is already adopted under VERRA's guidance through the 10-year restriction. In our view, the conditions should consider not only the restoration of native ecosystems but also conservation activities. The establishment of a percentage for such activities is ok, as long as the proposed percentage is reviewed and considers local regulations (see answers 4 and 5 below). In other words, if the instance has already conservation activities in the scope, it would need to undergo restoration just to complement and reach the percentage threshold. If the instance already has areas conserved meeting the percentage threshold, it should only meet condition 2 in the

				proposed 3.19.28. And, regarding condition 2, it should consider pasture lands as intensive agriculture (see answer 7 below).
252	ANONYMOUS #35	N/A	N/A	Condition 1) is not appropriate. Our view is that "30% of the project area" is not an appropriate threshold to apply to privately financed projects at this global scale. Applying a 30 percent restoration objective to all private projects is arbitrary and not based on science. Furthermore, the "30x30 initiative" referenced in the consultation document is a target agreed to by the parties to the Convention on Biological Diversity (which are all national governments, and not private actors). The initiative targets a high-level objective for conservation rather than for ARR or WRC, and it is therefore not a relevant supporting argument for the proposed 30 percent threshold. These governments can use legally mandated and voluntarily conserved areas to contribute toward this target; have the power to make national-level land use decisions in accordance with targets; and have the ability to pursue land-use planning goals that are not primarily motivated by financial returns. None of these conditions applies to project developers using the ARR methodologies. At the project level, such a target simply does not work. A 30 percent target would make many, if not most, private ARR projects financially unviable. In practice, the design and layout of land uses within an ARR project requires careful consideration of numerous factors, such as soil condition, quality, hydrology, topography, site/species selection, supporting infrastructure, and compliance with best management practices and local regulations. The result of these dynamic factors can mean that far more than 30%, or less, may be set aside for purposes complementary to the core ARR activity. Applying a blanket threshold is therefore arbitrary and does not consider local conditions, which are critical for sustained project impact and performance. We understand the intent of the requirement, but we would point out again that Verra has not demonstrated any meaningful difference between native and non-native monocultures, and a requirement to restore land using one type of species and not another does not make sense in this context. Outcome- or performance-based targets, such as a requirement to demonstrate that project activities will significantly enhance one or more ecosystem processes or functions, may make sense, but they should apply equally to all species, if implemented.

				Condition 2) is appropriate, provided that Verra makes this condition both feasible (see our response to Question 6 on classifications and data sources) and practicable (see our response to Question 7 on including pastureland in the land-use/land-cover types available for restoration activities). Our response is that a project should not need to meet condition 1, and that the language for condition 2 should be modified as follows: 3.19.28 2) The area of the project to be populated by non-native monoculture(s): a) Meets the definition of a "degraded ecosystem," as defined by the VCS Program Definitions; or b) Has been converted from a native ecosystem at least 10 years prior to the project start date (to include for use for intensive agriculture or animal husbandry). We note that the proposed language may also be excluding other types of land cover from ARR projects, including (e.g.) mine reclamation sites, disused rights of way, etc. We do not see a carbon accounting, equity, or safeguards rationale for restricting ARR projects to only certain categories of degraded land.
253	ANONYMOUS #36	N/A	N/A	Yes.
254	ANONYMOUS #37	N/A	N/A	It depends on how the conditions will be set. The key conceptual issue is the fact that such monocultures can indeed be established on a wide range of previous land uses, as long as it is done so on a sustainable basis. We believe the most important aspect is to ensure that it does not occur on lands previously covered by native forests or ecosystems. In fact, such a principle is already adopted under VERRA's guidance through the 10-year restriction. In our view, the conditions should consider not only the restoration of native ecosystems but also conservation activities. The establishment of a percentage for such activities is ok, as long as the proposed percentage is reviewed and considers local regulations (see answers 4 and 5below). In other words, if the instance has already conservation activities in the scope, it would need to undergo restoration just to complement and reach the percentage threshold. If the instance already has areas conserved meeting the percentage threshold, it should only meet condition 2 in the proposed 3.19.28. And, regarding condition 2, it should consider pasture lands as intensive agriculture (see answer 7 below).

255	ANONYMOUS #38	N/A	N/A	This could be restrictive for small projects,, and most of the projects we know and perhaps one or the other condition could be a less restrictive measure, due to the above-mentioned reasons on the need of commercial reforestation (commonly monocultures and sometimes non natives), on the increasing demand of forestry products.
256	ANONYMOUS #39	N/A	N/A	It must meet just one, as there are cases where due to the degradation stage it is not possible to use native species or to financially sustain many species. From nursery and climate change impacts 3 it is important to have this flexibility. Or there are no options to immediately have the 30% of native species, but through silvicultural management it might be the increase of the numbers and native species in the area. Also, important to consider the biodiversity impact with other species such as epiphytes, insects, and others, but as a result of the plantation, not necessarily at the beginning of it 1 .
257	ANONYMOUS #40	N/A	N/A	Yes. Ecological restoration activity is essential to provide shelter and long-term benefits to biodiversity. For example, many animal species need preserved, undisturbed forests.
258	ANONYMOUS #41	N/A	N/A	The deficit of forests caused by the extractive economic model is what should be tackled. This implies that all plantations must be developed with native species in order to restore the native forest area. These plantations should not be monocultures, they should mimic the natural successions. In some cases, we should rely on natural regeneration, only these forests will contribute positively to the carbon balance. No to monocultures of exotic species!
259	ANONYMOUS #42	N/A	N/A	When smallholders are allowed to partcipate in a project that includes non-native monocultures, these conditions will be hard to meet, since the smallholders will have been part of the problem.
260	ecosecurities	ecosecurities	Switzerland	ecosecurities consider monoculture should not be eligible for carbon credits. While we acknowledge the importance of monoculture for the society, we consider carbon credits should not be assigned to it.
261	Matthew Kerr	New Zealand Carbon Farming	New Zealand	We disagree with condition 1) as a hard rule, as our averaging carbon projects of Pinus radiata plantation improve all Climate, Community, and Biodiversity aspects in New Zealand compared to the baseline activity. This benefit should be tested in the “Do no harm” section as a context-based approach compared to the baseline activity.

				We agree with condition 2) in principle – however "degraded" needs to be broadly defined and proven on an individual basis. New Zealand's land use class system (Link: https://ourenvironment.scinfo.org.nz/maps-and-tools/app/Land%20Capability/lri_luc_mainwant) can be broad brush, lack context and misclassify land as "non-degraded" without looking at key variables which would make it suitable for plantation averaging carbon projects that would in reality improve all aspects of climate, community and biodiversity from the baseline activity in specific situations. "Intensive agriculture" should be more clearly defined as: "Agricultural land-use practices that require additional inputs such as machinery, fertilizer, or pesticides to increase or maintain agricultural outputs. Both 2a and 2b should not be applied as hard rules but should be considerations as part of an overall context based "Do no harm" approach.
262	Charlie Sichel	Forestry Linked Securities / Radius Zero	Switzerland / Paraguay	Neither, see above for justification, remembering that climate change mitigation is about trade-offs, and that without urgent and massive CO2 sequestration, which needs to be a bundle of measures including NBS, our planet is headed for disaster. We need to be pragmatic today, not perfectionist, if we want to achieve anything that moves the needle in terms of CO2 sequestration.
263	Beatriz Zavariz	Manulife Investment Management Timberland and Agriculture	United States	Non-native monocultures should be allowed without having to meet either of these two conditions as it is not guaranteed that all negative impacts of monoculture plantations (e.g. exotic species invading native ecosystems) would be mitigated by enacting those two conditions. Instead, it would be more effective to 1) require non-native monocultures to be certified to a sustainable forestry standard such as the Forest Stewardship Council (FSC) or the Sustainable Forestry Initiative (SFI), and; 2) be planned within broader landscape management plans. The goals of entities like the FSC are "to promote environmentally responsible, socially beneficial and economically viable management of the world's forests, by establishing a worldwide standard of recognized and respected Principles of Forest Stewardship." We believe Verra should draw from the multi-decades long experience developed by FSC, SFI or others to define how to prevent non-native monoculture potential negative impacts. FSC has defined 10 principles for sustainable forest and plantation management, for the purposes of this consultation it is worth to highlight principles 6 (environmental impact), 9 (maintenance of high conservation value forests) and 10 (plantations). FSC principle 6 (environmental impact) establishes that forest management should conserve

				biological diversity and its associated values, water resources, soils and unique and fragile ecosystems and landscapes, and, by doing so, maintain the ecological functions and the integrity of the forest. To achieve principle 6, FSC requires the following subprinciples: 1. environmental impact assessments, 2. safeguards to protect rare, threatened and endangered species such as conservation and protection areas, controlling of hunting activities and establishment of nesting and feeding areas 3. maintenance of ecological functions such as forest regeneration, genetic, species and ecosystem diversity and natural cycles that affect productivity of the forest ecosystem 4. protection of existing ecosystems within a landscape 5. control of erosion, minimization of forest damage and protection of water resources 6. pest management without the use of chemical methods 7. proper waste management practices 8. uses of non-genetically modified organisms and restrictions of biological control agents 9. controlled and actively monitored use of exotic species 10. prohibit establishment of plantations on forest lands or non-forest land uses except where there will be a clear, substantial, additional, secure, long term conservation benefit across the forest management unit. We believe that proposed conditions 1 and 2 will fall short on guaranteeing the prevention of all possible monoculture plantation negative impacts. For example, relying on only this conditions will not prevent the loss of rare, threatened and endangered species, the potential impacts of chemical pesticide use, and the dispersal of exotic species and genetically modified organisms. It would be more effective to rely on a multitude of measures, adjusted to country-specific conditions, that combined ensure the intended objectives of this consultation. FSC has developed country-specific standards that adjust the principles above to what is needed, and what is possible for each country situation. Again, we recommend requiring non-native monoculture plantations to be certified to a sustainable forest certification standard in lieu of conditions 1 and 2. Similarly, we believe that condition 2 is not sufficiently comprehensive regarding the areas that could benefit from monoculture plantations. For example, the restriction is not clear on the eligibility of degraded grasslands, degraded pasturelands, abandoned non-native grasslands and other land types that are not associated to agriculture like mine reclamation sites. All these lands could benefit from

				the establishment of plantations and may deliver additional environmental and biodiversity benefits if developed under a required sustainable forestry standard.

4) We propose that at least 30% of the project area be dedicated to native ecosystem restoration. In your opinion, is this an appropriate minimum restoration threshold? If not, what percentage of land should be dedicated to native ecosystem restoration? Please provide your rationale for the suggested amount.

#	Name	Organization	Country	Comment
264	ANONYMOUS #1	N/A	N/A	This number should be as high as 95% to be consistent with Natural Forest Management requirements of other high quality standards such as California ARB, and CAR US Forest Protocols. Note, that the respondent believes other parts of these two standards are not as high quality as the Natural Forest Management requirements mentioned (e.g.,common practice and baseline setting).
265	Luiz G. De Oliveira Filho	Tiete Agricola Ltda	Brazil	I think it would be a lot better if there was no need at all the use of native species, until the scientific research could offer more and better tecnology to plant and care native ones. This field is particularly delayed specially in Brazil.
266	Laszlo balog	Bloomair Zrt	Hungary	I have answered this in point 3.
267	Michael Spandern	freelance	Germany	20 % appears somewhat populistic, arbitrary and simplistic. Tree species, topography, soil type, climate, proximity to water bodies, valuable biotopes and habitats should be taken into context. The answer can be 0 or more than 50% ha
268	Mads Asprem	NewAfrica Bioenergy Ltd	United Kingdom	I think 30% maybe too low. I think it could be 40-50%. However, on the deforestation frontier where ARR is particularly important, it will be difficult to maintain a large area outside of the actively managed AR operations. More importantly, I think that 100% of the revenues generated from the sale of carbon credits should be used within the district or regions of the country where the project is located - to ensure that carbon finance is additional (which many forestry carbon credits are not) and maximise co-benefits.

269	Satinder Mohan Singh	Sequoia Plantation	Gabon	This is an arbitrary number and needs to be justified in context of each project and related ecosystem involved. It could be lower or higher depending upon the project. There are projects we have come across where mandatory conservation zones exceed 50% of forest area , as also projects where not more than 20% is the area to be reserved for native ecosystem restoration.
270	ANONYMOUS #3	N/A	N/A	30% is appropriate, in my opinion
271	ANONYMOUS #4	N/A	N/A	In principal this is fine but location and pattern are hugely important. Often with these simple percentage requirements you end up with worthless little strips and patches or put in the least productive sites where they won't succeed. Some additional requirements need to be put on this to maximize the ecological value of the restoration. For example, requiring that it be used to buffer between the plantation and existing natural ecosystems and or to enlarge the size of remnant patches to achieve ecologically-meaningful patches and or to reconnect existing natural areas or restore a corridor along water courses.
272	ANONYMOUS #5	N/A	N/A	I think it depends on the landscape status. If the landscape is totally converted, then 30% might be low. If it's relatively intact then 30% might be high. A more nuanced approach would be to consider the surrounding lands where the ARR project is being implemented. How much of it is native ecosystem? How much is already converted? I wonder if there's a not too complicated way to bring that into consideration when determining a threshold.
273	R. Sanjay Mishr	Callirius AG	Switzerland	The proposal that at least 30% of the project area be dedicated to native ecosystem restoration is a step in the right direction, but this threshold may be insufficient to compensate for the ecological footprint of non-native monocultures. Moreover, a 30% minimum restoration threshold may not be practical or feasible in all project contexts, especially in areas with limited available land or competing land uses. Instead of a fixed minimum restoration threshold, projects could be required to consider site-specific factors, such as the size and location of the project area, the condition of the existing ecosystem, and the potential for ecological connectivity. This could help ensure that restoration efforts are tailored to the specific needs and opportunities of each project, while still achieving meaningful environmental benefits. (https://doi.org/10.1016/j.tree.2008.11.012)

274	Vitor Vannozzi Brito	hummingbirds	France	We suggest considering 50% as a minimum threshold for native ecosystem restoration. This is a great opportunity for VCS to foster biodiversity and play a leading role in channeling private investment to ecosystem restoration, aligning its role with the UN Decade for Ecosystem Restoration.
275	Guy Pinjuv	Pachama	United States	Pachama recommends aligning thresholds for “Natural Forest Management” that are included in the Climate Action Reserve and California ARB US Forest Protocols. These include targets for 95% native species, requirements for species composition, as well as forest structure.
276	Otto Beukes	ClimatePartner Impact GmbH	Germany	Although this would be an idealistic outcome, it appears as another restriction and barrier to entry. Native species restoration inherently required a whole different suite of expertise and resources, is typically significantly more expensive than a systematic monoculture approach and incorporates complexity that cannot be attained by many project developers. It is again important to consider the land use objectives in context. In many cases, the incorporation of an indigenous restoration component will be restrictive, endangering the project as a whole and lead to continued unsustainable land use and associated poverty and inequality. We should promote a land use transition that considers tradeoffs holistically, where biodiversity and other co-benefits are promoted and rewarded by market participants, through existing systems (SDVISta, CCB, Labels and Assets), but not mandated to the point of exclusion from a mechanism intended to amplify GHG mitigation, valuation and regulation. Native ecosystem restoration may be mandated as a portion of the project as an outcome of a feasibility assessment, impact assessment or tradeoff analysis. In many instances, native species restoration is not a viable option due to extensive change/damage/degradation in the immediate and surrounding ecosystem and biophysiological conditions. Mandating proportional native ecosystem restoration may jeopardise the GHG benefits, obligations between financiers and proponents and the sustainability of such projects. I would again suggest that the VCS, its proponents and beneficiaries promote, facilitate and reward native species ecosystem restoration and conservation, but not limit the benefits that may be gained from the legitimate use of select non-native species within a holistic context and in a world where our collective GHG outcomes remain unattainable.
277	Marcelo Schmid	Arvor Business Advisory	Brazil	The percentage depends on the location and conditions of the area. For instance, if the property is already conected with a native vegetation, probably the percentage should be different than a property that is isolated. On the other hand this questions takes us back again to question 2: how we expect that a 100 hectares project will be feasible, considering all project developement costs, verification, etc?

278	ANONYMOUS #6	N/A	N/A	That is very huge as compared to FSC Forest management certification which demands 10 % of the area should be protected or set aside area. 30% will be a huge blow and practically not possible to execute. It is so, it will be trickster or bypassing the process. Please prepare amendable, executable, practical rules to follow which should be achievable in nature. The area in which the carbon credits project's are executed are farmers land. The acceptance of farmers should also be very important as his livelyhood is on the land.
279	Richard Zell Donovan	n/a - independent	USA (Vermont)	This is a scale question to me. For large-scale PLANTATION operations, which I believe would be 1,000 hectares or greater, the 30% requirement may be burdensome, but my guess is that it is a good starting point. I would suggest that for a 2 year period that Verra use that threshold and see what uptake and experience is, revisit after 2 years, and revise if necessary. However, I think a 30% threshold is not realistic for smallholders (using the same hectare size definitions that FSC uses for them in X country). I would suggest that 10% for smallholders, with language that prioritizes riparian zones, biological corridors, other community uses (bee trees, etc.), and that is clear that NTFP collection or low impact uses (light recreation) of such areas (for smallholders AND large-scale operations) is permissible.
280	Danny Torres	Saltus	Colombia	No comments
281	Jacob Penner	The Nature Conservancy	United States	ARR and WRC activities fundamentally involve a restoration of natural vegetative cover that naturally implies the presence of the native species originally present. TNC therefore feels that any threshold for the presence of native species below 50% is disingenuous to the general classification of the activity. A 30% minimum threshold for the restoration of native ecosystems feels only appropriate for projects that demonstrate that the planting of native species is not feasible and would still not be feasible with carbon finance. Where native species are available and affordable, the minimum threshold should be increased to a value greater than 50% (TNC recommends 70%).
282	ANONYMOUS #7	N/A	N/A	Preferably the same amount (50% of the project area) of land that will be dedicated to the monoculture should be dedicated to native ecosystem restoration, although 30% is an appropriate minimum restoration limit.
283	ANONYMOUS #8	N/A	N/A	This could be an acceptable level and should be implemented when working with non-native tree plantations to enhance natural vegetation in the plantation area.

284	Lucio Pedroni	Carbon Decisions International (CDI)	Colombia	Restoration of native ecosystems is desirable from an environmental and biodiversity perspective and should be encouraged, but not required. However, if an ARR project activity generates negative impacts, appropriate corrective actions, proportional to the damage caused, should be required. In some cases, but nor always, dedicating a percentage of the project area to restoring native ecosystems will be an appropriate corrective action. Justification: a) See the justifications provided under the previous questions. b) We assume that ARR project activities are generally beneficial for the environment and biodiversity, and not the opposite. A requirement to dedicate at least 30% of the project area to the restoration of native ecosystems when establishing non-native monocultures implies an assumption that non-native monocultures are environmentally harmful and that some form of preventive environmental compensation is therefore required. This may be a common perception among journalists and carbon market players, but is it supported by good scientific evidence? And, more importantly, will perceptions against non-native monoculture and against ARR project activities in general go away if 30% of the project area is dedicated to native ecosystem restoration? We believe that burdening ARR projects with the costs of restoring native ecosystems can be disproportionate compared to the actual harm that ARR projects can cause. Furthermore, this requirement will not diminish public perceptions against non-native species, monocultures, and ARR projects in general, but it will certainly cause several projects to lose their financial viability. c) ARR project activities have already lost attractiveness for impact investors due to the VCS's decision to adopt dynamic performance baselines. Adding more costs to this project category, such as the requirement to dedicate at least 30% of the project area to native ecosystem restoration when using non-native monocultures, further undermines the viability of many good ARR projects.
285	ANONYMOUS #9	N/A	N/A	No, 30% is not appropriate, and we do not believe an area-based minimum is appropriate as a condition. As noted above, borrowing the concept of 30% from the “30x30 initiative” referenced in the consultation document is misapplied as it was not designed for private landowners or projects. The

				parties to the Convention on Biological Diversity (which are all national governments and not private actors) are able to pursue the 30% objective using legally mandated and voluntarily conserved areas to contribute toward this target; have the power to make national-level land use decisions in accordance with it; and have the ability to pursue land-use planning goals that are not primarily motivated by financial returns. None of these conditions is applicable to project developers using the ARR methodologies. ARR projects serve to improve the production and/or conservation value of modified ecosystems (or "degraded land") through actions that include afforestation, reforestation, or restoration. When applying a land use planning concept that seeks to improve ecosystem service function at a project level and considering landscape factors, it is not appropriate to set fixed thresholds for native ecosystem restoration. As Verra well understands, the economics of ARR projects are already challenging, and only in some cases are they even financially viable with carbon finance. By imposing restrictions that will likely lead to suboptimal land use decisions and lower profitability, there will be substantially fewer new ARR projects. We strongly encourage Verra to remove the 30% proposed threshold and further to remove any area-based thresholds for native ecosystem restoration. If deemed appropriate, Verra could designate a separate native ecosystem restoration standard to distinguish restoration projects and criteria from other types of afforestation and reforestation, but such requirements are inappropriate in the VCS Standard as a whole and should not apply to all ARR.
286	Zoltan Kun	Great Lakes and Wetlands Association (Forest Defenders Alliance)	Hungary	There is a lack of scientific justification of the 30% limit. This limit as described above does not fit into the global biodiversity goals (see description at question 3). In my view 100% of the area should be dedicated to restore native ecosystems in order to be eligible for carbon credit. See principles 4 and 5 of the FAO principles of ecosystem restoration (see reference at question 3).
287	ANONYMOUS #10	N/A	N/A	We would recommend that VERRA aligns its conditions to those of the Forest Stewardship Council that prescribes 10% of the total landholding to be dedicated to conservation or restoration; an area of as much as 30% may deter project developers although it would depend on the type of restoration activities deployed.
288	ANONYMOUS #11	N/A	N/A	The problem with setting a fixed threshold such as 30% of total area is that highly variable conditions by geography, land fragmentation, surrounding areas, infrastructure, and other competing economic

				activities can make the target irrelevant or unachievable. We believe it is better to consider that plantations should not cover more than 70% of the legal boundary area. This leaves unplanted areas for conservation, poorly drained areas, rock outcrops, high value conservation areas, biological corridors available for enrichment among others. For instance, firebreaks are not typically restoration areas but are natural biological corridors connecting reserve areas providing important ecological significance. These should be factored into the remaining 30%. Also, the 30% requirement would make more sense if all the "replaced ecosystems in the 70%" are represented in the conservation area, avoiding over reliance of certain ecosystems and the absence of others.
289	Spencer Meyer	BeZero Carbon	U.S.	There has not been enough information provided as to why the 30% threshold has been chosen, we request further information to clarify the justification for this number. We also suggest that when setting such a threshold, financial analysis should be considered, to determine the impacts of increasing the proportion of native ecosystem restoration on financial viability and additionality of projects. If this were implemented, we would suggest that projects be required to disclose the split established by their projects. The implications of such a split between non-native and native species should be clearly accounted for in all carbon accounting.
290	ANONYMOUS #12	N/A	N/A	Yes, this is sufficient provided that the native ecosystem restoration area is managed to ensure the ecological benefits are achieved. This % goes beyond what is required for native ecosystem areas under FSC and PEFC certification for managed plantation forests. This is also higher than the 25% requirement of the similar UK Forest standard. It is our opinion that monoculture areas must also be actively managed, with best silvicultural practices and to enhance ecological benefits and biodiversity within all project areas.
291	Jeremy Kaufman	Propagate Group PBC	United States	As written in detail above, we believe on intensive agricultural land, the threshold should be closer to 5-10% as the transitions for farms would be uneconomically viable at a 30% threshold and thus limit adoption and ability to make transitions.
292	ANONYMOUS #13	N/A	N/A	No, 30% is not appropriate, and we do not believe an area-based minimum is appropriate as a condition. As noted above, borrowing the concept of 30% from the "30x30 initiative" referenced in the

				consultation document is misapplied as it was not designed for private landowners or projects. The parties to the Convention on Biological Diversity (which are all national governments and not private actors) are able to pursue the 30% objective using legally mandated and voluntarily conserved areas to contribute toward this target; have the power to make national-level land use decisions in accordance with it; and have the ability to pursue land-use planning goals that are not primarily motivated by financial returns. None of these conditions is applicable to project developers using the ARR methodologies. ARR projects serve to improve the production and/or conservation value of modified ecosystems (or "degraded land") through actions that include afforestation, reforestation, or restoration. When applying a land use planning concept that seeks to improve ecosystem service function at a project level and considering landscape factors, it is not appropriate to set fixed thresholds for native ecosystem restoration. As Verra well understands, the economics of ARR projects are already challenging, and only in some cases are they even financially viable with carbon finance. By imposing restrictions that will likely lead to suboptimal land use decisions and lower profitability, there will be substantially fewer new ARR projects. We strongly encourage Verra to remove the 30% proposed threshold and further to remove any area-based thresholds for native ecosystem restoration. If deemed appropriate, Verra could designate a separate native ecosystem restoration standard to distinguish restoration projects and criteria from other types of afforestation and reforestation, but such requirements are inappropriate in the VCS Standard as a whole and should not apply to all ARR.
293	Cyril Melikov	EP Carbon	United States of America	EP Carbon agrees with the proposed percentage of land to be dedicated to native ecosystem restoration, under the condition of compliance with safeguards and relevant legislation. The suggested safeguards include the prioritization of areas mentioned in our answer to Question #1. To ensure compliance with local legislation, when an applicable law establishes an area percentage for restoration, the higher percentage or the most conservative requirement, between VCS and the law, must be observed.
294	CASSAGNE Morgan	FRM COMMITMENT	FRANCE	It seems relevant to align with the 30x30 global initiative. It is an approach similar to that used for FSC-certified forests and for sustainable forest management more generally: harvest part of the area in a sustainable way and protect the other part in order to maximize the benefits for the biodiversity. This 30% rule should be applied on the basis of the net area planted in monoculture: the surface area thus obtained should be added to the total surface area managed by the project proponent.

				The definition of “native ecosystem restoration” should be understood in the broad sense, as is the case in the 30 x 30 initiative, to include the notion of ecosystem conservation/preservation as well as sustainable management of ecosystems. For example, actively involve communities by introducing trees into existing fields – according to the principle of agroforestry – so that the agricultural activity and food production of local populations can shift toward a sustainable scheme, replacing agricultural activities damaging to ecosystems, such as slash-and-burn agriculture.
295	Laurent Valiergue	THE SHARED WOOD COMPANY	FRANCE	Restoration of native ecosystems is key but we disagree on the way to promote and implement such a directive. As elaborated above, we rather suggest that you impose forest stewardship rules (ban of clear cut e.g. replaced by selective cutting to favor natural regeneration (and/or enriching) of native tree) which would apply on a percentage of non-native monocultures, unless native ecosystem restoration you propose includes our approach of vegetational succession via non-native monocultures. On the weight of practices aiming at promoting native ecosystem restoration, The Company does believe that its absolute level in percent is less important than its spatial distribution. 15% of each management unit area dedicated to such practices could be indeed much more impactful in terms of landscape protection and biodiversity conservation than 30% in a single swath of land.
296	Santiago Castelo	Carbosur	Uruguay	No, we do not find it appropriate to define the area for ecosystem restoration based on a percentage of the total area. It is crucial to determine beforehand which ecosystems are "restorable" and assess the viability of each case individually. Establishing fixed thresholds for the restoration of native ecosystems is not suitable when considering a land use planning approach aimed at improving the ecosystem service function at the project level and accounting for landscape factors. ARR projects are designed to enhance the production and/or conservation value of modified ecosystems or "degraded lands" through afforestation.
297	ANONYMOUS #14	N/A	N/A	We think is not appropriate. When implementing a land use planning concept aimed at enhancing ecosystem service function on a project level and taking landscape factors into account, establishing fixed thresholds for native ecosystem restoration is not advisable. Please de aware of the economic challenges associated with Afforestation, Reforestation, and Revegetation (ARR) projects, which, in

				many instances, are only financially viable with carbon finance. Introducing restrictions that may result in suboptimal land use decisions and reduced profitability is likely to hinder the initiation of numerous ARR projects. We recommend to reconsider the proposed 30% threshold and, furthermore, eliminate any area-based thresholds for native ecosystem restoration.
298	Cliff Massey	Burapha Agroforestry Co. Ltd	Lao PDR	DO NOT AGREE Burapha has been FSC Forest Management/CoC certified since 2013. Under FSC Principle 6: Environmental Values Burapha is required to satisfy 11 criteria including, a) preparation of environmental impact assessment, b) zero conversion of natural forests, c) protection of High Conservation Value Areas, and d) conserve and actively manage a minimum of 10% of its Management Units. It is therefore recommended that for projects that are FSC FM/CoC certified the 10% threshold should be maintained. In areas where Burapha operates (swidden) most of the natural forest cover has been historically cleared and pressure on remaining forest remnants is significant. A 30% target for conservation places an unrealistic and extraordinary burden on the company to control farmer land use practices in Laos.
299	ANONYMOUS #15	N/A	N/A	To simplify VCS requirements and their compliance we recommend aligning with existing FSC responsible forestry requirements. To have different requirements will increase complexity and costs for project development, reporting, auditing and validation.
300	ANONYMOUS #16	N/A	N/A	The question shows that there is a very limited understanding of project development. %land will depend on environment, legal frameworks and business case to ensure sustainability and requirements for local peoples.
301	ANONYMOUS #17	N/A	N/A	please refer to answers provided by FIA and BTG
302	ANONYMOUS #18	N/A	N/A	The 30% is reasonable if includes the riparian areas for conservation, therefore combining native ecosystem restoration areas plus riparian areas near the water bodies. Another option is to have at least 20% dedicated to native ecosystem restoration and addition to this the inclusion of riparian forests near the water bodies. So areas near large rivers or lakes would need to add riparian forests that would be additional to the 20% for native ecosystem restoration.

				The definition of the width of the riparian forest should be done according to the size of the river or lake, with a minimum width of 30 meters for rivers with width smaller than 10 meters. Also the area around the springs should be protected, with minimum 50 meters radius of riparian native forests.
303	ANONYMOUS #19	N/A	N/A	As currently written, VCS has not provided any justification for the 30% number; whichever number VCS ultimately chooses should be supported by a clear, justification backed by science and policy and provided in the text of the standard rules. If VCS has chosen 30% on the basis of evidence reviewed by the Standard, it should indicate this, so that commenters can evaluate the arguments VCS is using to create its rules. In addition, for existing projects (validated/verified) or those in advanced stages of development, how will these new rules be applied? If 100% of the project area or area owned by the proponent is currently planted with non-native monocultures, would the proponent be required to clear these areas and account for associated emissions, even if such actions result in a reversal? Would the project proponent be permitted or required to purchase additional land to restore in order to meet VCS requirements, and what would be the rules around the characteristics and location of such land, leakage considerations, etc.?
304	Shermila Weragoda	stx commodities b.v	Netherlands	The non-native monoculture is established with the purpose of environmental benefits as well as economic benefits. The 30% allocation for the native ecosystem will not be financially viable for the project due to the fluctuation of the carbon market; the project developer cannot rely on the financial benefits from the carbon credits. Therefore, this should be less than 30% and it is suggested to keep this to 15%.
305	Shauna	The ForestLink	Italy	Again - arbitrary number. It should be suitable to the site and context. It may require more, and may require less. There may be significant pockets and corridors of intact ecosystems that would be better managed by protecting these areas than performing native ecosystem restoration. On the other hand - there may be a significantly degraded area - where a variety of ecosystems are degraded, and 30% would not be enough.
306	ANONYMOUS #20	N/A	N/A	It is important to define that the project must have 30% of the project area dedicated to conservation, or if there is no such area, the restoration of a native ecosystem must be carried out, especially when in addition to acting on climate issues we must also associate it with biodiversity conservation.

				However, it is necessary to expand the requirement that 30% of the project area be dedicated to the planting of native species and not involve forest conservation, to pre-existing native areas on the properties that make up the project. Thinking about more robust projects, project monitoring indicators focused on biodiversity, water resources, and soil quality, among others, may be required. Mandatory conservation varies from country to country, where some countries allocate a percentage of area for conservation, others simply do not have legislation on this aspect. In order to maintain impartiality on the part of the certifier, that is, not to favor one country or another, the ideal would be to consider the total area of each property that is part of the project, that is, to consider the conservation areas intended for legal compliance with the requirement of 30 % of the project area that must be allocated to a native ecosystem area, when the area already has native formation existing for at least 10 years, according to eligibility criteria. To maintain the additionality criterion, carbon credits can only be generated in areas that are outside the area designated for legal compliance in your jurisdiction. As previously mentioned, the maintenance of native areas, especially when a mosaic is formed with the planting of non-native species, is what guarantees the conservation of biodiversity and this can be enriched with the formation of ecological corridors within the plantation in a monoculture format. of non-natives.
307	Tony Knowles	Cirrus	South Africa	30% does align with other forestry standards, but one does need to question the practicality and affordability of it, especially in the context of smallholders. Can one obtain VERs for the carbon that is potentially sequestered in the native ecosystem restoration area? If not, the cost of securing and managing the additional area over a 40 year project period may become prohibitive. Parties would secure 30% less carbon revenue and together with further reductions (e.g. approximate 20% to a risk buffer and a similar proposed share to host-country governments), the amount of remaining income may not be sufficient to implement and manage the project as well as provide smallholders with a fair income. Furthermore, there is already concern that ARR projects may reduce food security in a smallholder context. Adding the additional area will further reduce the area available to cultivate crops.
308	Thurstan Wright	SilviCarbon	Netherlands	We believe that it should not be necessary for at least 30% of the project area be dedicated to native ecosystem restoration, where this is not in line with host country policies and/or regulations, such as in Laos. In Laos, Government concession agreements specify the plantable land only. There is a lengthy

				process, consulting with different levels of government, and all villages who may have customary access rights, to determine which parts of a Production Forest Area (as designated by the government) are suitable for a plantation. All High Conservation Value areas (e.g., culturally significant areas, “Spirit Forests”, significant trees etc) are carved out from the concession, any vulnerable families who do not have access to other land have their customary use areas are also carved out. This results in mosaic style agroforestry plantations spread throughout the wider landscape. However, the concession only specifies the plantation areas as the Government has their own targets for growing the forestry industry within Laos. It’s likely possible to negotiate an additional concession, specifically for restoration but that is a process that could take years and would add significant burden for projects operating in a challenging LDC environment. Additionally, we believe it should be made clear that the % of restoration area applies at the Grouped PD level, rather than at an individual PAI level. This would allow projects to add restoration areas in bigger pieces rather than having to wait until the plantation further develops. Requiring 30% at the PAI level would create unnecessary barriers for projects.
309	ANONYMOUS #21	N/A	N/A	Regarding complexity of native species management, this condition can be limit to 20% of native species and after improvement of practices and the updating of the nurseries' response to the new demand,the threshold can be moved to 30%.
310	ANONYMOUS #22	N/A	N/A	The 30% threshold for the restoration of native ecosystems is based on a comprehensive assessment of environmental restoration. However, altering this threshold below the established limit could positively impact the project's effectiveness in maintaining an ecological balance. Determining the optimal restoration point means compromising the project's viability in terms of yield per hectare.
311	ANONYMOUS #23	N/A	N/A	NO While the Verra requirement can contribute to the 30x30 initiative, imposing the same 30% target on private VCM projects as on governments or other conservation initiatives may be overly burdensome and discourage private participation. A 30% requirement could hinder private efforts to implement projects that meet safeguards,

				demonstrate additionality, and voluntarily improve degraded lands, while also contributing to other Sustainable Development Goals (SDGs), for three main reasons: a) In certain instances, the cost of restoration of 30% of the project area could be prohibitive to develop the project as a whole; b) In other instances, it is possible that the restoration with native species is biologically and technically impossible; c) In most of the cases, the landscapes where carbon projects are developed are not uniform: it is constituted of a mosaic of ecosystems that represent a continuum at different stages between full deforestation and full intactness. Therefore, requiring to dedicate 30% of a project area to restoration while, for example, 40% of the project area is made of natural ecosystems will leave only 30% for plantation projects. In many cases, this could make the project impossible to finance. First, we suggest that VERRA should take into account in its recommendations all the natural ecosystems in the project area that the project developers claim to protect and conserve. The percentage of areas conserved/preserved should be included in the additionality calculation. Project that do not include conservation and/or restoration of native ecosystems are more likely to be developed only to maximize the economical revenues, while minimizing ecosystems, biodiversity and social benefits, therefore they should not pass additionality test and be ineligible to carbon finance. Additional commitments to restore natural ecosystems should be rewarded within the CCB certification: projects that include a significant area for natural regeneration could be rewarded by a gold “medal” for biodiversity and/or climate.
312	ANONYMOUS #24	N/A	N/A	The 30% threshold is well above what forest certification schemes require, for instance FSC requires a minimum 10% conservation area. In our experience, projects doing proper identification of future plantation areas based on technical, environmental, and social criteria will end up with 10 to 30% of the project area set aside for conservation and/or restoration, depending on the baseline conditions. A related consideration is that when purchasing or leasing a piece of land to develop a project, the landowner will expect payment of the full commercial price for the entire area with production potential, so this will add a financial burden to the project, since part of those areas will have to be allocated to restoration. Therefore, the 30% target will be challenging in many cases, as it will mean allocating areas perfectly suitable for production to restoration. However, it seems appropriate if Verra expects additional restoration efforts. It would be crucial to clarify the definition of restoration: how active it is expected to be and whether protection would be sufficient, as well as what uses would be acceptable for the restored area, for

				example, whether commercially managed plantations with native species would be allowed. It is also necessary to clarify which areas can contribute to achieving this target. Project areas that are not eligible, for example because they were deforested less than a decade ago, would be perfectly suitable for restoration and, in our opinion, should be counted towards achieving this target.
313	María Claudia Pittamiglio	Sociedad de Productores Forestales	Uruguay	This is partially responded above. While the criteria seem simple, there are many grey areas: • What is be the definition of project area? • What is be the definition of restoration? • What is be the definition of native ecosystem? • Why is 30% a suitable area? Is it the same if 30% is put together or should the 30% be distributed throughout the landscape? Firebreaks are not commonly considered areas for restoration but are biological corridors. Will these be factored into the 30%?
314	Thais Stoppe	Geonoma	Brazil	30% is an appropriate threshold, provided that this restoration is additional (please see comments to question 5 below).
315	ANONYMOUS #25	N/A	N/A	Yes, this provision will stimulate both non-native and native reforestation of non-forest lands. However, the condition of long-term average application should be updated to be clearer, reflecting that the long-term average applies to forest stands with harvesting. As the 30% of native restoration will not be harvested, it is not fair to apply the long-term average to these forest stands.
316	ANONYMOUS #26	N/A	N/A	This is addressed in questions (3) and (5).
317	ANONYMOUS #27	N/A	N/A	We agree on the restoration threshold. Restoration activities are not entirely defined in the proposed definition. In Uruguay, currently 40% of land is not planted within the properties, these include conservation areas, pathways to connect different natural areas, firebrakes, etc. Conservation areas are monitored and silvicultural impacts are assessed. If this can be considered as native ecosystem restoration, then forest plantations (at least those certified under FSC) are already complying with this condition, unlike other economic activities, such as cattle raising, further defending commercial plantation co-benefits.

318	ANONYMOUS #28	N/A	N/A	The percentage of minimum area that should be dedicated to the restoration of native ecosystems should be justified by the project proponent according to the types and characteristics of the ecosystems to be restored and the socio-economical context. The appropriateness of a minimum restoration threshold depends on several factors and detailed consultation at the local level is essential. Additionality must be a criterion for adjustment, requiring a detailed analysis on a case-by-case basis. This ensures that only projects that wouldn't occur otherwise, due to financial, cultural, investment, ecological and technological barriers, can benefit. The threshold that is defined must indicate a significant commitment to the restoration of native ecosystems. If the degradation or loss of native ecosystems in the project area is particularly severe, a higher restoration threshold may be required to effectively recover and sustain the ecosystem services provided by these habitats. Conversely, in some cases, a lower restoration threshold may be appropriate if the project area has already been the subject of substantial restoration efforts in the past or if other conservation strategies complement the restoration objectives.
319	James Hewitt	independent	United Kingdom	Proposing a fixed percentage as threshold oozes a combination of insincerity and a failure to comprehend the need for diversity, an area (including soil, water levels, etc) sufficient to sustain corresponding gene pools, together with buffer zones and corridors – and allow usufruct by forest peoples. No non-native plantations should be established and land on which they have been established should be restored (at the cost of those who financed and /or operated corruptly or otherwise demostrated malpractice concerning the corresponding land-use change).
320	Nadine Block	Sustainable Forestry Initiative	United States and Canada	As per our response to 3 (a) above SFI does not support a minimum size threshold of 30 percent native ecosystem restoration in an ARR project. We do not believe an area-based minimum is appropriate as a condition.
321	Camilla Marangon	Ibá - Brazilian Tree Industry	Brazil	No. We strongly believe that 20% should be the threshold for ARR projects and it should also consider conservation areas (not only restoration). Some countries already have or have been implementing regulations for the preservation of native ecosystems. For example, the Brazilian law (Forest Code) is the main legal instrument for regulating land use on private rural lands in Brazil. Its core goal is to promote environmental conservation, agricultural production and socioeconomic development and it has a critical role in the climate balance through the establishment of Permanent Preservation Areas and Legal Reserves. Brazilian Forest Code is one of the most restrictive land use regulations in the world, as pointed out by Chiavari and Lopes (2017) requiring the companies and farmers to set aside 20% to 80% (depending on the biome) of their property for conservation purposes.

				For this reason, 20% should be the threshold for ARR projects considering the benefit that this percentage already brings to projects in each different and characteristic biome and the difficulty of some regions in Brazil in enabling projects with a percentage above this. Moreover, the "30x30 initiative" established a goal to be developed at the country level, and not at the private entities level. So it is not reasonable to use this as a reference or justification to propose the 30% threshold, because its application is not at the same scale. Reference: Chiavari, Joana e Cristina Leme Lopes. Full Report Forest and Land Use Policies on Private Lands: an International Comparison. Rio de Janeiro: Climate Policy Initiative, 2017. Available at: https://www.climatepolicyinitiative.org/wp content/uploads/2017/10/Full_Report_Forest_and_Land_Use_Policies_on_Private_ _an_International_Comparison 1.pdf
322	ANONYMOUS #29	N/A	N/A	No. We strongly believe that 20% should be the threshold for ARR projects and it should also consider conservation areas (not only restoration). Some countries already have or have been implementing regulations for the preservation of native ecosystems. For example, the Brazilian law (Forest Code) is the main legal instrument for regulating land use on private rural lands in Brazil. Its core goal is to promote environmental conservation, agricultural production and socioeconomic development and it has a critical role in the climate balance through the establishment of Permanent Preservation Areas and Legal Reserves. Brazilian Forest Code is one of the most restrictive land use regulations in the world, as pointed out by Chiavari and Lopes (2017) requiring the companies and farmers to set aside 20% to 80% (depending on the biome) of their property for conservation purposes. For this reason, 20% should be the threshold for ARR projects considering the benefit that this percentage already brings to projects in each different and characteristic biome and the difficulty of some regions in Brazil in enabling projects with a percentage above this. Moreover, the "30x30 initiative" established a goal to be developed at the country level, and not at the private entities level. So it is not reasonable to use this as a reference or justification to propose the 30% threshold, because its application is not at the same scale. Reference: Chiavari, Joana e Cristina Leme Lopes. Full Report – Forest and Land Use Policies on Private Lands: an International Comparison. Rio de Janeiro: Climate Policy Initiative, 2017. Available at: https://www.climatepolicyinitiative.org/wpcontent/uploads/2017/10/Full_Report_Forest_and_Land_Use_Policies_on_Private_Lands_-_an_International_Comparison-1.pdf

323	Peter Chappell	Finnfund	Finland	No, better to align with FSC who are the definitive opinion on sustainability of forest management´to avoid dual standards on the same topics.
324	ANONYMOUS #30	N/A	N/A	No, 30% is not appropriate, and we do not believe an area-based minimum is appropriate as a condition. As noted above, borrowing the concept of 30% from the “30x30 initiative” referenced in the consultation document is misapplied as it was not designed for private landowners or projects. The parties to the Convention on Biological Diversity (which are all national governments and not private actors) are able to pursue the 30% objective using legally mandated and voluntarily conserved areas to contribute toward this target; have the power to make national-level land use decisions in accordance with it; and have the ability to pursue land-use planning goals that are not primarily motivated by financial returns. None of these conditions is applicable to project developers using the ARR methodologies. ARR projects serve to improve the production and/or conservation value of modified ecosystems (or “degraded land”) through actions that include afforestation, reforestation, or restoration. When applying a land use planning concept that seeks to improve ecosystem service function at a project level and considering landscape factors, it is not appropriate to set fixed thresholds for native ecosystem restoration. As Verra well understands, the economics of ARR projects are already challenging, and only in some cases are they even financially viable with carbon finance. By imposing restrictions that will likely lead to suboptimal land use decisions and lower profitability, there will be substantially fewer new ARR projects. We strongly encourage Verra to remove the 30% proposed threshold and further to remove any area-based thresholds for native ecosystem restoration. If deemed appropriate, Verra could designate a separate native ecosystem restoration standard to distinguish restoration projects and criteria from other types of afforestation and reforestation, but such requirements are inappropriate in the VCS Standard as a whole and should not apply to all ARR.
325	Tobias Dorenkamp	DEG	Germany	No, 30% is not appropriate, and we do not believe an area-based minimum is appropriate as a condition. As noted above, borrowing the concept of 30% from the “30x30 initiative” referenced in the consultation document is misapplied as it was not designed for private landowners or projects. The parties to the Convention on Biological Diversity (which are all national governments and not private

				actors) are able to pursue the 30% objective using legally mandated and voluntarily conserved areas to contribute toward this target; have the power to make national-level land use decisions in accordance with it; and have the ability to pursue land-use planning goals that are not primarily motivated by financial returns. None of these conditions is applicable to project developers using the ARR methodologies. ARR projects serve to improve the production and/or conservation value of modified ecosystems (or "degraded land") through actions that include afforestation, reforestation, or restoration. When applying a land use planning concept that seeks to improve ecosystem service function at a project level and considering landscape factors, it is not appropriate to set fixed thresholds for native ecosystem restoration. As Verra well understands, the economics of ARR projects are already challenging, and only in some cases are they even financially viable with carbon finance. By imposing restrictions that will likely lead to suboptimal land use decisions and lower profitability, there will be substantially fewer new ARR projects. We strongly encourage Verra to remove the 30% proposed threshold and further to remove any area-based thresholds for native ecosystem restoration. If deemed appropriate, Verra could designate a separate native ecosystem restoration standard to distinguish restoration projects and criteria from other types of afforestation and reforestation, but such requirements are inappropriate in the VCS Standard as a whole and should not apply to all ARR. We would suggest to consider as an alternative to make FSC certification and implementation of IFC Performance Standards obligatory. This would ensure the identification and conservation of High Conservation Value Forests, protection of Indigenous rights, etc.
326	Yann-Olivier de Jouvancourt	Terraformation	United States	30% of native ecosystem restoration is not enough. If a project has non-native monocultures as an activity, at least 50-70% of the area should be native restoration. Rationale: minimum of 50% would ensure that the majority of the project area is dedicated to native restoration, and would be in cases where several other activities are present (eg.: agroforestry and plantation/harvesting. For instance, a project could be 100% agroforestry, if it does not involve the use of non-native monocultures as the tree components. Some non-native tree species may be used, if mixed with other native and non-native tree species as part of the agroforestry design. This would be beneficial compared to conventional agriculture. Another option could be, 70% could be in the case there are only 2 activities (Eg. 70% native restoration, 30% agroforestry (or monoculture, if allowed), and 50% if there are 3 or more activities (eg.: 50% native restoration, 30% agroforestry, 20% monoculture).

327	MaryKate Bullen	Forest Investment Associates	United States	No, 30% is not appropriate, and we do not believe an area-based minimum is appropriate as a condition. It is unclear why ARR and WRC are being singled out as – we believe – the only project types that would require designating a significant portion of project resources to deliver environmental benefits that may be fundamentally different from the core project activity. If there are other project types that require un-related environmental (or even social) benefits to be demonstrated at significant scale and proportion as part of eligibility, this would be useful context for considering similar approaches within ARR. As noted above, borrowing the concept of 30% from the "30x30 initiative" referenced in the consultation document is misapplied as it was not designed for private landowners or projects. The parties to the Convention on Biological Diversity (which are all national governments and not private actors) are able to pursue the 30% objective using legally mandated and voluntarily conserved areas to contribute toward this target; have the power to make national-level land use decisions in accordance with it; and have the ability to pursue land-use planning goals that are not primarily motivated by financial returns. None of these conditions is applicable to project developers using the ARR methodologies. ARR projects serve to improve the production and/or conservation value of modified ecosystems (or "degraded land") through actions that include afforestation, reforestation, or restoration. When applying a land use planning concept that seeks to improve ecosystem service function at a project level and considering landscape factors, it is not appropriate to set fixed thresholds for native ecosystem restoration. As Verra well understands, the economics of ARR projects are already challenging, and only in some cases are they even financially viable with carbon finance. By imposing restrictions that will likely lead to suboptimal land use decisions and lower profitability, there will be substantially fewer new ARR projects. We strongly encourage Verra to remove the 30% proposed threshold and further to remove any area-based thresholds for native ecosystem restoration. If deemed appropriate, Verra could designate a separate native ecosystem restoration standard to distinguish restoration projects and criteria from other types of afforestation and reforestation, but such requirements are inappropriate in the VCS Standard as a whole and should not apply to all ARR.
328	Marek Guizot	Stafford Capital Partners	United Kingdom	We are not averse to the principal of having a prescribed portion of a project area set aside for native ecosystem restoration. However, to comment on the 30% as an appropriate threshold we need to better understand whether it must comprise of, as indicated in the previous question. A well-designed monoculture plantation project will commonly have 30% or more of its gross land area

				permanently unplanted. A smaller portion of this area will be used for infrastructure (e.g. offices, workshops, roads, firebreaks, power and telephone lines). But the larger portion will comprise of other ecosystems (e.g. wetlands, riparian areas, wildlife corridors, sensitive habitats such as nesting grounds, intact natural forest areas, etc). These areas receive specific management and represent the significant and positive impact that monoculture plantation projects can have from an ecosystem perspective. It is not clear to what extent these practices, which are commonplace across the industry, are recognised within the proposed 30%. If the 30% is expected to be largely on top of this existing approach to land-use planning and management, then it could swiftly result in many projects becoming financially non-viable. Furthermore, as it currently stands, "Native ecosystem restoration" could apply equally to a very low input approach such as leaving an area to slowly regenerate of its own accord, or to a high input approach based on actively reseeding/replanting areas and managing the subsequent growth. Both approaches would seemingly satisfy the requirement of setting aside a fixed portion of the land area, yet could result in outcomes that differ considerably in terms of timeline, quality and overall impact.
329	Justin Mercer	New Forests	Singapore, Kenya, Australia, New Zealand, United States	We propose that active restoration of 10% is a more reasonable expectation and aligns with FSC's forest management certification 10% conservation area requirement. Enhancing the obligation to include active restoration instead of what is currently a conservation requirement would generate improved outcomes. Native ecosystem restoration is expensive, and a 30% restoration requirement would make many ARR projects and likely the plantation operations that underpin them unviable. Cost-benefit analysis may rule our acquisitions by sustainable forestry practitioners, many of which struggle to remain viable having the 10% set-aside under FSC requirements. Conservation area should be considered as part of the obligation if such a large proportion of the project area is deemed appropriate. A 10% restoration: 20% conservation / natural regeneration ratio may be more achievable for plantation operators.
330	Brett Hundley	Agroforestry Partners	United States	When it comes to intensive agricultural land, we believe that the threshold should be around 5%-10%, as this would allow farmers and landowners the ability to mix suitable non-native species like Chinese chestnut with native grass cover and/or non-income generating native biodiversity plantings. However, a 30% threshold will likely limit adoption by farmers and landowners of agricultural lands, due to near-term income loss and lack of economic incentive.

331	Indradeep Das	ReNew	India	The idea of dedicating at least 30% of project area to native species seems appropriate since there is no peer-reviewed literature focusing on the minimum area to be dedicated towards native vegetation. We believe defining a certain area percentage for native ecosystem restoration require countries to assess the extent of degradation in their land and thereafter come up with national level policies to restore the ecosystem. A baseline year, if could be agreed might help to identify reference ecosystem based on which degree of degradation could be assessed which can subsequently facilitate in establishing minimum restoration threshold, which is proposed at 30% in this case.Additionally, in countries with high forest rate, having additional native forests may not be required, thus the requirement should be voluntary with the onus on the project developers for restoration of native ecosystems.
332	Agustin Inthamoussu	CLIMIT	Uruguay	This is partially responded above. While the criteria seem simple, there are many grey areas: • What is be the definition of project area? • What is be the definition of restoration? • What is be the definition of native ecosystem? • Why is 30% a suitable area? Is it the same if 30% is put together or should the 30% be distributed throughout the landscape? Firebreaks are not commonly considered areas for restoration but are biological corridors. Will these be factored into the 30%?
333	Jaan	Ecobase	Estonia	Yes, in line with national and global biodiversity goals. One of the questions here would be if the native ecosystem can be used for harvesting activities? That's important as some native ecosystems have been able to thrive thanks to human impact i.e. they need to be maintained or managed at least to an extent.
334	Jim Heyes	Criterion Africa Partners	South Africa	We could support a 30% requirement, presuming that this 30% is inclusive of any other conservation requirements imposed by government authorities or international certification systems. FSC certification currently includes a requirement for 10% conservation. 30% is already above this amount. It is imperative that these areas receive active restoration and conservation management, and an area should therefore be manageable in size in terms of the requirements of expenditure and costs associated with its good management. 30% would ensure effective management. Larger sizes will limit the ability of companies to also include effective restoration and management for an area.

335	ANONYMOUS #31	N/A	N/A	Yes, a 30% minimum restoration threshold is appropriate. Allocating a significant portion of the project area to native ecosystem restoration ensures the preservation and enhancement of local biodiversity, contributing to overall ecosystem health. This threshold strikes a balance between carbon credit generation and environmental conservation.
336	ANONYMOUS #32	N/A	N/A	The 30% is reasonable if includes the riparian areas for conservation, therefore combining native ecosystem restoration areas plus riparian areas near the water bodies. Another option is to have at least 20% dedicated to native ecosystem restoration and addition to this the inclusion of riparian forests near the water bodies. So, areas near large rivers or lakes would need to add riparian forests that would be additional to the 20% for native ecosystem restoration. The definition of the width of the riparian forest should be done according to the size of the river or lake, with a minimum width of 30 meters for rivers with width smaller than 10 meters. Also, the area around the springs should be protected, with minimum 50 meters radius of riparian native forests.
337	ANONYMOUS #33	N/A	N/A	We think Verra should align its standards on restoration with existing, internationally recognised standards. As regards conservation/set-aside, we think the relevant benchmark is the Forest Stewardship Council (FSC), which imposes a minimum threshold of 10%. We note this level exceeds any requirements mandated by compliance credit schemes which allow non-native monocultures such as those referenced above in answer 1.
338	ANONYMOUS #34	N/A	N/A	No. We strongly believe that 20% should be the threshold for ARR projects and it should also consider conservation areas (not only restoration). Some countries already have or have been implementing regulations for the preservation of native ecosystems. For example, the Brazilian law (Forest Code) is the main legal instrument for regulating land use on private rural lands in Brazil. Its core goal is to promote environmental conservation, agricultural production and socioeconomic development and it has a critical role in the climate balance through the establishment of Permanent Preservation Areas and Legal Reserves. Brazilian Forest Code is one of the most restrictive land use regulations in the world, as pointed out by Chiavari and Lopes (2017) requiring the companies and farmers to set aside 20% to 80% (depending on the biome) of their property for conservation purposes. For this reason, 20% should be the threshold for ARR projects considering the benefit that this

				percentage already brings to projects in each different and characteristic biome and the difficulty of some regions in Brazil in enabling projects with a percentage above this. Moreover, the "30x30 initiative" established a goal to be developed at the country level, and not at the private entities level. So it is not reasonable to use this as a reference or justification to propose the 30% threshold, because its application is not at the same scale. Reference: Chiavari, Joana e Cristina Leme Lopes. Full Report – Forest and Land Use Policies on Private Lands: an International Comparison. Rio de Janeiro: Climate Policy Initiative, 2017. Available at: https://www.climatepolicyinitiative.org/wp-content/uploads/2017/10/Full_Report_Forest_and_Land_Use_Policies_on_Private_Lands_-_an_International_Comparison-1.pdf
339	ANONYMOUS #35	N/A	N/A	Our view is that “30% of the project area” is not an appropriate threshold to apply to privately financed projects at this global scale. The “30x30 initiative” referenced in the consultation document is a target agreed to by the parties to the Convention on Biological Diversity (which are all national governments, and not private actors). These governments can use legally mandated and voluntarily conserved areas to contribute toward this target; have the power to make national-level land use decisions in accordance with it; and have the ability to pursue land-use planning goals that are not primarily motivated by financial returns. None of these conditions applies to project developers using the ARR methodologies. At the project level, such a target simply does not work. A 30 percent target would make many, if not most, private ARR projects financially unviable. Again: governments that agreed to the 30x30 target have the ability to make decisions in contexts outside their financial return profile. A strict restoration target of over 10 percent of a project area is likely to be very difficult for most project developers to meet. We understand the intent of the requirement, but would point out again that Verra has not demonstrated any meaningful difference between native and non-native monocultures, and a requirement to restore land using one type of species and not another does not make sense in this context. Outcome- or performance-based targets, such as a requirement to demonstrate that project activities will significantly enhance one or more ecosystem processes or functions, may make sense, but if implemented, they should apply equally to all planted species.

340	ANONYMOUS #36	N/A	N/A	At least an equivalent surface must be considered.
341	ANONYMOUS #37	N/A	N/A	No. We strongly believe that 20% should be the threshold for ARR projects and it should also consider conservation areas (not only restoration). Some countries already have or have been implementing regulations for the preservation of native ecosystems. For example, the Brazilian law (Forest Code) is the main legal instrument for regulating land use on private rural lands in Brazil. Its core goal is to promote environmental conservation, agricultural production and socioeconomic development and it has a critical role in the climate balance through the establishment of Permanent Preservation Areas and Legal Reserves. Brazilian Forest Code is one of the most restrictive land use regulations in the world, as pointed out by Chiavari and Lopes (2017) requiring the companies and farmers to set aside 20% to 80% (depending on the biome) of their property for conservation purposes. For this reason, 20% should be the threshold for ARR projects considering the benefit that this percentage already brings to projects in each different and characteristic biome and the difficulty of some regions in Brazil in enabling projects with a percentage above this. Moreover, the "30x30 initiative" established a goal to be developed at the country level, and not at the private entities level. So it is not reasonable to use this as a reference or justification to propose the 30% threshold, because its application is not at the same scale. Reference: Chiavari, Joana e Cristina Leme Lopes. Full Report – Forest and Land Use Policies on Private Lands: an International Comparison. Rio de Janeiro: Climate Policy Initiative, 2017. Available at: https://www.climatepolicyinitiative.org/wp-content/uploads/2017/10/Full_Report_Forest_and_Land_Use_Policies_on_Private_Lands_-_an_International_Comparison-1.pdf
342	ANONYMOUS #38	N/A	N/A	30% especially thinking on projects seeking planting more than 1,000 or 10,000ha could be considered a high number of hectares. Other similar standards have a 10% of the Project area for restoration of natural ecosystems. Perhaps another percentage between 10 and 30% could be a better compromise.

343	ANONYMOUS #39	N/A	N/A	The creation of patches can be a criterion, also the introduction of mixed stand. The criterion of dedicating 30% of the project area but there should be room for exceptions and also room for starting these activities after the breakeven point. There must be a battery of forest management practices that led to ecosystem restoration, but it is very important to consider the ecosystem's health. In a very degraded land, it is not possible to look for a native ecosystem restoration, and maybe the introduction of species should follow a patron that in the first years, the restoration is just focusing on recovering the erosion.
344	ANONYMOUS #41	N/A	N/A	See previous answer...
345	ANONYMOUS #42	N/A	N/A	For private investments, this treshold will be difficult to finance. For smallholders, it will be impossible to set aside 30% of their land. In case of smallholders the area representing the native ecosystem restoration should be allowed to be reach on project level and not on farm level. For private investors this is a matter of economics: the max is where minimum return cannot be reached anymore.
346	ecosecurities	ecosecurities	Switzerland	ecosecurites believe that credits should only be assigned to the restoration or conservation, not the the monoculture plantation.
347	Matthew Kerr	New Zealand Carbon Farming	New Zealand	As outlined above, there should be no area that is strictly mandated to be dedicated to native ecosystem restoration. This should be looked at considering all context and benefits compared to the current baseline activity. At minimum, “Native ecosystem protection or restoration” could be considered as a situational requirement where the project would not provide improvements to each aspect of climate, community and biodiversity without it.
348	Charlie Sichel	Forestry Linked Securities / Radius Zero	Switzerland / Paraguay	Firstly, let us state that we believe strongly in blending non-native monoculture plantations with areas of conservation or restoration, and so whilst we conceptually agree with dedicating an area to native ecosystem restoration, the need for and the application of such a rule can, and should only be applied on a local basis. In the example of Paraguay, environmental laws require at least 25% of the total forest cover in existence in or after 1986 to be maintained. Paraguay environmental laws also dictate that any surface which was originally forested in or after 2004 may not be utilized for commercial plantations. On top of this, FSC requires that any surface which was originally forested in or after 1994 may not be

				utilized for commercial plantations. Local laws and FSC regulations therefore provide clear guidelines as to how land use may be changed. In our opinion, it is for the local authorities to put in place legislation to achieve the environmental goals that they deem necessary. In addition to local standards, most significant projects are likely to be governed under additional Environmental and Social performance standards, such as the ones issued by the International Finance Corporation ("IFC"). IFC performance standard 6 (concerning biodiversity) already sets out clear 'no-net-harm' principles for the establishment of commercial activities. A 'one-size-fits all' 30% share is arbitrary and may be excessive in one case, while being insufficient in other cases. It can further lead to undesired consequences, especially when projects are aggregated. For example, a developer might secure a large share of restoration/conservation (say, over 50%) in one project, but thereby uses up areas where such restoration/conservation makes sense in a specific region. Other developers' efforts in the same region would be hampered by the lack of marginal land to dedicate to restoration/conservation and their project made economically unviable, if not by cutting corners on other important ecological and social factors. This would basically exclude compliant developers from the area and encourage more undesirable practices. In most cases, compliance with local laws and regulations, global forestry standards (e.g., FSC), and E&S regulations (such as the IFC performance standards) provides sufficient guidance. Where this is not possible (e.g., a project is too small to justify the application of IFC performance standards), then a 20-30% threshold might be considered as a fallback/subsidiary criterion. Ultimately, compounding further criteria will in most cases be redundant, and in some cases be detrimental to the feasibility of otherwise desirable projects.
349	Beatriz Zavariz	Manulife Investment Management Timberland and Agriculture	United States	In line with response to question 3 above, there should not be a minimum percentage dedicated to land restoration as there isn't a universal percentage that should apply to all reforestation or afforestation projects involving monoculture plantations. The ideal percentage depends on various factors, including regional ecological context, conservation goals, and the specific characteristics of the landscape. We instead propose monoculture plantations to be developed according to national forest certification standards such as FSC or SFI where sustainability requirements are already embedded and enforced. These requirements often include the planning of the plantation with

				biodiversity corridors and buffer zones in mind, while preventing exotic species dispersal as well as best practices in plantation siting.

5) Should legally mandated conservation land be counted toward the 30 percent requirement for native ecosystem restoration? Explain your rationale.

#	Name	Organization	Country	Comment
350	ANONYMOUS #1	N/A	N/A	No, this is not meet regulatory surplus requirements of section 3.14.1 of the VCS Standard.
351	ANONYMOUS #2	N/A	N/A	no, obviously. why would you get extra benefit for doing something required?
352	Luiz G. De Oliveira Filho	Tiete Agricola Ltda	Brazil	It depends on each country. Brazil for example has a strong forest legislation that surpass by far this number of 30%
353	Laszlo balog	Bloomair Zrt	Hungary	Of course. The status of the area is irrelevant in the calculation of the area. It is worth wondering whether a nature reserve designated 30-50 years ago, completely degraded, still fulfils its role or not...
354	Michael Spandern	freelance	Germany	No. To avoid greenwashing accusations and double counting only additional conservation land should be considered.
355	Mads Asprem	NewAfrica Bioenergy Ltd	United Kingdom	No, conservation areas are conservation areas. Non-native species are key to development and climate change mitigation. However, they do not belong to conservation areas. And, 30% set-aside' is a small area in any landscape and should therefore not include already designated conservation areas.
356	Satinder Mohan Singh	Sequoia Plantation	Gabon	Yes , this is fair . If this is not allowed project developers will shun from projects with large mandated conservation lands. Often land leases in Africa are all encompassing and include zones of

				conservation and restoration. If this 30% is beyond the mandatory zones then projects could be rendered unviable with no takers.
357	ANONYMOUS #3	N/A	N/A	Yes. In many cases, it will be very difficult to convert productive areas beyond that threshold without producing a large social/economical impact.
358	ANONYMOUS #4	N/A	N/A	I didn't find enough details to be sure what this means but interpreting it as govt requiring that 30% of a plantation site be retained for conservation doesn't tell me anything about what condition it is in. If its already natural ecosystem worthy of conservation then it can't be part of the project activity anyway so should not count. If it is "degraded" then it should be restored so again I don't think it should waive the requirement.
359	R. Sanjay Mishr	Callirius AG	Switzerland	Legally mandated conservation land should not count towards the 30 percent requirement for native ecosystem restoration. The objective should be to create additional conservation value, not to rely on existing legal obligations. Including legally mandated conservation land in the 30% requirement for ecosystem restoration undermines the principle of additionality in carbon finance, as it does not represent a net gain in conservation. It fails to expand the total conservation area, merely leveraging what is already protected by law. Excluding such areas fosters broader environmental stewardship and aligns with global conservation goals by incentivizing the restoration of additional habitats, thereby enhancing biodiversity and ecosystem benefits. (https://www.nature.com/scitable/knowledge/library/restoration-ecology-13339059/ and https://www.federalregister.gov/documents/2016/04/27/2016-09750/ecosystem-restoration-policy)
360	Vitor Vannozzi Brito	hummingbirds	France	The consideration of those areas toward the percentage requirement depends on 2 main factors: additionality and the relation between conservation and restoration: 1) Additionality Independently of the threshold defined, the matter of counting or not the legally mandated conservation land should be analyzed from the perspective of additionality. In some countries, it is already a common practice for large companies planting non-native monocultures to keep some riparian areas for native restoration, according to the national legislation (in Brazil, for example). When this is the common practice, the percentage of native ecosystem restoration should not be counted. However, when it is not the practice in the region, it could be considered within the area to be restored. We believe this should be based on a case-by-case analysis.

				By using such an approach, we believe that the reputational risk for the project will certainly be minimized. 2) Conservation vs restoration Legally mandated conservation refers to conservation, hence functional ecosystems. For the methodology to be of high integrity, the percentage requirement for native ecosystem restoration should focus on habitats needing restoration activities. So where legally mandated conservation is on set, it should be distinguished from native ecosystem restoration, and both should be applied.
361	Guy Pinjuv	Pachama	United States	Legally mandated conservation land should not be counted toward the 30 percent requirement for native ecosystem restoration, as this violates regulatory surplus requirements in the VCS standard Section 3.14.1 which states, “Regulatory surplus means that project activities shall not be mandated by any law, statute, or other regulatory framework, or for UNFCCC non-Annex I countries, any systematically enforced law, statute, or other regulatory framework”.
362	Otto Beukes	ClimatePartner Impact GmbH	Germany	In the event that a 30% native species restoration is mandated, there should be various options and mechanisms by which proponents may contribute to biodiversity conservation and ecosystem restoration as a tradeoff for selecting a non-native species monoculture. These may include: 1. Actual in-situ restoration of the project instance; 2. In-situ conservation of intact ecosystems within the project instance; 3. Ex-situ conservation of intact ecosystems within officially protected environments as a result of the ARR activity. (i.e. the cessation of illegal harvesting of natural resources from protected environments due to the access of an alternative natural resource produced through such monoculture)
363	Marcelo Schmid	Arvor Business Advisory	Brazil	Yes. In despite of the fact that Brazil has a good and complete evironmental legislation, we still don't have enough law enforcement in the country.Thus, an economical mechanism like carbono credits would be a good way to make conservate and protect those mandated conservation land that are not conserved.
364	ANONYMOUS #6	N/A	N/A	If it is 10 % would be great as this will also be very difficult to acheive. 30 is very very huge to adapt.
365	Richard Zell Donovan	n/a - independent	USA (Vermont)	The "delta" between the reality at the start of the project versus the end goals are important. IF legal instruments are in place there should be consideration of the different between mandatory versus voluntary requirements. IF X% requirement is mandatory under the laws of the jurisdiction, it could be

				counted as part of the 30% requirement for native ecosystem restoration but must not be eligible for carbon offset compensation. IF X% requirement in X jurisdiction is voluntary, both meeting the 30% restoration requirement and potential carbon offset compensation should be acceptable, provided that other "leakage" and "additionally" requirements are met.
366	Danny Torres	Saltus	Colombia	Not. I think additionality concept applies here, the area under native ecosystem restoration should be in addition to the area legally mandated.
367	Jacob Penner	The Nature Conservancy	United States	No. The criteria should apply only to the project activities implemented by the project proponent that have demonstrated additionality. Restoration activities on legally mandated conservation land would not be additional and should therefore not be eligible.
368	ANONYMOUS #7	N/A	N/A	No, it shouldn´t or it should only if it can be demonstrated that the project activity is needed to support the host country government in the conservation of such land.
369	ANONYMOUS #8	N/A	N/A	Yes. Otherwise there is a big risk that the project's economical viability will be reduced too much thus resulting in less interest to conduct such projects.
370	Lucio Pedroni	Carbon Decisions International (CDI)	Colombia	Yes, we see no reason why legally mandated conservation lands should not count towards any conservation or restoration requirements VCS wants to impose on ARR project activities that generate carbon credits from non-native monocultures. Justification: a) In this context, the concepts of additionality and supplementary do not apply. b) If legal and VCS requirements were added, even more projects would become unviable, and many mitigation and sustainable development opportunities would be lost. Note: The words “conservation land” in the question suggests that “conservation” may be an eligible “native ecosystem restoration” activity, which reinforces our previous recommendation to provide a definition of “native ecosystem restoration” that includes a list of eligible activities.
371	ANONYMOUS #9	N/A	N/A	Verra has not defined what “native ecosystem restoration” means. This is a term that could apply to a wide variety of statuses, activities, and objectives, and it needs to be defined before Verra considers

				using it in policy documents. As explained above, we strongly disagree with the inclusion of a 30% requirement or any area-based restriction. However, any target for restoration must include legally mandated conservation land (and we note as well that there is, in many jurisdictions, an important difference between legal mandates and actual practice). If Verra excluded legally mandated lands from this requirement, many, if not the vast majority, of ARR projects would be financially unviable. Local, site-specific factors are important for understanding how legal requirements play out in practice and affect the viability of ARR. For example, steep slopes may be prohibited from forest harvest, or riparian buffers may limit activity alongside waterways. Such factors can significantly affect the amount of legally required reserve areas. In parts of Brazil, conservation mandates can require that up to 80 percent of a property be set aside for conservation. Under the proposed wording, if existing and legally mandated conservation areas were not included, it would not be possible to do an ARR project in the Brazilian Amazon as 80% + 30% of land is not possible. In any jurisdiction, adding additional requirements for restoration on top of already high requirements (whether legally mandated like Legal Reserve or voluntarily applied through best management practices or certification) is likely to limit the financial viability of carbon finance and would significantly limit the potential for successful ARR projects. While we have described by the 30x30 target is misapplied in any private project context, we note that the national governments that are signatories to the 30x30 commitment do, themselves, include existing protected and conserved areas within their jurisdictions as contributing toward this target. It does not make sense to exclude from ARR projects those areas that national governments may designate or require to be conserved or restored. We also note that while there are clear reasons to exclude legally mandated area from carbon calculations for additionality purposes, those reasons do not apply in the context of ensuring environmental benefits (which we understand to be the intent of this proposed requirement).
372	Zoltan Kun	Great Lakes and Wetlands Association (Forest	Hungary	I don’t think a separate response is needed for this question! See the response for question 4. Based on the rationale to reject the 30% limit, I do not support conservation land counted towards native ecosystem restoration.

		Defenders Alliance)		
373	ANONYMOUS #10	N/A	N/A	Yes we believe it should be counted provided assuming the management of those areas would fall under the project developer and would be located within the project area
374	ANONYMOUS #11	N/A	N/A	Yes, it should if it is in the same ecosystem or river basin. This would put all participants on a level playfield.
375	Spencer Meyer	BeZero Carbon	U.S.	We recommend that projects disclose which project areas are included the 30% land requirement, whether or not they are conserved. There needs to be greater transparency as to which conservation mechanisms are eligible, and it should be made clear in project documents where there any interactions between voluntary and policy-driven conservation mechanisms that contribute to a project's native ecosystem restoration. We also recommend providing transparency on how this would be enforced if mandated restoration is not included, e.g. if a project is legally mandated to restore 50% of its areas as native ecosystem, would 30% of the remaining area or the total area also be required to be native ecosystem under the VCS standard? This could lead to large differences in the amount of restored native ecosystem area.
376	ANONYMOUS #12	N/A	N/A	No. All areas of native restoration within the project should be beyond areas where this legal protection is in place. This would be to increase the potential impact of the 30% threshold across areas that do not benefit from legal safeguards.
377	Jeremy Kaufman	Propagate Group PBC	United States	Yes, improvements are costly and ex-post credits don't today unlock the capital for these projects at scale. Conservation enables these projects to fund things that are non-economic and in agricultural landscapes there is a real opportunity cost to changing practice. Often the programs for conservation from governments are only partial cost shares on the work required as well, so there is still a gap.
378	ANONYMOUS #13	N/A	N/A	Verra has not defined what "native ecosystem restoration" means. This is a term that could apply to a wide variety of statuses, activities, and objectives, and it needs to be defined before Verra considers using it in policy documents. As explained above, we strongly disagree with the inclusion of a 30% requirement or any area-based restriction. However, any target for restoration must include legally mandated conservation land (and

				we note as well that there is, in many jurisdictions, an important difference between legal mandates and actual practice). If Verra excluded legally mandated lands from this requirement, many, if not the vast majority, of ARR projects would be financially unviable. Local, site-specific factors are important for understanding how legal requirements play out in practice and affect the viability of ARR. For example, steep slopes may be prohibited from forest harvest, or riparian buffers may limit activity alongside waterways. Such factors can significantly affect the amount of legally required reserve areas. In parts of Brazil, conservation mandates can require that up to 80 percent of a property be set aside for conservation. Under the proposed wording, if existing and legally mandated conservation areas were not included, it would not be possible to do an ARR project in the Brazilian Amazon as 80% + 30% of land is not possible. In any jurisdiction, adding additional requirements for restoration on top of already high requirements (whether legally mandated like Legal Reserve or voluntarily applied through best management practices or certification) is likely to limit the financial viability of carbon finance and would significantly limit the potential for successful ARR projects. While we have described by the 30x30 target is misapplied in any private project context, we note that the national governments that are signatories to the 30x30 commitment do, themselves, include existing protected and conserved areas within their jurisdictions as contributing toward this target. It does not make sense to exclude from ARR projects those areas that national governments may designate or require to be conserved or restored. We also note that while there are clear reasons to exclude legally mandated area from carbon calculations for additionality purposes, those reasons do not apply in the context of ensuring environmental benefits (which we understand to be the intent of this proposed requirement).
379	Cyril Melikov	EP Carbon	United States of America	EP Carbon seeks clarification on the proposed update before providing a response. The inclusion of legally mandated conservation raises questions, particularly regarding its purpose. If a project demonstrates additionality, it should inherently meet eligibility criteria. As part of the additionality demonstration, regulatory surplus is proven, fulfilling legal mandates and VCS requirements. To address our concerns, we need clarification on: -VCS Definition of Legally Mandated: What criteria does VCS consider for defining a conservation activity as legally mandated? -Exclusion from Additionality Demonstration: Why isn't this requirement covered within the additionality demonstration, especially considering regulatory surplus?

				EP Carbon suggests that conservation efforts existing independently of the project should not contribute to the 30% native ecosystem restoration requirement. However, if the project can demonstrate that the restoration is conditional upon project activity implementation, perhaps by demonstrating that revenue from the non-native monoculture activity is needed to fund implementation of native ecosystem restoration, then it should count towards the 30% requirement for native restoration. This condition would allow the use of non-native monoculture activity as a mechanism for livelihood diversification, or transitory device as an alternative until native or natural activities can be prioritized as the main project activity. We recommend requesting proof from the project proponent that conservation is conditioned upon non-native monoculture project activity. If additionality and regulatory surplus can be demonstrated, they should be eligible. However, proving regulatory surplus in a legally mandated activity would be challenging. Therefore, the VCS should maintain open phrasing to accommodate diverse scenarios.
380	CASSAGNE Morgan	FRM COMMITMENT	FRANCE	What is important is not the legal status but the effective conservation. Legally mandated conservation should be counted toward the 30% requirement in countries where lack of financial means or lack of institutional capacity causes these protected areas to deteriorate. Carbon finance brought by this 30% rule would ensure effective restoration of these areas. It could be necessary to demonstrate the additionality of these restoration activities.
381	Laurent Valiergue	THE SHARED WOOD COMPANY	FRANCE	Yes, of course. When governments impose legally mandated conservation lands, the rationale is similar to the one developed by the VCS Program. Both approaches aim at promoting a more diverse forest stewardship. Not counting legally mandated conservation land toward the X percent requirement under the VCS would penalize the good countries by an additional burden which might potentially make the project not viable financially.
382	Santiago Castelo	Carbosur	Uruguay	We believe that some concepts should be defined before establishing this requirement. Verra has not outlined how the "restoration of native ecosystems" will be evaluated and carried out. This is essential if it is to be included as a requirement within the conditions for project implementation. In our opinion, legally designated conservation lands should be allowed to count toward the requirement for the area designated for the restoration of native ecosystems. However, we do not find

				it appropriate to define the restoration area based on a percentage of the total area. The legal designation of lands for conservation does not necessarily indicate the implementation of best restoration practices or proper conservation. Legally mandated conservation lands are typically established with the explicit purpose of protecting and preserving natural ecosystems and biodiversity. By including these areas in the restoration percentage calculation, we recognize and value the importance of maintaining the integrity of these ecosystems, contributing to long-term conservation objectives. Moreover, this inclusion provides an additional incentive for reforestation or restoration projects to actively engage in the care and monitoring of conservation lands. Considering these areas as part of the restoration percentage ensures that projects act as agents of control and supervision, guaranteeing that conservation lands remain in their natural state and fulfill their conservation purpose. This strengthens surveillance and commitment to the preservation of these resources, contributing to more effective management of conservation areas. In summary, allowing legally obligated conservation lands to count toward the area designated for the restoration of native ecosystems is consistent with the goals of biodiversity protection, conservation of natural ecosystems, and comprehensive climate change mitigation. This inclusion can enhance synergies between conservation and restoration, promoting more sustainable practices and contributing to ecosystem resilience. However, clear and precise definitions and expected outcomes for ecosystem restoration should be established beforehand.
383	ANONYMOUS #14	N/A	N/A	As previously mentioned, we disagree with the incorporation of a 30% requirement or any restrictions based on area. Nevertheless, it is imperative to underscore that any restoration target should encompass lands subject to legal conservation mandates (recognizing the notable distinction that often exists between legal mandates and their practical implementation in various jurisdictions). Excluding legally mandated lands from this requirement is essential, as failure to do so would render a considerable number, if not the majority, of Afforestation, Reforestation, and Revegetation (ARR) projects financially unfeasible. According to the proposed language, excluding existing conservation areas that are already legally mandated would render an Afforestation, Reforestation, and Revegetation (ARR) project in the Brazilian Amazon unattainable, as the combined 80% plus 30% land requirement becomes unfeasible. Introducing supplementary restoration prerequisites in any jurisdiction, especially on top of existing high standards, whether legally mandated like the Legal Reserve or voluntarily adopted through best

				management practices or certification, is anticipated to curtail the financial feasibility of carbon finance. This, in turn, would markedly constrain the potential success of ARR projects.
384	Cliff Massey	Burapha Agroforestry Co. Ltd	Lao PDR	NEUTRAL Burapha does not operate in legally mandated conservation areas, national parks etc., so this criterion does not apply. In saying that refer to Burapha response to Question 4
385	ANONYMOUS #15	N/A	N/A	Depends on the definition of "legally mandated conservation land". In some countries riparian zones are legally protected, and these could be included. However, a neighboring national park, (under different management from the project developer) should probably not be included.
386	ANONYMOUS #16	N/A	N/A	Any native land should be counted as native ecosystem, irrelevant on what it is.
387	ANONYMOUS #17	N/A	N/A	please refer to answers provided by FIA and BTG
388	ANONYMOUS #18	N/A	N/A	Yes, in countries where the environmental and land use law defines a specific percentage for native forest conservation or riparian forests, these areas can be counted toward the planned 30% requirement for native ecosystem restoration. A good example is the environmental law of Brazil, where in areas not included in the legal Amazon region, all properties must keep 20% of the area as natural conservation (legal reserve), and then additional to that the riparian forest near water bodies must also be protected as permanent preservation area. In properties with large rivers or lakes, the total area protected can achieve 50% or more, when combining the 20% of the legal reserve and the permanent preservation areas of the riparian forest. However in countries where the law requires the conservation areas, including Brazil, these areas should not have additionality to claim carbon credits on larger productive areas, where the landowner can afford the cost to restore the native ecosystem in the required conservation areas part of the property. But small landowners without the resources to restore the native ecosystem in the legal required areas, could use the additional fund generated from carbon credits to fund the restoration of the native ecosystem in the legally mandated conservation areas.

389	ANONYMOUS #19	N/A	N/A	VCS should consider whether and how that percentage should vary based on said legal requirements and common practice. VCS needs to provide language that considers local legal requirements for conservation and restoration that exist in some countries and jurisdictions (e.g., Brazil), and ensure that crediting is only permitted for these restoration activities when they exceed the legal threshold to ensure a robust additionality argument. In addition, where it can be demonstrated that existing legal requirements for conservation are not enforced or not effective (based on a robust, rigorous test provided by VCS), there should be an option to count this land towards the VCS restoration requirement. We recognize that such a rule could give governments an excuse for or disincentivize enforcement, but we also know there are limits to what governments can achieve given disparate resources and risks (including personal safety risks) associated with stopping illegal deforestation/degradation. These factors need to be considered and rules crafted accordingly.
390	Shermila Weragoda	stx commodities b.v	Netherlands	Initially no, however, the standard should consider some cases where establishing new areas of the native ecosystem is not possible (due to ecological constraints), then actions/activities that help to maintain or improve the conditions in the current regions of the native ecosystem should count the threshold of 15% - 30% of the restoration.
391	Shauna	The ForestLink	Italy	I don't support the 30% requirement. However, taking that out of the equation, legally mandated conservation land should be counted toward a project developer's conservation efforts (whether restoration or protection) if it can be evidenced that the governing authority is not enforcing the law which protects the area, and degradation is happening in this or other nearby legally mandated conservation areas.
392	ANONYMOUS #20	N/A	N/A	Mandatory conservation varies from country to country, where some countries allocate a percentage of area for conservation, others simply do not have legislation on this aspect. In order to maintain impartiality on the part of the certifier, that is, not to favor one country or another, the ideal would be to consider the total area of each property that is part of the project, that is, to consider the conservation areas intended for legal compliance with the requirement of 30 % of the project area that must be allocated to a native ecosystem area, when the area already has native formation existing for at least 10 years, according to eligibility criteria. To maintain the additionality criterion, carbon credits can only be generated in areas that are outside the area designated for legal compliance in your jurisdiction.

				As previously mentioned, the maintenance of native areas, especially when a mosaic is formed with the planting of non-native species, is what guarantees the conservation of biodiversity and this can be enriched with the formation of ecological corridors within the plantation in a monoculture format. of non-natives.
393	Tony Knowles	Cirrus	South Africa	I do not believe it should. If the land was going to be conserved in baseline without-out project scenario, adding it to a project area does not enhance biodiversity or ecosystem services and does not address the underlying reason for allocating 30 percent to native ecosystem restoration.
394	Thurstan Wright	SilviCarbon	Netherlands	Legally mandated conservation land should not be counted toward the 30 percent requirement for native ecosystem restoration in the following scenarios: i) under the dynamic baseline methodology (where if legally mandated conservation land was enforced it would show up on control plots); ii) if it can be demonstrated that it has not been enforced for at least 10 years (this is because legally mandated conservation land is often not enforced); and iii) if projects are taking in place in developing countries then legally mandated conservation land should count towards the 30%. Otherwise there is a perverse incentive created for developing countries to NOT introduce or water down legal mandates. The issue of not creating perverse incentives has been considered during the CDM era as well, for example, see 2014-EB79-Annex03-Para120 CDM-EB65-A05-STAN. Standard: CDM project standard. (version 07.0). / CDM-EB65-A05-STAN Standard. CDM project standard (Version 07.0) / 9. Specific design requirements for afforestation and reforestation project activities / 9.5. Application of selected baseline and monitoring methodology and selected standardized baseline / 9.5.1. General
395	ANONYMOUS #21	N/A	N/A	Of course, this will help the non-permanent risk as biodiversity, would help with disease, reduce fire risks, generate significant social positive impacts and help develop knowledge of secondary forest products. Some useful thinning can be done. In the long term, these actions will reduce pressure on native forests and ensure the conservation of biodiversity at different species scales. By now we all know about the benefits of ecosystem services. The responsibility is to change current practices. In this sense, the new methodology ARR VM0047 does not additionally analyse afforestation projects through the quality of the plantations in the sense mentioned above. The standard is intended to complement the conditions to ensure high quality project development.
396	ANONYMOUS #23	N/A	N/A	YES

				According to the CDM tool for demonstration of additionality, projects that aim to comply with legal requirements are considered additional if non-compliance with the law is common (i.e., it occurs on at least 30% of the land within the smallest administrative region encompassing the project area). Applying the same logic, legally mandated conservation areas that contribute to the 30% native ecosystem restoration requirement should be considered additional if law enforcement in the project region is proven to be ineffective. It should be counted if that restoration is additional (according to the same additionality test of the project), e.g. an area under conservation by legal requirement but that is nevertheless degraded or if, although the law requires its restoration, the law is not implemented in the general context of the country.
397	ANONYMOUS #24	N/A	N/A	Yes. In many countries legally protected areas are not effectively protected and despite prohibition, they are subject to degradation and deforestation. Protecting such areas requires effort and resources, and creates impact. Furthermore, if mandated conservation land were not counted, projects could end up with such a large portion of the project area being allocated for conservation (maybe 40 to 60%) that it would put most productive projects in an economically unsustainable position.
398	María Claudia Pittamiglio	Sociedad de Productores Forestales	Uruguay	Yes, legally mandated conservation land should be counted toward the 30 percent requirement for native ecosystem restoration. This approach is justified as legally protected conservation areas inherently contribute to the preservation and restoration of native ecosystems. Including such areas in the restoration requirement ensures that recognized conservation efforts are acknowledged and integrated into the overall restoration goal. This approach aligns with the intention of maximizing the positive impact on biodiversity and ecosystem health, recognizing and leveraging existing conservation initiatives as valuable contributions toward achieving the restoration target. Additionally, this inclusion provides an added incentive for reforestation or restoration projects to actively engage in the care and monitoring of conservation lands. By considering these areas as part of the restoration percentage, projects act as oversight agents, ensuring that conservation lands are maintained in their natural state and align with their conservation purpose. This strengthens surveillance and commitment to preserving these resources, contributing to more effective conservation area management. It is essential to clarify that legal protection does not inherently guarantee proper conservation or the implementation of best practices. There might be instances where legally protected areas lack a comprehensive management plan. Allowing conservation lands to count towards the 30 percent requirement for native ecosystem restoration is crucial. It fosters synergies between conservation and

				restoration efforts, promoting more sustainable practices and contributing to the resilience of ecosystems. This becomes particularly pertinent as legal protection alone may not ensure optimal conservation outcomes.
399	Thais Stoppe	Geonoma	Brazil	Legally mandated conservation land should not be counted toward the 30% requirement, because there is significant risk such project would have no additionality, risking environmental integrity. However, it is worth noting that this does not mean that non-native species can't be used as facilitators for restoring legally mandated conservation land when allowed by the local regulation.
400	ANONYMOUS #25	N/A	N/A	Yes, in some countries and in registered projects of forest restoration, it's demonstrated that legally mandated areas may be additional. These areas should also be eligible and additional to fulfill the 30 percent requirement.
401	ANONYMOUS #26	N/A	N/A	As we indicated in (3) we disagree with the need of a fixed restoration or conservation percentage as (i) plantations are not harmful to the environment, and (ii) there are very strict controls by the Government in Uruguay to approve only plantation projects which do not create negative impacts to the environment and are sustainable. If, Verra finally decided that some threshold percentage of conservation / restoration must necessarily be imposed, then we agree that legally mandated conservation land can be counted to the defined percent requirement as legally protected conservation areas inherently contribute to the preservation and restoration of native ecosystems.
402	ANONYMOUS #27	N/A	N/A	Moreover, companies have measured impacts on flora and fauna biodiversity over the years. This monitoring is carried out by experts in flora and fauna, and is recorded in reports that are submitted to the FSC (Forest Stewardship Council). These measurements are taken place in legally mandated conservation areas as well as areas defined by the companies which include native forest, wetlands, grasslands, stony areas with park-like native forest and riparian forests. These areas are monitored yearly to evaluate the number, characteristics and frequency of fauna and flora species and have shown already good results. In Uruguay, these studies have been a valuable contribution of the productive sector to the knowledge and conservation of natural resources, generating valuable scientific information. The results have shown an increase in biodiversity in the vast majority of cases. In addition, new plant species have

				been discovered and a greater frequency of species that were not seen before the plantations were established has begun to be recorded. This is the case because forestry activity already has higher control standards than agriculture and cattle raising.
403	ANONYMOUS #28	N/A	N/A	To count conservation lands legally mandatory in the threshold requirement can be seen to enforce legislation. The decision regarding whether legally mandated conservation land should be counted toward the 30 percent requirement for native ecosystem restoration must be guided by the principle of additionality. And should aim to balance the recognition of legally mandated conservation areas with the need for active restoration and enhancement of native ecosystems. Incorporating legally mandated conservation lands as potential project areas can play a significant role in breaking down barriers. Beyond financial, ecological, and cultural barriers, there may be a 'lack of enforcement' of existing legislation. Including these areas in carbon projects can contribute to overcoming such challenges, providing support where it is most needed. This approach aligns with the broader goal of utilizing carbon initiatives to foster positive ecological outcomes, especially where enforcement of existing legislation may be lacking.
404	James Hewitt	independent	United Kingdom	Of course not. Stewardship of legally mandated conservation land is or should be explicit or implicit in any land-use concession, not an optional afterthought.
405	Nadine Block	Sustainable Forestry Initiative	United States and Canada	Yes. If there are legally mandated conservation areas (parks, ecological reserves, etc.) proximate to an ARR project area they should be eligible as counting to whatever target level is determined (using best scientific information) for native ecosystem restoration. The SFI Forest Management Standard addresses this with Performance Measure 4.1. • Performance Measure 4.1 requires forest landowners and managers to conserve biological diversity at the landscape and ownership/tenure levels, ensuring the contribution of the managed area to conditions that promote biodiversity (including native ecosystems). Also, forest landowners and managers are required to incorporate the results of credible, relevant state, provincial, or regional conservation planning and priority-setting efforts to conserve biological diversity. Credible priority-setting efforts include state and provincial wildlife action plans, state forest action plans, relevant habitat conservation plans, provincial wildlife recovery plans, Indigenous planning processes or ecoregional plans.

406	Camilla Marangon	Ibá - Brazilian Tree Industry	Brazil	Yes, legally mandated conservation areas must be considered in the minimum percentage of 20%. The Target 2 of the Global Biodiversity Framework seeks to recover ecosystem functions among other benefits with a broad view of all degraded areas regardless of whether they are classified as legally mandated conservation land. Also, the 30x30 target does include existing protected and conserved areas within their jurisdictions as contributing toward this target. Furthermore, including these areas would be a way of not penalizing projects that are located in countries with more restrictive regulations. For these cases, it would be appropriate to think about other approaches, such as considering only meeting condition 2 in the proposed 3.19.28, as asked in question 3. Additionally, we acknowledge that although there are valid grounds for excluding legally mandated areas from carbon calculations for the sake of additionality, these rationales may not be applicable when the goal is to ensure environmental benefits, as we interpret to be the intention behind this proposed requirement for non--native monocultures. References: Lopes, Cristina L., Lourdes Machado e Joana Chiavari. Onde Estamos na Implementação do Código Florestal? Radiografia do CAR e do PRA nos Estados Brasileiros -- Edição 2022. Rio de Janeiro: Climate Policy Initiative, 2023. Available at: http://www.climatepolicyinitiative.org/wp--content/uploads/2023/04/REL--Onde--Estamos--na--Implementacao--do--Codigo--Florestal--2022.pdf
407	ANONYMOUS #29	N/A	N/A	First of all, we strongly believe that 20% should be the threshold for restoration and/or conservation activities under ARR projects. Yes, legally mandated conservation areas must be considered in the minimum percentage of 20%. The Target 2 of the Global Biodiversity Framework seeks to recover ecosystem functions among other benefits with a broad view of all degraded areas regardless of whether they are classified as legally mandated conservation land. Also, the 30x30 target does include existing protected and conserved areas within their jurisdictions as contributing toward this target. Furthermore, including these areas would be a way of not penalizing projects that are located in countries with more restrictive regulations. For these cases, it would be appropriate to think about other approaches, such as considering only meeting condition 2 in the proposed 3.19.28, as asked in question 3.Additionally, we acknowledge that although there are valid grounds for excluding legally mandated areas from carbon calculations for the sake of additionality, these rationales may not be applicable when the goal is to ensure environmental benefits, as we interpret to be the intention behind this proposed requirement for non-native monocultures. References:

				Lopes, Cristina L., Lourdes Machado e Joana Chiavari. Onde Estamos na Implementação do Código Florestal? Radiografia do CAR e do PRA nos Estados Brasileiros - Edição 2022. Rio de Janeiro: Climate Policy Initiative, 2023. Available at: http://www.climatepolicyinitiative.org/wpcontent/uploads/2023/04/REL-Onde-Estamos-na-Implementacao-do-Codigo-Florestal-2022.pdf
408	Peter Chappell	Finnfund	Finland	As above, align with FSC.
409	ANONYMOUS #30	N/A	N/A	Verra has not defined what “native ecosystem restoration” means. This is a term that could apply to a wide variety of statuses, activities, and objectives, and it needs to be defined before Verra considers using it in policy documents. As explained above, I strongly disagree with the inclusion of a 30% requirement or any area-based restriction. However, any target for restoration must include legally mandated conservation land (and we note as well that there is, in many jurisdictions, an important difference between legal mandates and actual practice). If Verra excluded legally mandated lands from this requirement, many, if not the vast majority, of ARR projects would be financially unviable. Local, site-specific factors are important for understanding how legal requirements play out in practice and affect the viability of ARR. For example, steep slopes may be prohibited from forest harvest, or riparian buffers may limit activity alongside waterways. Such factors can significantly affect the amount of legally required reserve areas. While we have described by the 30x30 target is misapplied in any private project context, we note that the national governments that are signatories to the 30x30 commitment do, themselves, include existing protected and conserved areas within their jurisdictions as contributing toward this target. It does not make sense to exclude from ARR projects those areas that national governments may designate or require to be conserved or restored. We also note that while there are clear reasons to exclude legally mandated area from carbon calculations for additionality purposes, those reasons do not apply in the context of ensuring environmental benefits.

410	Tobias Dorenkamp	DEG	Germany	Verra has not defined what “native ecosystem restoration” means. This is a term that could apply to a wide variety of statuses, activities, and objectives, and it needs to be defined before Verra considers using it in policy documents. As explained above, we strongly disagree with the inclusion of a 30% requirement or any area-based restriction. However, any target for restoration must include legally mandated conservation land (and we note as well that there is, in many jurisdictions, an important difference between legal mandates and actual practice). If Verra excluded legally mandated lands from this requirement, many, if not the vast majority, of ARR projects would be financially unviable. Local, site-specific factors are important for understanding how legal requirements play out in practice and affect the viability of ARR. For example, steep slopes may be prohibited from forest harvest, or riparian buffers may limit activity alongside waterways. Such factors can significantly affect the amount of legally required reserve areas. In parts of Brazil, conservation mandates can require that up to 80 percent of a property be set aside for conservation. Under the proposed wording, if existing and legally mandated conservation areas were not included, it would not be possible to do an ARR project in the Brazilian Amazon as 80% + 30% of land is not possible. In any jurisdiction, adding additional requirements for restoration on top of already high requirements (whether legally mandated like Legal Reserve or voluntarily applied through best management practices or certification) is likely to limit the financial viability of carbon finance and would significantly limit the potential for successful ARR projects. While we have described by the 30x30 target is misapplied in any private project context, we note that the national governments that are signatories to the 30x30 commitment do, themselves, include existing protected and conserved areas within their jurisdictions as contributing toward this target. It does not make sense to exclude from ARR projects those areas that national governments may designate or require to be conserved or restored. We also note that while there are clear reasons to exclude legally mandated area from carbon calculations for additionality purposes, those reasons do not apply in the context of ensuring environmental benefits (which we understand to be the intent of this proposed requirement).
411	Yann-Olivier de Jouvancourt	Terraformation	United States	Yes. Mandated conservation land should only be used for native restoration, since it is the purpose of the conservation mandate. The carbon credits should be a way of financing projects in legally

				mandated conservation land that has not been and is not expected to be restored, as long as additionality criteria are met.
412	MaryKate Bullen	Forest Investment Associates	United States	Verra has not defined what "native ecosystem restoration" means. This is a term that could apply to a wide variety of statuses, activities, and objectives, and it needs to be defined before Verra considers using it in policy documents. As explained above, we strongly disagree with the inclusion of a 30% requirement or any area-based restriction. However, any target for restoration must include legally mandated conservation land (and we note as well that there is, in many jurisdictions, an important difference between legal mandates and actual practice). If Verra excluded legally mandated lands from this requirement, many, if not the vast majority, of ARR projects would be financially unviable. Local, site-specific factors are important for understanding how legal requirements play out in practice and affect the viability of ARR. For example, steep slopes may be prohibited from forest harvest, or riparian buffers may limit activity alongside waterways. Such factors can significantly affect the amount of legally required reserve areas. In parts of Brazil, conservation mandates can require that up to 80 percent of a property be set aside for conservation. Under the proposed wording, if existing and legally mandated conservation areas were not included, it would not be possible to do an ARR project in the Brazilian Amazon as 80% + 30% of land is not possible. In any jurisdiction, adding additional requirements for restoration on top of already high requirements (whether legally mandated like Legal Reserve or voluntarily applied through best management practices or certification) is likely to limit the financial viability of carbon finance and would significantly limit the potential for successful ARR projects. While we have described by the 30x30 target is misapplied in any private project context, we note that the national governments that are signatories to the 30x30 commitment do, themselves, include existing protected and conserved areas within their jurisdictions as contributing toward this target. It does not make sense to exclude from ARR projects those areas that national governments may designate or require to be conserved or restored. We also note that while there are clear reasons to exclude legally mandated area from carbon calculations for additionality purposes, those reasons do not apply in the context of ensuring environmental benefits (which we understand to be the intent of this proposed requirement).

413	Marek Guizot	Stafford Capital Partners	United Kingdom	Yes. It is evident that the existence of legally mandated requirements to manage land for conservation objectives is no guarantee that this will occur. The low level of compliance with the Legal Reserve requirements set out in Brazil's Forest Code is just one notable example. By counting such areas towards the 30%, it means that Verra's Standard can be viewed as reinforcing and supporting these local legislative frameworks rather than acting outside of them. This intuitively feels like a more positive message to be adopting. Furthermore, not allowing any overlap runs the risk of such a large share of the property needing to be excluded from planting non-native monocultures that the project becomes non-viable from a financial point of view, with the result that no investment takes place at all.
414	Justin Mercer	New Forests	Singapore, Kenya, Australia, New Zealand, United States	Yes, where warranted. Without exception, the restoration site(s) should be selected based on biophysical and often social attributes, such as potential to create habitat connectivity; enhance high conservation values by providing buffer; restore riparian area; avoid competing land uses with community, highly accessible areas, and additional factors that require consideration. By mandating an area that cannot be included, the area most suited to restoration may be excluded and opportunity for enhancement lost. For example, legally prescribed conservation areas are often riparian areas and in emerging markets these are also often degraded. Fully functioning riparian vegetative communities protect water quality, enhance aquatic biodiversity, provide for habitat connectivity and migration pathways due to their somewhat linear nature, and are often more unique and complex habitat types than neighbouring upland sites. If legally protected but degraded riparian areas are excluded from restoration activity, the net benefits of the program would be reduced.
415	Brett Hundley	Agroforestry Partners	United States	Yes. Legally mandated conservation land should count towards whatever threshold is ultimately decided by Verra. Transition improvements are costly and carbon credits may not immediately unlock capital for large scale projects. Conservation allows projects to partially fund practice changes on agricultural landscapes.
416	Indradeep Das	ReNew	India	Already answered in point 4

417	Agustin Inthamoussu	CLIMIT	Uruguay	Yes, legally mandated conservation land should be counted toward the 30 percent requirement for native ecosystem restoration. This approach is justified as legally protected conservation areas inherently contribute to the preservation and restoration of native ecosystems. Including such areas in the restoration requirement ensures that recognized conservation efforts are acknowledged and integrated into the overall restoration goal. This approach aligns with the intention of maximizing the positive impact on biodiversity and ecosystem health, recognizing and leveraging existing conservation initiatives as valuable contributions toward achieving the restoration target.
418	Jaan	Ecobase	Estonia	Yes, as it doesn't change the end result which is to have biodiversity areas included in monoculture plantations. If legally mandated areas aren't counted, this will end up in a national law arbitrage where all else equal activities could be done more profitably in areas where the national law for conservation areas is weak.
419	Jim Heyes	Criterion Africa Partners	South Africa	Absolutely legally mandated conservation land should be included in the 30 percent requirement. Adding a 30% requirement on top of any legal requirements would impose undue hardship on project developers and threaten the viability of many projects. Further, it would perversely disincentive investments in countries that have good conservation regulations.
420	ANONYMOUS #31	N/A	N/A	Yes, legally mandated conservation land should be counted toward the 30 percent requirement for native ecosystem restoration. Legislation will differ between countries. It doesn't matter for the ecosystem if there is an overlap. The design of the project and how existing high-value ecological systems are protected is what's important.
421	ANONYMOUS #32	N/A	N/A	Yes, in countries where the environmental and land use law defines a specific percentage for native forest conservation or riparian forests, these areas can be counted toward the planned 30% requirement for native ecosystem restoration. A good example is the environmental law of Brazil, where in areas not included in the legal Amazon region, all properties must keep 20% of the area as natural conservation (legal reserve), and then additional to that the riparian forest near water bodies must also be protected as permanent preservation area. In properties with large rivers or lakes, the total area protected can achieve 50% or more, when combining the 20% of the legal reserve and the permanent preservation areas of the riparian forest.

				However, in countries where the law requires the conservation areas, including Brazil, these areas should not have additionality to claim carbon credits on larger productive areas, where the landowner can afford the cost to restore the native ecosystem in the required conservation areas part of the property. But small landowners without the resources to restore the native ecosystem in the legal required areas, could use the additional fund generated from carbon credits to fund the restoration of the native ecosystem in the legally mandated conservation areas.
422	ANONYMOUS #33	N/A	N/A	Yes, Verra should not exclude this option. In table 6 of the "AFOLU Non-Permanence Risk Tool" the risk rating would receive a score of -2 if the project areas is protected by a legally binding agreement (e.g., a license, conservation easement, conservation servitude or protected area) to continue management practices that protect carbon stocks for the duration of the project crediting period.
423	ANONYMOUS #34	N/A	N/A	Yes, legally mandated conservation areas must be considered in the minimum percentage of 20%. The Target 2 of the Global Biodiversity Framework seeks to recover ecosystem functions among other benefits with a broad view of all degraded areas regardless of whether they are classified as legally mandated conservation land. Also, the 30x30 target does include existing protected and conserved areas within their jurisdictions as contributing toward this target. Furthermore, including these areas would be a way of not penalizing projects that are located in countries with more restrictive regulations. For these cases, it would be appropriate to think about other approaches, such as considering only meeting condition 2 in the proposed 3.19.28, as asked in question 3. Additionally, we acknowledge that although there are valid grounds for excluding legally mandated areas from carbon calculations for the sake of additionality, these rationales may not be applicable when the goal is to ensure environmental benefits, as we interpret to be the intention behind this proposed requirement for non-native monocultures. References: Lopes, Cristina L., Lourdes Machado e Joana Chiavari. Onde Estamos na Implementação do Código Florestal? Radiografia do CAR e do PRA nos Estados Brasileiros - Edição 2022. Rio de Janeiro: Climate Policy Initiative, 2023. Available at: http://www.climatepolicyinitiative.org/wp-content/uploads/2023/04/REL-Onde-Estamos-na-Implementacao-do-Codigo-Florestal-2022.pdf

424	ANONYMOUS #35	N/A	N/A	Verra has not defined what “native ecosystem restoration” means. This is a very broad term that could apply to both activities and outcomes, as well as a wide variety of statuses, and it needs to be defined before Verra considers using it in policy documents. Placing the definitional question aside: as explained above, we strongly disagree with the existence of a 30 percent requirement. However, any target for restoration must include legally mandated conservation land (and we note as well that there is, in many jurisdictions, an important difference between legal mandates and actual practice). If Verra excluded legally mandated lands from this requirement, many, if not the vast majority, of ARR projects would be financially unviable. Local, site-specific factors are important for understanding how legal requirements play out in practice and affect the viability of ARR. For example, steep slopes may be prohibited from forest harvest, or riparian buffers may limit activity alongside waterways. Such factors can significantly affect the amount of legally required reserve areas. In parts of Brazil, for example, conservation mandates can require that 80 percent – or more - of a property be set aside for conservation. Adding additional requirements for restoration on top of already high requirements is likely to limit the financial viability of carbon finance and would significantly limit the potential for successful ARR projects. The 30x30 target, as explained above, is meant for national governments. We note that the national governments that are signatories to the 30x30 commitment do, themselves, include existing protected and conserved areas within their jurisdictions as contributing toward this target. It does not make sense to exclude from ARR projects those areas that national governments may designate or require to be conserved or restored. We also note that while there are clear reasons to exclude legally mandated area from carbon calculations for additionality purposes, those reasons do not apply in the context of ensuring environmental benefits (which we understand to be the intent of this proposed requirement). The 30 percent target specified under the 30x30 Initiative is designed around the principle of allowing enough connectivity, and native habitat reservoirs, at the global level to prioritize the persistence of native biodiversity. From a scientific perspective, in any given place, the reasons for that set-aside are immaterial. As long as the appropriate target is met, it does not matter under whose auspices or requirements the land is being restored.

425	ANONYMOUS #36	N/A	N/A	Yes. Otherwise companies do not feel bound to fulfill.
426	ANONYMOUS #37	N/A	N/A	Yes, legally mandated conservation areas must be considered in the minimum percentage of 20%. The Target 2 of the Global Biodiversity Framework seeks to recover ecosystem functions among other benefits with a broad view of all degraded areas regardless of whether they are classified as legally mandated conservation land. Also, the 30x30 target does include existing protected and conserved areas within their jurisdictions as contributing toward this target. Furthermore, including these areas would be a way of not penalizing projects that are located in countries with more restrictive regulations. For these cases, it would be appropriate to think about other approaches, such as considering only meeting condition 2 in the proposed 3.19.28, as asked in question 3. Additionally, we acknowledge that although there are valid grounds for excluding legally mandated areas from carbon calculations for the sake of additionality, these rationales may not be applicable when the goal is to ensure environmental benefits, as we interpret to be the intention behind this proposed requirement for non-native monocultures. References: Lopes, Cristina L., Lourdes Machado e Joana Chiavari. Onde Estamos na Implementação do Código Florestal? Radiografia do CAR e do PRA nos Estados Brasileiros - Edição 2022. Rio de Janeiro: Climate Policy Initiative, 2023. Available at: http://www.climatepolicyinitiative.org/wp-content/uploads/2023/04/REL-Onde-Estamos-na-Implementacao-do-Codigo-Florestal-2022.pdf
427	ANONYMOUS #38	N/A	N/A	Similar to other standards and FSC regulations, protection areas such as buffer areas for water bodies, which should be protected, but which do not have budget or legal conservation activities from the government. In the case of legally mandated conservation areas with a clear buffer and activities, these areas are not additional and should not be included in the 30% for restoration.
428	ANONYMOUS #39	N/A	N/A	Yes, If the baseline shows that it has not been properly conserved, yes. As long as degradation is due to unplanned issues.

429	ANONYMOUS #41	N/A	N/A	See answer 3...
430	ANONYMOUS #42	N/A	N/A	As mentioned in the previous item: if 30% is too much, what will be the result of 30% + mandated conservation?
431	ecosecurities	ecosecurities	Switzerland	ecosecurities consider the methodological definitions for restoration and conservation should apply, with no special conditions for the monoculture plantation.
432	Matthew Kerr	New Zealand Carbon Farming	New Zealand	See response to Q4
433	Charlie Sichel	Forestry Linked Securities / Radius Zero	Switzerland / Paraguay	Yes. a) Often in developing countries, compliance with local laws is not the normal state of affairs. Often the economically superior route is to (i) ignore the local laws, (ii) pay the fine for ignoring the laws if caught, or (iii) resort to corruption. b) The establishment of local conservation regulations should be rewarded and supported by counting the effect of their positive regulations into the threshold. Local authorities will be in a better position to impose the law as well as levies on the sale of carbon credits so obtained. If there is to be a convergence between voluntary and compliance markets, national regulations should count towards crediting criteria. There is no reason why developed economies may use their self-determined carbon sinks (or alleged carbon sinks) for compliance credits, while developing countries are excluded. This is particularly unbalanced, given the stronger incentives for exploiting the environment in a lower income situation and in the context of dynamic population growth.
434	Beatriz Zavariz	Manulife Investment Management	United States	A 30% requirement would not achieve the intended goal of this consultation. We believe that legally mandated conservation or restoration land should be considered when assessing the quality in plantation management. At a minimum, it should be required for non-native monoculture plantations to comply with local conservation and restoration land allocation requirements. Voluntarily, projects could choose to increase legally mandated connectivity buffers (and get credited for it either with

		Timberland and Agriculture		carbon credits, biodiversity credits or both). But if national mechanisms do not exist, then a sustainable forest management certification and a land siting study should be required to ensure sustainable plantation management.

6) What data sources for land classification (e.g., government data, peer-reviewed scientific literature) should be allowed to demonstrate that projects occur on lands considered degraded or under intensive agriculture?

#	Name	Organization	Country	Comment
435	ANONYMOUS #1	N/A	N/A	Government data, or peer-reviewed scientific literature
436	Luiz G. De Oliveira Filho	Tiete Agricola Ltda	Brazil	Government and hi tech companies altogueder
437	Laszlo balog	Bloomair Zrt	Hungary	Presumably the government data are also based on some kind of scientific, peer-reviewed material. Ergo all 2 points are correct.
438	Michael Spandern	freelance	Germany	In any case publicly available data should be considered. Government data (if available) must be prioritised to guarantee for public/regional/national acceptance.
439	Mads Asprem	NewAfrica Bioenergy Ltd	United Kingdom	Just proper baseline studies. This is not difficult for anybody doing fieldwork, collect, monitor and verify. Government date and 'scientific' literature is of little value in most interesting areas for ARR.
440	Satinder Mohan Singh	Sequoia Plantation	Gabon	government data, site inspection reports , last 25 to 50 years of land use physical information, peer-reviewed scientific literature can all be allowed to demonstrate if project occurs on lands considered degraded.
441	ANONYMOUS #3	N/A	N/A	Any verifiable high quality source should be allowed, provided that those references will eventually need to be thoroughly checked.

442	ANONYMOUS #4	N/A	N/A	Off the shelf data can usually readily document that the land has been cleared and when. The "degraded" part I think can only be established by current high res imagery coupled with field verification.
443	ANONYMOUS #5	N/A	N/A	In VM42 v2 we included a new Appendix 2: PROCEDURE TO DEMONSTRATE DEGRADATION OF PROJECT LANDS IN THE BASELINE SCENARIO to https://verra.org/wp-content/uploads/2023/05/VM0042-Improved-ALM-v2.0.pdf. It draws on the CDM Tool for the identification of degraded or degrading lands for consideration in implementing CDM A/R project activities. It's worth reviewing and aligning if possible the approach to degradation demonstration between VM42 and VM47.
444	R. Sanjay Mishr	Callirius AG	Switzerland	Determining whether land is degraded or has been under intensive agriculture is crucial to ensure that restoration projects align with the goals of ecosystem health and carbon sequestration. We suggests that a combination of sources should be used: (a) Government Data: This includes national or local government records which can provide official documentation of land status and historical land use. (b) Peer-reviewed Scientific Literature: Academic and research publications offer evidence-based information on land conditions, which can help in assessing the ecological status of an area. (c) Local Community and Indigenous Peoples' Inputs: Involving local and indigenous knowledge can provide deep insights into the historical and current state of the land, which may not be captured in official records or scientific studies. (https://www.fao.org/about/meetings/soil-erosion-symposium/key-messages/en/)
445	Vitor Vannozzi Brito	hummingbirds	France	Land classification from satellite images, peer-reviewed literature and government data (rarely available) could be used to demonstrate the degradation level of the lands or its use for agriculture in general. We also believe in the importance of ground truthing and photos from field visits to provide a clearer picture of the baseline when the project initiated.
446	Guy Pinjuv	Pachama	United States	We don't agree with the demonstration for land classification, however only government data, or peer-reviewed scientific literature should be allowed if approved.
447	Otto Beukes	ClimatePartner Impact GmbH	Germany	I believe that expert geospatial analyses should be included as a form of proof of land and ecosystem transformation, particularly if government databases and literature has not recorded the degradation

				class. This may also be supported by specialist field assessments and/or, laboratory results of soil analyses for instance.
448	Marcelo Schmid	Arvor Business Advisory	Brazil	It is possible to understand the historical land use and thus show land degradation or intensive agricuture by using satelite images.
449	ANONYMOUS #6	N/A	N/A	Government documents should be considered as it is the only genuine source land use classification.
450	Richard Zell Donovan	n/a - independent	USA (Vermont)	I think any data source should be possible, but that each situation/analysis justifying planting on degraded or formerly intensive agriculture land should be subject to local expert peer review to ensure accuracy, and that public documents associated with the intervention present the findings of such peer review. I would also suggest that we live in a world where time-series analysis using remote sensing should be available for virtually any potential site, and that such analysis should also buttress examinations and approvals. There may also be national laws identifying such areas, but I would caution again accepting such designations "carte blanche". Government thresholds can typically be lower than FSC's or perhaps Verra requirements, and it is the latter that should be used when/if government thresholds are lower.
451	Danny Torres	Saltus	Colombia	Any official or per-reviewed data should be allowed to demonstrate this.
452	Jacob Penner	The Nature Conservancy	United States	Government data and peer-reviewed scientific literature should be allowed. Expert judgment should only be allowed in the demonstrated absence of those data.
453	ANONYMOUS #7	N/A	N/A	Local or regional publicly available data from reliable sources, government data or scientific literature should be allowed to demonstrate the land conditions.
454	ANONYMOUS #8	N/A	N/A	Peer-reviewed scientific literature and government data should be allowed.
455	Lucio Pedroni	Carbon Decisions International (CDI)	Colombia	a) Government data are not always a good source of information: • The scale at which government data are published is often too small or too coarse for them to be suitable for a site-specific assessment. In many cases, government data are also too outdated to be

				useful. • Official government maps and data often define original ecosystems based on arbitrary historical moments that do not reflect the evolutionary reality of ecosystems. In ecological restoration projects, it is crucial to determine whether the project will return the land to the original ecosystem or contribute to improving the current baseline conditions, regardless of whether it is considered a return to the "original ecosystem". • The assessment of whether a land is degraded and/or degrading should be carried out by a professional by measuring established and accepted indicators of degradation and not based solely on government data, peer-reviewed scientific literature and other public sources of information, as this would only offer the opportunity to select data sources that are convenient to use to achieve a predetermined purpose. Public sources of data and information could be used, but only in combination with additional and more site-specific evidence of land degradation. b) Peer-reviewed scientific literature may be used if it is applicable to the specific sites in which a project intends to establish non-native monocultures. Many scientific studies refer to specific locations and are not applicable to locations that were not included in the geographical scope of the study. c) To demonstrate that an area is degraded and/or degrading, historical series of remotely sensed images can be used to reveal the presence of degradation indicators, such as frequently burned areas, scars caused by erosion, absence of dense vegetation, etc. Likewise, a time series of remotely sensed images can be used to demonstrate that the land has been used for intensive agriculture or livestock in the last ten years. d) Comparative soil samples analysis and other sources of information generated from locally collected data are also valid (and powerful) source of evidence for land degradation.
456	ANONYMOUS #9	N/A	N/A	Verra already has a good definition for a degraded ecosystem, and it should simply refer to that definition in the ARR standard. The additional restrictions caused by the data sources listed will severely limit ARR project feasibility, without a basis in science or the actual underlying land condition, because the data is not broadly available. Instead, project proponents should document evidence of the pre-project land conditions and these should remain subject to expert judgment and verification, as is current practice.

				Government data on the relative level of degradation of a specific project area are unlikely to exist in most places. “Peer-reviewed scientific literature” related to specific project sites is rarely available at a project scale. Even in cases where peer-reviewed scientific classifications or government classifications regarding degradation are available, they are often available at resolutions that are too coarse to be useful for project-level data. If they do happen to be available at the required spatial scale, such data is usually only available at single points in time, although conditions may reasonably be expected to change over periods of just a few years. These data are simply not available in many parts of the world, especially at the very granular scale required to assess a project. The current definition requires demonstration “by peer-reviewed literature or expert judgment.” Such expert judgment is by far the best way to demonstrate degradation in most real-world situations. It is not clear how degradation can be definitively assessed and confirmed, and at what point in the project development process this work should be carried out. Verra should simply require documentation and evidence that the area was degraded or that it meets the prior conversion or other land use status. Verra already relies on in-person audits, verification activities, and expert judgment to assist on many other aspects of project evaluation and should do the same here. Where scientific literature or government data exist, they should certainly be utilized, or justification should be required as to why such data are not appropriate. Further, scientific process takes time, and the development of a research project from conception to peer-reviewed paper is often measured in years. Making these two data sources, and only these two, a requirement will impose an expensive, lengthy bottleneck on the development of useful and beneficial ARR projects. It would also likely exclude many projects (or incorrectly include others) because the scientific or government analysis was not conducted at an appropriate scale or resolution, or groundtruthing was insufficient in specific project areas. We see no clear purpose to these restrictions on data sources, and many drawbacks. Literature, government data, and/or expert judgment are the correct potential sources.
457	Zoltan Kun	Great Lakes and Wetlands Association (Forest	Hungary	The national land registry could be used for defining the intensive agriculture coverage. Other degradation should be confirmed through peer-reviewed scientific evidence supported by satellite images.

		Defenders Alliance)		
458	ANONYMOUS #10	N/A	N/A	Aside of government data and literature we recommend the use of time series satellite imagery which is now widely available. Such imagery can be analysed by qualified 3rd party consultants/experts similar we recommend project specific HCVA (High Conservation Value Area) assessments to be undertaken by similar expert consultants
459	ANONYMOUS #11	N/A	N/A	Land classifications and peer reviewed scientific literature should be allowed, but project proponents should also be able to demonstrate through other means, such as satellite imagery, adequate baseline sampling or other tools showing site disturbance as from a past cutoff date (ie 2013). This is because degradation levels are equally or more important to determine suitability for afforestation/reforestation, and these may or may not be documented by governments or scientific publications. Erosion, burning, invasive species, high value species removal, degraded natural forests diminished biodiversity are all gradient variables which can be present in parts or all the target project area regardless of whether they have been recognized by outside parties. Also, these impacts are highly variable spatially. If more than 50% of the area is shown to be degraded, then the whole project should be acceptable. That is why the standard cannot rely exclusively on published or government data.
460	Spencer Meyer	BeZero Carbon	U.S.	Verra should increase the transparency of what definition of degraded land they are using, if these are nationally based it allows for disparity between projects, and introduces further disparity between projects if national classifications change in the future. In our view, the use of literature or government datasets for the general region, may not always be reflective of the quality of land in the project area, due to the coarseness of data, and therefore introducing information risk. However, satellite imagery is generally reliable, in regions where it is available, and offers the ability to check the land use for 10 years prior to the project and establish the presence or absence of forest, other native ecosystems, as required for eligibility. This last point is of importance as some ecosystems may fall under the classification of degraded, but offer greater ecosystem benefits than tree planting, such as some grasslands or shrublands. This use of satellite imagery could be combined with site visits by trained experts to confirm current land quality.
461	ANONYMOUS #12	N/A	N/A	It is our position that government data is sufficient, providing government data is less than 5 years old and reliable. If the project cannot demonstrate the reliability of government data, peer reviewed

				literature would be acceptable. If neither of these sources of information are available within the project area, an independent review should take place prior to project start date, by at least two experts in the local ecoregion, to confirm and map which sections of the project are degraded or under intensive agriculture.
462	Jeremy Kaufman	Propagate Group PBC	United States	Data sources such as the Multi-Resolution Land Characteristics (MRLC) Consortium (https://www.mrlc.gov/) which track land use history is an example of a source that would show intensive agriculture historical land use. Similar analogs that can show 10 years of history should be allowed. A corn, soy, hay field or pasture in the US is always intensive, requiring machinery and inputs, that simple classification is highly correlated with land intensity.
463	ANONYMOUS #13	N/A	N/A	Verra already has a good definition for a degraded ecosystem, and it should simply refer to that definition in the ARR standard. The additional restrictions caused by the data sources listed will severely limit ARR project feasibility, without a basis in science or the actual underlying land condition, because the data is not broadly available. Instead, project proponents should document evidence of the pre-project land conditions and these should remain subject to expert judgment and verification, as is current practice. Government data on the relative level of degradation of a specific project area are unlikely to exist in most places. “Peer-reviewed scientific literature” related to specific project sites is rarely available at a project scale. Even in cases where peer-reviewed scientific classifications or government classifications regarding degradation are available, they are often available at resolutions that are too coarse to be useful for project-level data. If they do happen to be available at the required spatial scale, such data is usually only available at single points in time, although conditions may reasonably be expected to change over periods of just a few years. These data are simply not available in many parts of the world, especially at the very granular scale required to assess a project. The current definition requires demonstration “by peer-reviewed literature or expert judgment.” Such expert judgment is by far the best way to demonstrate degradation in most real-world situations. It is not clear how degradation can be definitively assessed and confirmed, and at what point in the project development process this work should be carried out. Verra should simply require documentation and evidence that the area was degraded or that it meets the prior conversion or other land use status. Verra already relies on in-person audits, verification activities, and expert judgment to assist on many other aspects of project evaluation and should do the same here. Where scientific literature or government data exist, they should certainly be utilized, or justification should be required as to why

				such data are not appropriate. Further, scientific process takes time, and the development of a research project from conception to peer-reviewed paper is often measured in years. Making these two data sources, and only these two, a requirement will impose an expensive, lengthy bottleneck on the development of useful and beneficial ARR projects. It would also likely exclude many projects (or incorrectly include others) because the scientific or government analysis was not conducted at an appropriate scale or resolution, or groundtruthing was insufficient in specific project areas. We see no clear purpose to these restrictions on data sources, and many drawbacks. Literature, government data, and/or expert judgment are the correct potential sources.
464	Cyril Melikov	EP Carbon	United States of America	In addition to the two proposed data-sources, EP Carbon recommends using satellite imagery having spatial resolution equal to or better than Landsat 8 and Sentinel-2 for image classification purposes. In that context, EP carbon believes that the data should exhibit an accuracy of >80% and utilize a classification method validated by credible scientific research. Landsat satellites, with a spatial resolution of 30 meters, are well-suited for regional and large-scale land monitoring. Sentinel-2 satellites offer multispectral imagery at varying spatial resolutions (10 meters, 20 meters, and 60 meters), enabling detailed land surface analysis. Both platforms also provide Normalized Difference Vegetation Index (NDVI) values at these resolutions. NDVI, a widely used vegetation index derived from satellite imagery, accurately gauges vegetation health and density by comparing visible and near-infrared light reflectance. Healthy vegetation reflects more infrared light and absorbs more visible light, leading to higher NDVI values. In contrast, degraded or sparsely vegetated areas exhibit lower NDVI values, providing valuable insights into land condition and health. Furthermore, EP Carbon suggests considering commercial geospatial data sources for identifying degraded lands, under the condition that the data meets certain criteria. Specifically, the data should exhibit an accuracy of >80% and utilize a classification method validated by credible scientific research. Moreover, it is recommended that the data maintains a minimum spatial resolution of no less than 30 meters. EP Carbon emphasizes that relying solely on data sources like government reports and peer-reviewed scientific literature may perpetuate historical biases and overlook historically avoided or underrepresented areas. Scientific literature often concentrates on locations where empirical observations are easily conducted or where remote sensing data is readily available, resulting in extensive characterization of certain areas in terms of land cover, land use, degradation state, and

				ecosystem integrity. In contrast, other regions, especially in less developed countries, are often poorly studied. Moreover, the absence of functional government structures and effective data collection processes exacerbates this data gap, hindering access to vital government data related to ecosystem state, land use, and land cover. This challenge is particularly pronounced for forest carbon projects, including Afforestation/Reforestation initiatives, which have the potential for establishment in diverse locations, provided they adhere to specific safeguards and requirements. To address this issue, EP Carbon advocates an inclusive approach for land classification and the identification of degraded areas that have been utilized for intensive agriculture. We propose considering expert judgment and opinions as valuable data sources for landcover classification in addition to the two sources mentioned in the Public Consultation document. Incorporating expert opinions can provide a more comprehensive and balanced perspective, ensuring adequate representation of less-studied areas in the assessment and planning processes of carbon projects. Expert elicitation processes are increasingly recognized as reliable sources of information, supporting the idea that their judgment should be regarded as a relevant data source. Similarly, as the definition of 'intensive agriculture' is intricately linked to the inputs utilized, EP Carbon suggests permitting interviews with local stakeholders as credible sources of information . These insights can effectively determine whether a location qualifies as intensively used for agricultural purposes or not when supported by relevant literature or expert opinion.
465	CASSAGNE Morgan	FRM COMMITMENT	FRANCE	The analysis must focus on the territory directly impacted by the project, and not on a broader regional scale which may not be representative of the study site. However, on a fine spatial scale, we are generally faced with a lack of data, especially in certain countries. Forcing project proponents to use data from scientific literature would disadvantage the implementation of projects in countries where scientific research is less advanced; this is not fair. It is therefore essential to demonstrate land classification over time in a technical, factual, indisputable way. A diachronic analysis using remote sensing makes it possible in particular to take stock of the recent history of the project site on a very fine spatial scale. Thus, local observations / surveys (with verified pictures, census, data, witness, experiment,

				experience, etc.) must be considered to demonstrate degradation, intensive agriculture, natural/climax ecosystem, etc. in the same way as scientific literature or national/local publication.
466	Laurent Valiergue	THE SHARED WOOD COMPANY	FRANCE	Government data are usually not precise enough to be used at project level. As a result, a combination of historical series of satellite images and data collection in the field (soil analysis, phytosociological inventory among other field investigation as needed) will be privileged.
467	Santiago Castelo	Carbosur	Uruguay	We believe that a variety of information sources should be allowed. This should encompass both government data and field studies conducted by specialists such as biologists and other experts on the ground who can attest to whether the land is indeed degraded or affected by intensive agriculture/extensive livestock farming. There are several reasons for including these sources. Firstly, government data can offer an overall view of the land-use history in a region, which can be valuable in assessing whether areas meet the criteria for degradation or agricultural intensification. However, it is crucial to complement this data with on-site assessments by specialists, as these professionals can provide a more detailed and accurate evaluation of the land's condition. Field studies conducted by biologists and other experts are essential for an accurate assessment of soil conditions, biodiversity, and ecosystem health. These studies can provide solid evidence of whether specific land meets the criteria for degradation or has been subjected to intensive agriculture, which is crucial to ensuring the integrity of projects and their ability to meet restoration and climate change mitigation goals. In summary, allowing a variety of information sources, including field studies conducted by specialists, ensures a more comprehensive and accurate assessment of the lands in question. This contributes to the transparency and credibility of projects and ensures that decisions regarding the designation of lands as degraded or affected by intensive agriculture/extensive livestock farming are well-informed.
468	ANONYMOUS #14	N/A	N/A	The proposed additional restrictions stemming from the listed data sources pose a significant threat to the feasibility of ARR projects, lacking a scientific basis and practical applicability due to limited data availability. In many regions globally, including the Brazilian and Peruvian Amazon, obtaining government data on specific project area degradation levels or peer-reviewed scientific literature at

				the project scale is improbable. Even when available, such data often lacks the necessary granularity or is outdated, making it inadequate for assessing dynamic project conditions. The current requirement for demonstration through "peer-reviewed literature or expert judgment" is sensible, considering the practical challenges in definitively assessing and confirming degradation. Verra should continue to emphasize documentation and evidence of degradation or prior land use status, incorporating in-person audits, verification activities, and expert judgment, which have proven effective in various project evaluation aspects. The rigid insistence on scientific literature and government data as the sole sources would not only impose costly delays but also risk excluding potentially valuable ARR projects due to scale or resolution discrepancies. Therefore, advocating for flexibility and recognizing literature, government data, and expert judgment as suitable sources ensures a more realistic and adaptable approach to ARR project assessment.
469	Cliff Massey	Burapha Agroforestry Co. Ltd	Lao PDR	Burapha has undertaken the following assessments and believes they provide sufficient evidence of proof of baseline land use prior to plantation establishment and the protections of remanent forest, critical habitat and ecosystem services. • Environmental and Social Impacts Assessment (IFC Performance Standard 1) • FSC FM/CoC Certification Annual Audit Reports • Critical Habitat Assessments (IFC Performance Standards 6 Biodiversity Conservation and Sustainable Management of Living Natural Resource) • High Conservation Value Assessments, HCV Network
470	ANONYMOUS #15	N/A	N/A	Multiple data sources should be allowed - including expert opinions - as in many rural locations in Africa there are neither government nor peer-reviewed scientific literature available.
471	ANONYMOUS #16	N/A	N/A	Government data or expert studies
472	ANONYMOUS #17	N/A	N/A	please refer to answers provided by FIA and BTG
473	ANONYMOUS #18	N/A	N/A	One of the best sources of data is satellite remote sensing, where it is possible to verify the situation of the area today, but also from the past, showing the historical land use and providing evidence of degradation status or intensive agriculture for the past 10 years. But it is important to clearly define what is considered degraded land, for example for the Land

				Degradation Assessment in Drylands (LADA) project, executed by FAO, land degradation is a reduction in the capacity of the land to perform ecosystem functions and services that support society and development. Degraded land is usually in areas where the natural regeneration process is not happening, and if not managed these areas will continue as idle degraded land, therefore it is necessary to establish a restoration project to recover the natural ecosystem planting seedlings of the native tree species from the original ecosystem. Remote sensing tools, with historical satellite image analysis, can provide evidence that the targeted area is degraded and that now and in the past few years the natural regeneration has not occurred, and therefore a restoration project is needed. Also it is possible to confirm the intensive agricultural use of the land in the past 10 years with remote sensing tools.
474	ANONYMOUS #19	N/A	N/A	It is completely country specific. Many countries will have no data available. Also, in our experience, national or global land cover datasets often do not meet the level of accuracy necessary at the project scale, especially to discriminate between native grasslands, wetlands, and pasture. In addition to land cover classification, photographic evidence from the field within the project area and local expert opinion should also be required to support this decision, and land cover must be validated by a suitably qualified independent local expert. This is a minimal burden on the project proponents or project developer. This evidence should be collected prior to the start of any project activities in order to substantiate project eligibility before project activities transform the land cover.
475	Shermila Weragoda	stx commodities b.v	Netherlands	Yes, data from official sources and peer-reviewed sources should be taken into consideration when defining the land classification. GIS data, which is supported by clear and open processing and methods, could also be a good variable for the definition of these lands.
476	Shauna	The ForestLink	Italy	Remote sensing, peer-reviewed scientific literature, in some cases interviews with elders of indigenous or traditional peoples who can describe land use change over time. Government data is highly variable in its breadth and dependability. In some countries, the data is extremely reliable and robust, and in others it may be false to side with certain political agendas. I don't know if it is realistic to accept some and not others, or if there is an independent body that has reviewed the scientific quality of national data?
477	ANONYMOUS #20	N/A	N/A	The databases to be used for carbon credit projects must be validated based on scientific literature, regardless of who provided the data, government institution or not.

				For each region of the world, there are a series of data sources that can be used to check the state of an area, and countless variables to classify it as degraded or under intensive agriculture. The important thing is to ensure that the characteristics found in the area of the project are by the eligibility classifications and can be justified by analyses based on scientific literature. I emphasize that it is not appropriate to leave the responsibility of the government to make area classification data available since we are working together with Verra in the voluntary market, this does not exclude the use of this data if the government makes it available and presents scientific validation.
478	Tony Knowles	Cirrus	South Africa	A combination of both national land-cover data (used for national GHG inventories following the IPCC 2006 guidance) as well as local expert opinion may be required. The reason is that while it may be fairly straight-forward to map cultivated land, mapping degraded land is more difficult and concerning. It is well known that especially in less mesic areas, intact indigenous grassland and shrubland is often classified as "degraded" in land-cover mapping exercises. Some of the most species-rich ecosystems in southern Africa are often classified as "degraded" in land cover mapping exercises based on NDVI and other general approaches, whereas in reality, they are very much intact. For this reason, further expert opinion and review is required.
479	Thurstan Wright	SilviCarbon	Netherlands	We suggest that degraded land should be classified either in scientific literature, by expert judgement or by national or local governments. This aligns with how the VCS Program Definitions defines a degraded ecosystem, which also permits the use of ‘expert judgement’ for classifying land: “an ecosystem where ecosystem function is disrupted to an extent where it can no longer sustain its biotic and abiotic characteristics as demonstrated by peer-reviewed literature or expert judgment”. The reason for permitting ‘expert judgement’ as a data source, in addition to government data and peer-reviewed scientific literature, is because it is important to ensure that potential projects are not penalised in countries and/or areas that are not well studied, or where governments do not have capacity. Third party studies, commissioned by a project developer specifically for the project area, and validated/verified by a VVB should be considered a very high-quality data source. Feedback from consultants show that carbon forestry projects in this way can significantly contribute

				to increasing the knowledge and data about understudied areas and landscapes where often a lot of information about natural areas disappears before they are even well studied.
480	ANONYMOUS #21	N/A	N/A	First of all, the term "degraded" should be properly defined. In what sense? Carbon sequestration of the system, loss of biodiversity, etc? because degradation can be analysed in different compartments of the ecosystem. In South America, there have been hundreds of years of unmanaged livestock production in natural grasslands. Of course, these are now degraded grasslands because of the composition of the flora and the potential SOC. The point here is that these lands, the grasslands, can be restored to the same ecosystem type (grassland). This discussion requires a "functional type analysis", i.e. if the land is originally pure grassland, afforestation should not be allowed, but rather silvopastoral activities may be a moderate solution for both problems, climate change and restoration of ecosystem services. Other situations imply mixed natural areas with natural forest patches, in these cases the implementation of afforestation with a percentage of native species that should be left in perpetuity for restoration can, as indicated before, restore forest and avoid pressure on native forest and enhance mitigation of extreme events (control of flooding as a consequence of more precipitation). In summary, the condition of the degraded ecosystem can be demonstrated by peer-reviewed literature, but the project design must also be consistent with the original ecosystem function. In pure grasslands, afforestation has been shown to have negative impacts, and only silvopastoral systems should be allowed. On the other hand, in transitional ecosystems (landscapes composed of patches of native forest and grassland), afforestation with native species can have a positive impact on the system.Thus, although the initial degraded conditions are important to understand, it is more important to understand the transformation in terms of the original ecosystem functions.
481	ANONYMOUS #22	N/A	N/A	The data for reviewing projects can be sourced from local information providers such as environmental corporations or the government. However, it's essential to consider the information provided by the project submitter, as they often offer more reliable and even more detailed information.
482	ANONYMOUS #23	N/A	N/A	Project proponents should be permitted to submit their own studies, which may incorporate information from participatory rural appraisal (PRA) or independent expert opinions, in addition to relying on government data, peer-reviewed scientific literature, and credible public information sources.

				Due to the scarcity of information in the AFOLU sector in many countries, relying solely on "government data, peer-reviewed scientific literature" may not be feasible in numerous instances.
483	ANONYMOUS #24	N/A	N/A	Reliable government data or scientific literature will be missing in many cases. GIS information (e.g. analysis of satellite images over a time series) combined with public consultation (e.g. testimony of local authorities, neigbours or previous landowners) can be reliable sources as well.
484	María Claudia Pittamiglio	Sociedad de Productores Forestales	Uruguay	We believe that a variety of information sources should be permitted, encompassing both government data and on-site studies conducted by specialists such as biologists and other field experts. The rationale behind advocating for the inclusion of multiple sources is twofold. Firstly, government data can offer a comprehensive overview of the land-use history in a region, providing valuable insights for assessing whether areas meet the criteria for degradation or agricultural intensification. However, it is crucial to supplement these data with on-site assessments conducted by specialists, as they can provide a more detailed and precise evaluation of the terrain's condition. Government data or peer-reviewed scientific literature should be allowed to demonstrate that projects occur on lands considered degraded or under intensive agriculture. However, both "degradation" and "intensive agriculture" are terms that can encompass a spectrum of nuances, varying degrees of severity, and levels of interpretation. Is soil organic carbon stock reduction considered soil degradation? Their definitions may be subject to subjectivity based on context, perspectives, and specific criteria. These terms are not always absolute and can be influenced by factors such as environmental, cultural, or regional considerations. The interpretation of what constitutes degradation or the extent of intensity in agriculture, for example, may differ among stakeholders, researchers, and policymakers. It underscores the importance of clear definitions and contextual understanding when using these terms in various discussions and analyses. As an example, in Uruguay an overgrazed area can be defined as degraded as it is understood that a pristine scenario only occurred before the introduction of livestock (17 hundreds) and after several years of poorly grassland management, exotic grasses were introduced, and the quality of forage reduced. In summary, by allowing a variety of information sources, including on-site studies conducted by specialists, a more comprehensive and precise evaluation of the relevant lands is ensured. This contributes to transparency and project credibility, ensuring that decisions regarding the designation of lands as degraded or impacted by intensive agriculture/extensive livestock farming are well-informed and grounded.
485	Thais Stoppe	Geonoma	Brazil	Government data and peer-reviewed scientific literature are adequate data sources.

486	ANONYMOUS #25	N/A	N/A	All types of data are already in place for ARR projects in Verra.
487	ANONYMOUS #26	N/A	N/A	We believe that a variety of information sources should be permitted, encompassing both government data and on-site studies conducted by specialists such as biologists and other field experts. The rationale behind advocating for the inclusion of multiple sources is twofold. Firstly, government data can offer a comprehensive overview of the land-use history in a region, providing valuable insights for assessing whether the areas meet the criteria for degradation or intensive agriculture. However, it is crucial to supplement these data with on-site assessments conducted by specialists, as they can provide a more detailed and precise evaluation of the specific conditions of each project area. Government data or peer-reviewed scientific literature should be allowed to demonstrate that projects occur on lands considered degraded or under intensive agriculture. However, both "degradation" and "intensive agriculture" are terms that can encompass a spectrum of nuances, varying degrees of severity, and levels of interpretation. Is soil organic carbon stock reduction considered soil degradation? Their definitions may be subject to subjectivity based on context, perspectives, and specific criteria. These terms are not always absolute and can be influenced by factors such as environmental, cultural, or regional considerations. The interpretation of what constitutes degradation or the extent of intensity in agriculture, for example, may differ among stakeholders, researchers, and policymakers. It underscores the importance of clear definitions and contextual understanding when using these terms in various discussions and analyses. As an example, in Uruguay an overgrazed area can be defined as degraded as it is understood that a pristine scenario only occurred before the introduction of livestock (18th century) and after several years of poorly grassland management, the quality of forage was reduced. In summary, by allowing a variety of information sources, including on-site studies conducted by specialists, a more comprehensive and precise evaluation of the relevant lands is ensured. This contributes to transparency and project credibility, ensuring that decisions regarding the designation of lands as degraded or impacted by intensive agriculture/extensive livestock farming are well-informed and grounded.

488	ANONYMOUS #27	N/A	N/A	Land classification should take into consideration all available information and analysed by judgment. In the case of government data, it is usually not available at project area scale, so together with land use history, peer-reviewed scientific literature and field information, degradation should be evidenced.
489	ANONYMOUS #28	N/A	N/A	Data sources may include: - peer-reviewed scientific literature, academic research, published scientific studies, research articles; - data from official national records, reports from entities responsible for land management and classification; - satellite images with good resolution that can be analyzed to determine land use patterns, vegetation health or changes over time; - remote sensing and GIS, land use cover, historic land use cover, spectral analysis and soil maps; - investigations by independent organizations, surveys or monitoring projects. Using multiple data sources increases the reliability of the analyses. Therefore, combining multiple data sources is advisable to ensure a comprehensive and accurate assessment of land classification, intensive agricultural, and land degradation. Besides, considering the Good Practice Guidance for Land Use, Land-Use Change and Forestry-IPCC.
490	James Hewitt	independent	United Kingdom	Proposals or studies which describe native land using words such as degraded, secondary, low value etc should be a red flag. The land may have substantial value for ecosystem services, biodiversity etc. It may have been deliberately degraded etc in order to gain notional justification for its conversion. It may be that greater social and environmental value could be had by implementing regulations in the spirit they were prepared if their letter would result less consistent with restoring, conserving and enhancing natural ecosystems.
491	Nadine Block	Sustainable Forestry Initiative	United States and Canada	SFI would support a classification of 'degraded' where it is based on a state/provincial land classification or as identified using credible scientific information where it is available. However, a better more practical approach is to rely on the judgement of experts (auditors/verifiers) who are knowledgeable of the ARR project area and are able to make a determination specific to the scale and scope of the project.
492	Camilla Marangon	Ibá - Brazilian Tree Industry	Brazil	When available, government data and/or peer reviewed scientific literature should be considered. It is desirable to have local data, but in the absence of such data, regional studies should also be considered. It is important to highlight that in some cases there will not be a consolidated and updated geospatial

				database that demonstrates which lands are considered degraded or under intensive agriculture. In these circumstances, these mentioned references would be used to identify which parameters and conditions would best characterize the land as degraded or under intensive agriculture, and evaluations from qualified professionals should also always be considered.
493	ANONYMOUS #29	N/A	N/A	When available, government data and/or peer-reviewed scientific literature should be considered. It is desirable to have local data, but in the absence of such data, regional studies should also be considered. It is important to highlight that in some cases there will not be a consolidated and updated geospatial database that demonstrates which lands are considered degraded or under intensive agriculture. In these circumstances, these mentioned references would be used to identify which parameters and conditions would best characterize the land as degraded or under intensive agriculture, and evaluations from qualified professionals should also always be considered.
494	ANONYMOUS #30	N/A	N/A	Verra should simply refer to the definition in the ARR standard. The additional restrictions caused by the data sources listed will severely limit ARR project feasibility, without a basis in science or the actual underlying land condition, because the data is not broadly available. Instead, project proponents should document evidence of the pre-project land conditions and these should remain subject to expert judgment and verification, as is current practice. Government data on the relative level of degradation of a specific project area are unlikely to exist in most places. “Peer-reviewed scientific literature” related to specific project sites is rarely available at a project scale. Even in cases where peer-reviewed scientific classifications or government classifications regarding degradation are available, they are often available at resolutions that are too coarse to be useful for project-level data. If they do happen to be available at the required spatial scale, such data is usually only available at single points in time, although conditions may reasonably be expected to change over periods of just a few years. These data are simply not available in many parts of the world, especially at the very granular scale required to assess a project. The current definition requires demonstration “by peer-reviewed literature or expert judgment.” Such expert judgment is by far the best way to demonstrate degradation in most real-world situations. It is not clear how degradation can be definitively assessed and confirmed, and at what point in the project development process this work should be carried out. Verra should simply require documentation and evidence that the area was degraded or that it meets the prior conversion or other land use status. Verra already relies on in-person audits, verification activities, and expert judgment to assist on many

				other aspects of project evaluation and should do the same here. Where scientific literature or government data exist, they should certainly be utilized, or justification should be required as to why such data are not appropriate. Further, scientific process takes time, and the development of a research project from conception to peer-reviewed paper is often measured in years. Making these two data sources, and only these two, a requirement will impose an expensive, lengthy bottleneck on the development of useful and beneficial ARR projects. It would also likely exclude many projects (or incorrectly include others) because the scientific or government analysis was not conducted at an appropriate scale or resolution, or ground-truthing was insufficient in specific project areas.
495	Tobias Dorenkamp	DEG	Germany	Verra has a working definition and should use it as well in the ARR standard: “an ecosystem where ecosystem function is disrupted to an extent where it can no longer sustain its biotic and abiotic characteristics as demonstrated by peer-reviewed literature or expert judgment.” The additional restrictions caused by the data sources listed will severely limit ARR project feasibility, without a basis in science or the actual underlying land condition, because the data is not broadly available. Instead, project proponents should document evidence of the pre-project land conditions and these should remain subject to expert judgment and verification, as is current practice. Government data on the relative level of degradation of a specific project area are unlikely to exist in most places. “Peer-reviewed scientific literature” related to specific project sites is rarely available at a project scale. Even in cases where peer-reviewed scientific classifications or government classifications regarding degradation are available, they are often available at resolutions that are too coarse to be useful for project-level data. If they do happen to be available at the required spatial scale, such data is usually only available at single points in time, although conditions may reasonably be expected to change over periods of just a few years. These data are simply not available in many parts of the world, especially at the very granular scale required to assess a project. The current definition requires demonstration “by peer-reviewed literature or expert judgment.” Such expert judgment is by far the best way to demonstrate degradation in most real-world situations. It is not clear how degradation can be definitively assessed and confirmed, and at what point in the project development process this work should be carried out. Verra should simply require documentation and evidence that the area was degraded or that it meets the prior conversion or other land use status. Verra already relies on in-person audits, verification activities, and expert judgment to assist on many other aspects of project evaluation and should do the same here. Where scientific literature or government data exist, they should certainly be utilized, or justification should be required as to why such data are not appropriate.

				Further, scientific process takes time, and the development of a research project from conception to peer-reviewed paper is often measured in years. Making these two data sources, and only these two, a requirement will impose an expensive, lengthy bottleneck on the development of useful and beneficial ARR projects. It would also likely exclude many projects (or incorrectly include others) because the scientific or government analysis was not conducted at an appropriate scale or resolution, or groundtruthing was insufficient in specific project areas. We see no clear purpose to these restrictions on data sources, and many drawbacks. Literature, government data, and/or expert judgment are the correct potential sources.
496	Yann-Olivier de Jouvancourt	Terraformation	United States	Government and peer-reviewed maps/data should be allowed, as well as well documented local analysis led by the project, with strong evidence. Eg.: Land high resolution recent cover classification using a supervised classification based on verified/documented geo-tagged photos of each land cover.
497	MaryKate Bullen	Forest Investment Associates	United States	Verra already has a good definition for a degraded ecosystem, and it should simply refer to that definition in the ARR standard. The additional restrictions caused by the data sources listed will severely limit ARR project feasibility, without a basis in science or the actual underlying land condition, because the data is not broadly available. Instead, project proponents should document evidence of the pre-project land conditions and these should remain subject to expert judgment and verification, as is current practice. Government data on the relative level of degradation of a specific project area are unlikely to exist in most places. “Peer-reviewed scientific literature” related to specific project sites is rarely available at a project scale. Even in cases where peer-reviewed scientific classifications or government classifications regarding degradation are available, they are often available at resolutions that are too coarse to be useful for project-level data. If they do happen to be available at the required spatial scale, such data is usually only available at single points in time, although conditions may reasonably be expected to change over periods of just a few years. These data are simply not available in many parts of the world, especially at the very granular scale required to assess a project. The current definition requires demonstration “by peer-reviewed literature or expert judgment.” Such expert judgment is by far the best way to demonstrate degradation in most real-world situations. It is not clear how degradation can be definitively assessed and confirmed, and at what point in the project development process this work should be carried out. Verra should simply require documentation and evidence that the area was degraded or that it meets the prior conversion or other land use status.

				Verra already relies on in-person audits, verification activities, and expert judgment to assist on many other aspects of project evaluation and should do the same here. Where scientific literature or government data exist, they should certainly be utilized, or justification should be required as to why such data are not appropriate. Further, scientific process takes time, and the development of a research project from conception to peer-reviewed paper is often measured in years. Making these two data sources, and only these two, a requirement will impose an expensive, lengthy bottleneck on the development of useful and beneficial ARR projects. It would also likely exclude many projects (or incorrectly include others) because the scientific or government analysis was not conducted at an appropriate scale or resolution, or groundtruthing was insufficient in specific project areas. We see no clear purpose to these restrictions on data sources, and many drawbacks. Literature, government data, and/or expert judgment are the correct potential sources.
498	Marek Guizot	Stafford Capital Partners	United Kingdom	We are concerned that both government data and peer-reviewed scientific literature present significant limitations. Firstly, government datasets may be too coarse to apply at a project level, and may vary in their classification approach from one region/country to the next. Scientific literature could be similarly high-level, or else be too narrowly focused at a localised level. It may also not have crucial outputs, such as spatial data, available for project developers to use. We believe that a series of historical, georeferenced satellite images, overlaid with the project boundaries, constitutes the most widely available, consistent, and practical way to evidence that the land is degraded or has been used previously for intensive agriculture.
499	Justin Mercer	New Forests	Singapore, Kenya, Australia, New Zealand, United States	Government data and peer-reviewed literature should be allowed, but in many areas will be non-existent or outdated at the scale needed, particularly in areas such as Southeast Asia, where research in remote areas is less frequent due to logistical and financial constraints in often remote and isolated areas. A host of potential projects would likely be excluded from ARR activities in the emerging countries that we operate in. Further means to demonstrate degradation or agriculture should be allowed. This could include ongoing use of ‘expert judgement’, time series of satellite imagery, management plans stemming from third-party surveys for biodiversity, natural habitat, critical habitat or high conservation values assessments provided these provide independent delineation of land uses and degradation level across the applicable timeframe required for VCS.

500	Brett Hundley	Agroforestry Partners	United States	The Multi-Resolution Land Characteristics (MRLC) Consortium should be allowed. Similar options that show 10 years of history would also be appropriate.
501	Indradeep Das	ReNew	India	Regional/national analyses and assessments of local and/or indigenous experts as well as the use of remote sensing should also be allowed to show compliance. The use of remote sensing should also be allowed to demonstrate the status of the land in cases where reliable government data or peer-reviewed scientific literature is not available.
502	Agustin Inthamoussu	CLIMIT	Uruguay	Government data or peer-reviewed scientific literature should be allowed to demonstrate that projects occur on lands considered degraded or under intensive agriculture. However, both "degradation" and "intensive agriculture" are terms that can encompass a spectrum of nuances, varying degrees of severity, and levels of interpretation. Is soil organic carbon stock reduction considered soil degradation? Their definitions may be subject to subjectivity based on context, perspectives, and specific criteria. These terms are not always absolute and can be influenced by factors such as environmental, cultural, or regional considerations. The interpretation of what constitutes degradation or the extent of intensity in agriculture, for example, may differ among stakeholders, researchers, and policymakers. It underscores the importance of clear definitions and contextual understanding when using these terms in various discussions and analyses. As an example, in Uruguay an overgrazed area can be defined as degraded as it is understood that a pristine scenario only occurred before the introduction of livestock (17 hundreds) and after several years of poorly grassland management, exotic grasses were introduced, and the quality of forage reduced. The standard cannot rely exclusively on published or government data but also in sampling methods developed by project participants.
503	Jean	Beijing forestry university	China	Peer-reviewed opensoursing remote sensing data, or personal processed remote sensing data with all the related processing code or history should be allowed.
504	Jim Heyes	Criterion Africa Partners	South Africa	The recently completed FSC remedy procedure includes guidance on the definition of degraded forest (but not other vegetation types), which is based on international peer reviewed literature. Government data is often lacking in many African countries. Other literature on degradation is however available and can be used and extrapolated to local conditions. Assuming extrapolation of literature for same vegetation types (eg. grassland, woodland, forest) will be allowed, this should not be a limiting factor where poor national and government information is available.

505	ANONYMOUS #31	N/A	N/A	Data sources for land classification should include a combination of reliable and verifiable information. Government data and peer-reviewed scientific literature are both credible sources. The inclusion of satellite imagery and on-the-ground assessments can provide a comprehensive understanding of land conditions.
506	ANONYMOUS #32	N/A	N/A	One of the best sources of data is satellite remote sensing, where it is possible to verify the situation of the area today, but also from the past, showing the historical land use and providing evidence of degradation status or intensive agriculture for the past 10 years. But it is important to clearly define what is considered degraded land, for example for the Land Degradation Assessment in Drylands (LADA) project, executed by FAO, land degradation is a reduction in the capacity of the land to perform ecosystem functions and services that support society and development. Degraded land is usually in areas where the natural regeneration process is not happening, and if not managed these areas will continue as idle degraded land, therefore it is necessary to establish a restoration project to recover the natural ecosystem planting seedlings of the native tree species from the original ecosystem. Remote sensing tools, with historical satellite image analysis, can provide evidence that the targeted area is degraded and that now and in the past few years the natural regeneration has not occurred, and therefore a restoration project is needed. Also, it is possible to confirm the intensive agricultural use of the land in the past 10 years with remote sensing tools.
507	ANONYMOUS #33	N/A	N/A	Government data, peer-reviewed publications also supported by GIS and remote sensing. Cadastral maps, PRAs, RRAs. Check CDM tools. We believe that all project participants should provide evidence that the project occurs on lands considered degraded or under intensive agriculture by following the steps outlined below (2). Demonstrate that the land at the moment the project starts does not contain any forest by providing transparent information that: - Vegetation on the land is below the forest thresholds (tree crown cover or equivalent stocking level, tree height at maturity in situ, minimum land area) adopted for the definition of forest by the country

				or FAO forest definition; and - All young natural stands and all plantations on the land are not expected to reach the minimum crown cover and minimum height chosen by the country to define forest or the FAO forest definition; and - The land is not temporarily unstocked, as a result of human intervention such as harvesting or natural causes. We believe that to support the land classification, the following information should be presented in the PDD that will be validated by a 3rd party auditor (Validation and Verification Body - VVB). This is in addition to the government data and/or peer-reviewed scientific literature. a. Aerial photographs or satellite imagery complemented by ground reference data b. Land use or land cover information from maps or digital spatial datasets c. Ground based surveys (;and use or land cover information from permits, plans, or information from local registers such as cadastre, owners registers, or other land registers) (2) https://cdm.unfccc.int/methodologies/ARmethodologies/tools/ar-am-tool-10-v1.pdf
508	ANONYMOUS #34	N/A	N/A	When available, government data and/or peer-reviewed scientific literature should be considered. It is desirable to have local data, but in the absence of such data, regional studies should also be considered. It is important to highlight that in some cases there will not be a consolidated and updated geospatial database that demonstrates which lands are considered degraded or under intensive agriculture. In these circumstances, these mentioned references would be used to identify which parameters and conditions would best characterize the land as degraded or under intensive agriculture, and evaluations from qualified professionals should also always be considered.
509	ANONYMOUS #35	N/A	N/A	Verra already has a definition for a degraded ecosystem, and it should simply refer to that definition in the ARR standard. Government data on the relative level of degradation of a specific project area are unlikely to exist in most places. “Peer-reviewed scientific literature” related to specific project sites is rarely available at a project scale; even in cases where peer-reviewed scientific classifications or government classifications regarding degradation are available, they are often available at resolutions that are too coarse to be useful for project-level data (e.g. classifications of 1 km2 pixels). If they do happen to be

				available at the required spatial scale, such data are usually only available at single points in time, although conditions may reasonably be expected to change over periods of just a few years. At the very granular scale required to assess a project, these data are simply not available in many parts of the world. Further, scientific process takes time, and the development of a research project from conception to peer-reviewed paper is often measured in years. Making these two data sources, and only these two, a requirement will impose an expensive, lengthy bottleneck on the development of useful and beneficial ARR projects. It would also likely exclude many projects (or incorrectly include others) because the scientific or government analysis was not conducted at an appropriate scale or resolution, or ground-truthing was insufficient in specific project areas. We see no clear purpose to these restrictions on data sources, and many drawbacks. Where scientific literature or government data exist, they should certainly be utilized, or justification should be required as to why such data are not appropriate. The current definition requires demonstration "by peer-reviewed literature or expert judgment." Such expert judgment is by far the best way to demonstrate degradation in the vast majority of real-world situations. It is not clear how degradation can be definitively assessed and confirmed through literature or government data, and at what point in the project development process this work should be carried out. Our view is that Verra should simply require documentation and evidence that the area was degraded or that it meets the prior conversion or other land use status conditions. Verra already relies on in-person audits, verification activities, and expert judgment to assist on many other aspects of project evaluation, and it should do the same here. Our view is that the correct potential sources of information on degradation status are peer-reviewed literature, government data, and/or expert judgment.
510	ANONYMOUS #36	N/A	N/A	Reliable sources.
511	ANONYMOUS #37	N/A	N/A	When available, government data and/or peer-reviewed scientific literature should be considered. It is desirable to have local data, but in the absence of such data, regional studies should also be considered. It is important to highlight that in some cases there will not be a consolidated and updated geospatial database that demonstrates which lands are considered degraded or under

				intensive agriculture. In these circumstances, these mentioned references would be used to identify which parameters and conditions would best characterize the land as degraded or under intensive agriculture, and evaluations from qualified professionals should also always be considered.
512	ANONYMOUS #38	N/A	N/A	All available; contrasted against each other (if there were several) and prioritising the one with greater resolution, precision or discriminating power. Additionally paying special attention to government reliable data which needs to be contrasted to local data and ground truth data to support the Remote sensing GIS analyses.
513	ANONYMOUS #39	N/A	N/A	Any data that shows geographical evidence e.g., government data, peer-reviewed scientific literature, remote sensing analysis, etc
514	ANONYMOUS #40	N/A	N/A	Any verifiable local, regional, national or international land system classification or credible study/peer-reviewed scientific literature; visual/field assessment verifiable participatory rural appraisal (PRA).
515	ANONYMOUS #41	N/A	N/A	https://redd.unfccc.int/uploads/2234_45_escenarios_de_deforestacion_futura_en_paraguay.pdf INFONA deforestation maps MAG soil maps MADES Ecosystem and Biome Maps
516	ANONYMOUS #42	N/A	N/A	Sources cannot be defined beforehand. The sources and arguments used should be under scrutiny.
517	ecosecurities	ecosecurities	Switzerland	ecosecurites believe that credits should only be assigned to the restoration or conservation, not the the monoculture plantation.
518	Matthew Kerr	New Zealand Carbon Farming	New Zealand	Government data, peer reviewed scientific literature, and site-specific assessments from local experts should be used as considerations to justify a context approached “Do no harm” test. Using only specific datasets and hard rules for assessment of “degraded” or “intensive agriculture” can result in disallowing projects that in reality bring benefits to all aspects of climate, community and biodiversity.

519	Charlie Sichel	Forestry Linked Securities / Radius Zero	Switzerland / Paraguay	Once again, applying a one-size-fits-all regulation to what is a highly nuanced local subject matter raises many issues. For instance, in a Western European country, any land not exploited under a regime of 'organic/biological' growth or exceeding a certain number of animal heads per ha may be seen as somewhat degraded and damaging to the environment, while in South America, a yearly practice of 'slash-and-burn' would probably qualify. The degradation of land is usually measured as the difference between a past state and a present state. While its use as a metric has partial value, the absolute productive and biodiversity statuses are more relevant. Again, IFC performance standard 6 (and the no-net-harm principle) may provide a better framework than an arbitrary definition, even if such a definition comes from esteemed academic circles. Where the principles of IFC PS 6 cannot apply, a "land category" criterium, linked to national classifications may be a good subsidiary/fallback alternative. By way of example, we are actively in a process of land acquisition, and have tried to apply a geo-spatial programme that measures land degradation to a dedicated area/plot on which we have been carrying out due diligence. A marginal adjustment in the period of time being applied changed the overall "degraded" area from 8% to 28%, which raises many questions about the correct criteria being input, and then validated. - Is land being assessed on trend analysis, or comparison of 2 periods? - Is the current state of land being assessed, or historic change? - Which years should apply? - Over what period of time? - How to enforce? - How to establish the base case? Then comes the challenge of ground-truthing and verifying the GIS data, establishing a baseline, safeguarding sufficient area to ensure accurate comparable data points. In our view, establishing an equitable basis and universally valid definition by Verra presents a major challenge, if not a hugely political issue, in particular for the Global South. A strict, universal definition will severely limit ARR project feasibility, without a basis in science or regard for the actual underlying land condition, because the data is not broadly available and country-specific conditions differ widely.

				Instead, project developers should document evidence of the pre-project land conditions and these should remain subject to expert judgment and verification, as is current practice and defined within Verra ARR standard. In addition, IFC PS 6 (no net harm) should be mandatorily inspected and verified. In practical terms, that should cover well over 90% of all relevant projects.
520	Beatriz Zavariz	Manulife Investment Management Timberland and Agriculture	United States	We recommend providing flexibility regarding the types of data to use in case some data sources aren't available for some country contexts. For example, it could be required to demonstrate land suitability using at least two or three independent different sources to ensure an objective assessment of land. A list of information sources that should be used to assess quality of lands (or to identify lands that are suitable for plantations) is the following: **a) Satellite imagery, raw or through services like Planet Labs:** i. Landsat data such as the one by the United States Geological Survey (USGS) Earth Explorer ii. Sentinel data (especially Sentinel-2) jj. Default basemaps by ESRI **b) Global Datasets:** i. MODIS (Moderate Resolution Imaging Spectroradiometer): Can be used for monitoring vegetation health, land cover changes, and identifying areas with degraded vegetation. **c) Vegetation Indices:** i. Normalized Difference Vegetation Index (NDVI) helps assess the health and vigor of vegetation, including crops. A decline in NDVI values may indicate degraded agricultural lands. **d) Soil Health and Quality:** i. Global Soil Information Facilities (WoSIS) can provide soil health and quality parameters to help identify areas with degraded agricultural productivity. **e) Remote Sensing Platforms:** i. Google Earth Engine provides a cloud-based platform for analyzing satellite imagery and remote sensing data. It can be used for land cover classification, change detection, and monitoring vegetation health. **f) Land Cover Databases:** i. Copernicus Global Land Service provides land cover maps at global and regional scales. These maps can be used for identifying changes in land cover, including degraded agricultural lands.

				g) Government Agricultural and Environmental Agencies, such as i. USDA National Agricultural Statistics Service (NASS) provides agricultural statistics and land use information that can be useful for understanding trends in agricultural productivity ii. Natural Resources Conservation Service's Geospatial Data Gateway which provides US land resource data iii. Brazilian government land datasets **h) Local Surveys and Field Data:** i. Ground truthing: Local surveys, field visits, and ground truthing (conducted by local scientists, not project developers or outside auditors) are essential for validating remote sensing data. Data used for ground truthing should be used to demonstrate land degradation **i) Land Degradation Assessment Tools:** i. Land Degradation Surveillance Framework (LDSF) is a methodology for assessing land degradation that can be applied at various scales. Project proponents could use this methodology to demonstrate land degradation and have it reviewed by a verifier. **j) Independent expert knowledge** i. An attestation by a local independent expert could be used to demonstrate land degradation or non-degradation.

7) Is the definition of "intensive agriculture" appropriate, or is there another definition that would be more appropriate? Please explain your suggestion. Is there another threshold, test, or condition in which introducing non-native monoculture(s) would be appropriate in the context of ARR and WRC projects in the VCS Program to ensure ecosystem health is protected?

#	Name	Organization	Country	Comment
521	ANONYMOUS #1	N/A	N/A	No

522	Luiz G. De Oliveira Filho	Tiete Agricola Ltda	Brazil	Yes, it is appropeated. Just because its driven by maximum productivity
523	Laszlo balog	Bloomair Zrt	Hungary	The definition of "intensive agriculture" is appropriate.
524	Michael Spandern	freelance	Germany	I'd suggest to use the term "degrading agriculture" which could be proven by records and observations of erosion, soil degradation (humus, C-org %), declining yields, pests...etc
525	Mads Asprem	NewAfrica Bioenergy Ltd	United Kingdom	FSC has developed high quality standards, by high quality organisations for decades. There is no reason to double guess this.
526	Satinder Mohan Singh	Sequoia Plantation	Gabon	A more appropriate definition would include besides intensive agriculture - the state of soils , climate, rainfall, topography and agriculture and forestry potential of the lands where the project is occurring as many monoculture sites like savannah lands have acidic soils not suitable for agriculture. Also nutrient deficiency could be another reason of degraded lands.
527	ANONYMOUS #4	N/A	N/A	This is context-dependent. Much of the eastern US was subject to intensive ag and then naturally succeeded to native forest without intervention. Small holdings in other (typically moist) settings will do likewise so this shouldn't presuppose that intensive ag necessarily equates to permanently cleared, barren sites. Returning to Q1, I don't think continuous canopy monocultures (native or non-native) should be eligible at all but if this moves ahead, then I'd restrict them from occurring where adjacent to natural ecosystems--such sites should be restored using a native mix proportional to what exists. The only exception would be where non-natives are being consciously used (as in some projects in the Amazon) to restore micro-climate conditions (and provide timber finance) for a very short time and then native species are planted below but that needs to be part of the design.
528	ANONYMOUS #5	N/A	N/A	To my point under 3) above, I'd like to better understand the rationale for the intensive ag condition. I tend to think that the degradation condition is sufficient and justified but that intensive ag could not always lead to the right outcome if adopted as is. Please work with the Ag team when considering approaches and before finalizing this intensive ag condition.
529	R. Sanjay Mishr	Callirius AG	Switzerland	The proposed definition of "intensive agriculture" as agricultural practices that require significant inputs such as machinery, fertilizers, and pesticides is a functional starting point. It captures the

				essence of high-input farming systems that are typically associated with environmental degradation. However, this definition could be expanded to provide a more holistic understanding of intensive agriculture, which may include considerations like biodiversity impact, water usage, and soil health. An alternative or additional criterion could be the ecological footprint of the agricultural practices, which could account for factors such as: (a) Biodiversity: The extent to which the agricultural practices diminish area biodiversity, including impacts on pollinators, soil organisms, and native flora and fauna. (b) Soil Health: The degree of soil erosion, reduction in soil organic matter, and overall soil degradation resulting from the agricultural practices. (c) Water Use: The sustainability of the water usage patterns, including the impact on local water tables and water quality. (d) Carbon Footprint: The overall greenhouse gas emissions associated with the agricultural practices, considering the entire lifecycle from production to distribution. Introducing non-native monocultures might be considered appropriate under specific thresholds or conditions if they do not compromise ecosystem health. Such conditions could include: (a) Ecological Compatibility: Non-native species should be ecologically compatible with the local environment, with a low risk of becoming invasive. (b) Ecosystem Services: The species should contribute positively to ecosystem services, such as soil stabilization or habitat provision, without displacing native species. (c) Reversibility: There should be a clear and feasible plan for reversing the introduction if negative impacts on the ecosystem are identified. (d) Monitoring and Evaluation: Continuous monitoring should be in place to evaluate the impact of the non-native monocultures on the local ecosystem. These conditions would help ensure that non-native monocultures, if used, contribute to the overall goals of the VCS Program and do not undermine ecosystem health.
530	Vitor Vannozzi Brito	hummingbirds	France	Agricultural lands in general would be a more suitable definition in our opinion, as basically every type of agriculture land would be encompassed by both conditions. We reproduce our opinion based on the answer to item 3: Option b): our understanding is that the areas should not necessarily be used for intensive agriculture, as it is a very difficult term to define.

				Intensive agriculture has the potential to be very detrimental to ecosystems when using a large quantity of chemical pesticides, fertilizers, and machinery, but this is not always the case. Permaculture, agroforestry or organic intensive systems that use a large number of inputs (e.g. organic fertilizer, biological control, eventually machinery) can be very good and support the regeneration of the ecosystem. And from the definition proposed by Verra, they would fall within intensive agriculture as well. Also, some degraded areas can also be under extensive agriculture use (e.g. very low productive, degraded pastures in Latin America or slash-and-burn agriculture in Sub-Saharan Africa, for example). Therefore, we suggest substituting intensive agriculture for agricultural lands. Our suggestion is: "2) The area of the project to be populated by non-native monoculture(s) either: a) Is classified in scientific literature or by national or local governments as degraded or b) is classified as an agricultural land."
531	Guy Pinjuv	Pachama	United States	Non-native monocultures are not appropriate in the context of crediting for ARR or WRC projects. If a site is severely degraded (such as saline-affected areas), site preparation with early seral stages of development may be necessary, however these pioneer species should not be credited for carbon emissions reductions or removals.
532	Otto Beukes	ClimatePartner Impact GmbH	Germany	Intensive agriculture is appropriate but should also be supplemented by other land transformation mechanisms that lead to unsustainable land use and degradation, such as slash-and-burn, over stocking of livestock and intensive timber production (particularly in the case where that timber production leads to altered soil conditions).
533	Marcelo Schmid	Arvor Business Advisory	Brazil	Yes, it is.
534	ANONYMOUS #6	N/A	N/A	I am not interested in it. Sorry.
535	Richard Zell Donovan	n/a - independent	USA (Vermont)	I am OK with the definition at this point, without seeing opinions of others (who may have good conditions to add). As to the other threshold test, I think that Verra may want to ensure, or seek clear assurance, that X candidate operation/landowner commits to maintaining X project areas - both natural restoration areas and tree plantings - in a similar land use category into the future. Time periods are always challenging to require, but at least some kind of permanence commitment should

				be there. This is also an area where there should be a higher threshold of permanence requirement for large-scale operations versus smallholders. "Keeping forest as forest", or "keeping and restoring natural ecosystems" should be crucibles for the use of the standard.
536	Danny Torres	Saltus	Colombia	No comments.
537	Jacob Penner	The Nature Conservancy	United States	The Encyclopedia Britannica defines intensive agriculture as a system of cultivation that uses large amounts of labor and capital to obtain high yields per unit land area. The definition proposed by Verra should be revised to better reflect this and to include the 'per unit land area' component of the definition. The condition TNC proposes to add (discussed in questions 3 and 4) is to require projects to demonstrate that native monocultures are not feasible as an alternative to planting non-native monocultures. This would help protect ecosystem health in a way that the current proposed language does not.
538	ANONYMOUS #7	N/A	N/A	Intensive agriculture and intensive monoculture are appropriate definitions for such project activity.
539	ANONYMOUS #8	N/A	N/A	Adding intensive grazing would be appropriate. In many countries governments keep good records of grazing intensity which can serve as a good data source to determine the intensity of grazing and thus eligibility for a project.
540	Lucio Pedroni	Carbon Decisions International (CDI)	Colombia	a) The term "intensive" is not directly associated with a negative or positive impact. In terms of livestock, for example, the term "intensive" refers to more efficient management, with rotations, a higher number of animals per hectare, and more intensive feeding practices, which are beneficial for the soil. "Extensive" livestock farming, on the other hand, has a higher environmental impact, is less productive, and presents multiple health issues for both animals and the environment. In the case of intensive agriculture, it does not necessarily relate to the issue of monocultures, as monocultures can be either intensive or extensive, and intensive agriculture can involve either monocultures or polycultures, referring more to the number of plants per hectare. b) Traditional agricultural and livestock management practices are sometimes virtually unsustainable and lead to land degradation. For example, a traditional and cheap technology used to renew pastures for extensive livestock farming is to burn the grasslands every year, which causes a progressive loss of

				organic matter and nutrients, among other negative impacts for biodiversity, safety, security, and health.
541	ANONYMOUS #9	N/A	N/A	The definition of "intensive agriculture" itself is a reasonable definition, but it is not clear why it alone is a focus. While we do not advocate conversion of native ecosystems for intensive agriculture, it is important to understand that intensive agriculture is generally an efficient use of land on a per-unit basis (i.e., production per area of land), which concentrates production on relatively small land areas. By contrast, low-input or extensive agriculture is less productive on a per-unit basis and thus requires more land occupation to produce the same output. Land used for extensive agriculture, including grazing and pasturelands, is often land that is generally better suited for ARR activities, which can increase carbon stocks on areas of land that are producing relatively low yields. Replacing intensive agricultural land both increases competition for scarce productive land, and is unlikely anyway, as land values for intensive agriculture land tend to be too high to be financially viable for ARR activities. Though we do not object to the inclusion of "intensive agriculture," we are unsure why Verra is focused on it as a prior state for land used for ARR activities. As noted above, we do not believe a land use condition criteria should be required beyond "degraded land;" however, if agricultural land is going to be referenced, then 3.19.28(2)(b) should also include land used for extensive agriculture, including pasture (and other types of land cover, as noted in our answer to Question 3). Pasture does not meet the proposed definition of "intensive agriculture," but it is a major, direct cause of degradation, deforestation, and/or conversion in many parts of the world, and likely the primary pre-project land use for most ARR projects in Latin America and elsewhere. For example, in Brazil, often identified as the country with the single highest global NCS potential, there are more than 170 million hectares of cattle pasture, most of which used to be forested. Extensive cattle pasture is the land use with which reforestation with carbon finance can potentially compete economically. Once land is converted to intensive agriculture, it is typically too expensive for ARR projects to be financially viable. Pasture appears to be excluded from the proposed definition, but we are aware of no ecological, equity, practical, or other reason to exclude restoration and reforestation of cattle pasture from climate finance. In many parts of the world, pasture is simply where ARR projects happen, and we believe it is critical that pasture be included as within the scope of ARR activities—explicitly included if agricultural land is specified or included by default where it is a degraded land type relative to native ecosystem condition.

542	Zoltan Kun	Great Lakes and Wetlands Association (Forest Defenders Alliance)	Hungary	There is no condition, under which non-native monocultures should be eligible for carbon credits. At the same time, it is unclear why a new definition of “intensive agriculture” is suggested in the proposal. The UN-REDD Glossary includes a definition and this should just be used under the VCS (“An agricultural system with high productivity per unit area. Intensive agricultural systems also frequently have high input requirements per unit area, relying upon the use of mechanization, fertilizers, and agrochemicals.”) https://www.un-redd.org/glossary/intensive-agriculture
543	ANONYMOUS #10	N/A	N/A	No comment
544	ANONYMOUS #11	N/A	N/A	In a world where the agricultural frontier continuously expands, agricultural land rarely gets converted into carbon sequestration projects, regardless of carbon prices. Relative to higher value agricultural land, cattle grazing land is more likely to be converted to carbon projects. The “agriculture definition in 2b” does not consider the degradation and intensive use for cattle herding (burning, pasture plantation, deforestation, seedling regeneration inhibition, land fragmentation etc). Regarding the threshold test or condition the project should be able to demonstrate that no significant harm is done to the integrity of surrounding ecosystems. It is worrisome to see that the Standard is assuming that all non-native monocultures are harmful, de facto accepting a theory which is highly contested. The presumption of wrongdoing assumed by the Standard should be replaced by caution and proof of wrongdoing. Many of the features discussed in this consultation have been reviewed, refined, and implemented by FSC for more than 25 years. Relying on the methodologies implemented by FSC and other verification standards for sustainable forestry to verify that forest or ecosystem replacement did not take place is advisable. A fast track for FSC or PEFC certified forests could also help the Validation process. Verra should consider labeling nonnative plantation carbon credits to separate them from other methodologies. It is better to allow the market to discover the price for “exotic species plantation” credits rather than banning them altogether.

545	Spencer Meyer	BeZero Carbon	U.S.	In our view, Verra's definition of intensive agriculture — "Agricultural land-use practices that require additional inputs such as machinery, fertiliser, and pesticides to increase or maintain agricultural outputs" – is not sufficiently clear in terms of timeframes and intensities. Due to this lack of clarity we raise the concern that this definition could be applied to agricultural land that may still be fertile when a project starts. In our view, when a project planting non-native monoculture is the most profitable land use scenario due to degradation limiting other agricultural profitability, this may increase the likelihood of the project activities occurring in the absence of carbon finance being the most likely alternative scenario. Therefore, the standard should account for these risks by providing clear guidance on what conditions and definitions apply to project eligibility requirements. We also suggest that the choice to plant non-native monocultures should be scrutinised under the standard to be clear whether they are likely to have negative impacts for ecosystem health, particularly when associated with harvesting.
546	ANONYMOUS #12	N/A	N/A	The proposed definition by Verra is too general and more related to "agriculture". Intensive agriculture is characterized by the use of high inputs of capital, labor, and technology to maximize productivity. In this context Verra is not aligned with FAO's/UN definition. An alternative suggestion would be to use the FAO's definition regarding land that has been classified as agricultural land in the past 10 years, particularly livestock agricultural.
547	Jeremy Kaufman	Propagate Group PBC	United States	The definition as proposed is suitable in our view.
548	ANONYMOUS #13	N/A	N/A	The definition of "intensive agriculture" itself is a reasonable definition, but it is not clear why it alone is a focus. While we do not advocate conversion of native ecosystems for intensive agriculture, it is important to understand that intensive agriculture is generally an efficient use of land on a per-unit basis (i.e., production per area of land), which concentrates production on relatively small land areas. By contrast, low-input or extensive agriculture is less productive on a per-unit basis and thus requires more land occupation to produce the same output. Land used for extensive agriculture, including grazing and pasturelands, is often land that is generally better suited for ARR activities, which can increase carbon stocks on areas of land that are producing relatively low yields. Replacing intensive agricultural land both increases competition for scarce productive land, and is unlikely anyway, as land values for intensive agriculture land tend to be too high to be financially viable for ARR activities. Though we do not object to the inclusion of "intensive agriculture," we are unsure why Verra is focused on it as a prior state for land used for ARR activities.

				As noted above, we do not believe a land use condition criteria should be required beyond “degraded land;” however, if agricultural land is going to be referenced, then 3.19.28(2)(b) should also include land used for extensive agriculture, including pasture (and other types of land cover, as noted in our answer to Question 3). Pasture does not meet the proposed definition of “intensive agriculture,” but it is a major, direct cause of degradation, deforestation, and/or conversion in many parts of the world, and likely the primary pre-project land use for most ARR projects in Latin America and elsewhere. For example, in Brazil, often identified as the country with the single highest global NCS potential, there are more than 170 million hectares of cattle pasture, most of which used to be forested. Extensive cattle pasture is the land use with which reforestation with carbon finance can potentially compete economically. Once land is converted to intensive agriculture, it is typically too expensive for ARR projects to be financially viable. Pasture appears to be excluded from the proposed definition, but we are aware of no ecological, equity, practical, or other reason to exclude restoration and reforestation of cattle pasture from climate finance. In many parts of the world, pasture is simply where ARR projects happen, and we believe it is critical that pasture be included as within the scope of ARR activities—explicitly included if agricultural land is specified or included by default where it is a degraded land type relative to native ecosystem condition.
549	Cyril Melikov	EP Carbon	United States of America	EP Carbon contends that the existing definition of 'intensive agriculture' in the Public Consultation document lacks the necessary specificity. We advocate for a more precise delineation that targets particular types of agriculture. For instance, organic farming, especially at medium to large scales, relying on machinery, organic fertilizers, and bio-pesticides for enhanced yields, can be perceived as intensive. In contrast, conservation agriculture, including reduced tillage, is generally less intensive than organic methods, although it still involves machinery. The mere presence of supplementary inputs such as machinery, fertilizers, and pesticides should not be the sole criteria for classifying an agricultural practice as intensive. Otherwise, nearly all forms of medium to large-scale agriculture could fall into the intensive category. We believe that these defining parameters require refinement to accurately capture the intensity of agricultural practices. Specifically, EP Carbon believes that the definition should encompass the extent, quantity, and density (input per unit area) of machinery, fertilizers, and equipment used. Parameters such as frequency, volume, and quantity should be the primary defining criteria, differentiating intensive agriculture from other agriculture types as highlighted by reputable organizations such as the United States Department of Agriculture (USDA)

				(https://agclass.nal.usda.gov/vocabularies/nalt/concept?uri=https://lod.nal.usda.gov/nalt/39540), the European Environment Agency (EEA) (https://www.eea.europa.eu/help/glossary/eea-glossary/intensive-farming), and the UN-REDD program (https://www.un-redd.org/glossary/intensive-agriculture).
550	CASSAGNE Morgan	FRM COMMITMENT	FRANCE	When non-native monocultures provide products that replace those resulting from the degradation or deforestation of natural forests (for example, timber or firewood for the local market), these monocultures contribute directly to the health of the ecosystem. This is therefore an additional condition for the introduction of non-native monocultures. Furthermore, positive impact on biodiversity from non-native monocultures should be considered as such when it leads to a net increase in several biodiversity parameters (e.g. the number of animal and plant species) compared to the existing ecosystems it replaces, especially when these are degraded or anthropized. Finally, Verra should clearly specify what falls under monoculture and what does not: for example, we believe that Verra should specify that an ARR or WRC project, as long as it plants at least 2 different species across the project area (with a significant area dedicated to each species), should clearly not be considered a monoculture project. Quantified thresholds must therefore be set.
551	Laurent Valiergue	THE SHARED WOOD COMPANY	FRANCE	The Company does not believe that limiting non-native monocultures to areas used for intensive agriculture makes sense (See our proposals above). If you maintain such a criterion, The Company suggests that you refer to sustainability rather than intensification. Requirements should be based on a definition of unsustainable practices rather than the production type (agroecology is a form of intensification).
552	Santiago Castelo	Carbosur	Uruguay	Regarding the definition of "intensive agriculture" and whether there is a more appropriate definition, we believe it would be beneficial to adapt the definition to address challenges related to less intensive activities that can still lead to long-term resource degradation. In particular, we suggest considering the inclusion of an additional option within Section 2 of point 3.19.28 that takes into account specific situations related to livestock farming and ecosystem degradation. Under the current condition, pastures appear to be excluded from the proposed definition, but we are not aware of any specific reason to exclude afforestation carried out on livestock fields from climate financing.

				Adapting the definition of "intensive agriculture" to encompass activities that, while not as intensive as traditional agriculture, can still result in long-term resource degradation would reflect a more comprehensive understanding of potential ecosystem impacts. Livestock farming is one such activity that, if conducted unsustainably on naturally low-fertility soils (e.g., overgrazing), can have adverse effects on biodiversity and soil quality over time. Including an additional option within Section 2 of point 3.19.28, as mentioned, to consider ecosystem degradation caused by livestock farming over the past 50 years would be a significant step in addressing this specific concern. This would allow for a more accurate and comprehensive assessment of the lands in question, taking into account their history and long-term impact on the ecosystem. In summary, adapting the definition of "intensive agriculture" and considering an additional option related to livestock farming would contribute to more precise and equitable regulation, effectively addressing natural resource degradation and promoting sustainable practices in a variety of agricultural contexts. This ensures the integrity of ecosystems and their ability to meet restoration and climate change mitigation goals while ensuring long-term sustainability.
553	ANONYMOUS #14	N/A	N/A	While the definition of "intensive agriculture" is reasonable, it remains unclear why it is the sole focus in the current context. Although we don't advocate for converting native ecosystems into intensive agriculture, it's crucial to acknowledge that intensive agriculture often represents an efficient use of land on a per-unit basis. This form of agriculture concentrates production on smaller land areas, in contrast to low-input or extensive agriculture, which requires more land to achieve comparable output. Extensive agriculture, including grazing and pasture lands, often occupies land better suited for ARR activities, potentially increasing carbon stocks on less productive land. The replacement of intensive agricultural land not only heightens competition for limited productive land but is also financially unviable for ARR activities due to high land values. While we do not oppose the inclusion of "intensive agriculture," we question why Verra places specific emphasis on it as a prior state for land designated for ARR activities

554	Cliff Massey	Burapha Agroforestry Co. Ltd	Lao PDR	The definition fails to consider common land use practices in developing countries such as Laos. In the Lao context the use of fire is the most widely used tool for land preparation and forest clearing. Mechanical clearing is barely used given its cost and also its limitations due to the terrain of the country, which is 80% mountainous. In reference to pesticides, there remains wide spread use of banned or restricted pesticides, particularly herbicides used to control plant regrowth. Reference to pesticides should be linked to either the WHO Recommended Classification of Pesticides by Hazard, the FSC List of Highly Hazardous Pesticides or some other internationally recognized listing. Additionally, in Laos an intensive form of agriculture which is commonly used is swidden. Swidden land is left fellow for periods between five to seven-year return intervals. Unfortunately, the fellow period between burns is progressively being reduced to three to five years which significantly impacts on soil fertility and stability, not to mention reduced crop yields. Replacing swidden land with plantations reduces the fire return interval significantly, - decades, thus plantations are very useful for managing and sustaining conservation areas within their management units.
555	ANONYMOUS #15	N/A	N/A	Intensive agriculture is not an appropriate term. We recommend use of the term "cultivated" land to be more accurate and avoid confusion. The IPCC 2006 land classification system should be used for national reporting and national GHG Inventories.
556	ANONYMOUS #17	N/A	N/A	please refer to answers provided by FIA and BTG
557	ANONYMOUS #18	N/A	N/A	The use of intensive agriculture together with degraded land is adequate. As both can be used for restoration projects as proposed in the 3.19.28 requirement, for introduction of non-native tree monocultures in part of the land, combined with native trees for native ecosystem restoration. One important condition to consider is proof and evidence that the non-native exotic tree species to be used are non-invasive, and therefore will not thrive as part of the project activities and will not threaten the existence of endangered species.
558	ANONYMOUS #19	N/A	N/A	Make the definition very clear that agriculture where the land has been intensely transformed in the broader sense is referred to, that this also means inclusion of livestock pastures under the definition. Referring back to previous comment CI has provided to remove “pasture” from the VCS grassland definition. Provide decision making tools to assist project developers to determine what the land use

				category is prior to project implementation. E.g. – land has been ploughed and planted with agricultural food crop or paster grasses = intensive agriculture
559	Shermila Weragoda	stx commodities b.v	Netherlands	The definition of intensive agriculture should consider quantitative thresholds linked to yield productivity. Intensive agriculture involves maximizing crop production by using high fertilizer, water, and pesticide inputs. However, this definition should be expanded to include productivity thresholds that can be quantified using data on crop yields. This would ensure that agricultural practices that do not maximize productivity are excluded from the definition of intensive agriculture. By incorporating yield productivity thresholds, the definition of intensive agriculture can better capture the impact of farming practices on the environment and help ensure that projects on degraded or under-intensive agriculture lands meet the criteria for non-native monoculture requirements.
560	Shauna	The ForestLink	Italy	I'm not an agriculture expert - I would revert to applying the FAO definitions for both forest and agriculture and different management regimes. FAO's definitions are widely recognized, used by several standards for best practice and have credibility.
561	ANONYMOUS #20	N/A	N/A	The use of the definition of intensive agriculture is not appropriate to refer to reforestation in a monoculture format using non-native species. It is common for agricultural activity, in the monoculture format for any type of crop, to be associated with negative environmental and social impacts, however, there are many management techniques and innovations being worked on to make agricultural production an activity with fewer negative impacts, and that promotes sustainable development. It is necessary to disconnect the fact that high productivity in agriculture is only possible when we use chemical fertilizers, and heavy machinery, among other techniques common to intensive agriculture. It is possible to have good productivity results with the application of sustainable management techniques that, by definition, aim for the responsible use of natural resources and ecosystem conservation. Understanding seasonality, soil types, and sustainable management techniques plays an essential role. Scientific research is also crucial to optimize planting, seeking varieties that are resistant to diseases, adapted to local conditions, and capable of contributing to economic diversification. I believe that for projects where non-native monoculture will be practiced, the requirement for complementary forest certification can be implemented in order to guarantee the health of the ecosystem. We already operate internationally with the Forest Stewardship Council (FSC) and the Program for the Endorsement of Forest Certification (PEFC), in addition to other regional forestry

				certifications. FSC certification, for example, is a certification that also functions as a tool for sustainable development and environmental management that combats deforestation, contributes to the responsible use of forest resources, and promotes the maintenance or improvement of ecosystem services, such as water supply. , carbon stock and cultural values, helps in the conservation and regeneration of natural forests and wildlife, respects the well-being, dignity, and rights of workers, local communities, and indigenous peoples, and adds great socio-environmental value to certified products.
562	Tony Knowles	Cirrus	South Africa	"Cultivated land" including both cropland and planted and managed pasture may be more appropriate for several reasons: - It avoids debate on what is "intensive" agriculture and where the threshold is with less intensive forms. - Once land is cleared, ploughed and turned over, the biodiversity value of it greatly reduced (or removed), irrespective of whether it is ploughed using a tractor and modern machinery or traditional ox-drawn ploughs. If the intention is to guard against implementation in indigenous ecosystems (including indigenous grassland, shrubland, open savanna and wetlands), but allow implementation in historically converted land where the native biodiversity has already been removed or severely depleted, then "cultivated land" may be a more appropriate term.
563	Thurstan Wright	SilviCarbon	Netherlands	We suggest that the definition of intensive agriculture should be revised as follows: “Agricultural land-use practices that require additional inputs such as machinery, systematic burning of the land, slash and burn practices, fertilizer, and pesticides to increase or maintain agricultural outputs”. We have modified this definition to reflect that fact that intensive agriculture practices in developing countries that degrade the natural environment runs much wider than the use of machinery, fertilizers and pesticides. The following definitions should also be added to the VCS Program Definitions as part of the VCS Standard update:

				Native ecosystem restoration: “Returning to a landscape composed of naturally occurring and self-sustaining biotic and abiotic components demonstrated by peer-reviewed literature, expert judgment, or government registry”. Modified habitats (taken from IFC Performance Standards 6): “Areas that may contain a large proportion of plant and/or animal species of non-native origin, and/or where human activity has substantially modified an area’s primary ecological functions and species components”. The adoption of the definition of other standards such the IFC PS6 is generally preferable as such definitions have been proven in practice which makes it easier for projects.
564	ANONYMOUS #21	N/A	N/A	As explained in point 6. The analysis of the functional ecosystem type should be assessed. Grasslands, regardless of species, have water, carbon and biodiversity dynamics associated with them. On the other hand, native forests have their own (e.g. evapotranspiration regimes, water table fluctuations, etc.). It is crucial to understand that land-use changes MUST evaluate the functional type of the ecosystem before transformation. There is a large literature on this, I would be happy to provide more information on request.
565	ANONYMOUS #23	N/A	N/A	NO The definition could totally fit for other types of agriculture: machinery, fertilizer and pesticides are more or less used in any typology of agriculture. By opposition, in some cases, extensive agriculture with little use of machinery, fertilizer and pesticides is a major driver of deforestation (for example extensive catlle). Therefore, the definition seems useless taking into account that the definitions of “degraded land” and “non native ecosystems” are both sufficient to define the area where ARR projects could be eligible.
566	ANONYMOUS #24	N/A	N/A	The definition of intensive agriculture seems complete. Verra should consider that this restriction implies competing for land that is used for food production. Areas subject to cattle grazing should also be included, as they are highly modified ecosystems, and

				although not intensively used, they will not recover to natural state unless there is an intervention. Also, overgrazing is often a cause of degradation.
567	María Claudia Pittamiglio	Sociedad de Productores Forestales	Uruguay	Once again, the term “intensive agriculture” may have different interpretations. As an example, “intensive” may not mean aggressive or non-conservationist. Intensive agriculture could be done in very fertile soils where forest plantation will never happen: food security is at a higher level of importance in respect to fibre production. Intensive agriculture could also mean non-sustainable ways of production which could end in degraded soils. In our understanding, “intensive agriculture” is only another way to demonstrate “soil erosion” and should not be considered as a requirement itself. We believe an alternative would be to modify the definition to address challenges associated with less intensive activities that could still lead to long-term resource degradation. It is suggested to consider incorporating an additional option within Section 2 of point 3.19.28 that allows for specific situations related to livestock farming and ecosystem degradation to be taken into account. For instance, in cases where unsustainable livestock practices on low-fertility soils (resulting in overgrazing) may have adverse effects on biodiversity and soil quality over time. The inclusion of an additional option within Section 2 of point 3.19.28, allowing the consideration of ecosystem degradation caused by livestock farming over the past 50 years, would be a significant step in addressing this specific concern. However, regarding the “threshold, test, or condition in which introducing non-native monoculture(s) would be appropriate in the context of ARR and WRC projects in the VCS Program to ensure ecosystem health is protected”, it is our understanding that presume of guilt should be replaced by proof of guilt, as it has been the approach in version 4.4 of the Standard. The project shall demonstrate that no significant harm is done to the environment, rather than establishing requirements presuming every plantation is harmful.
568	Thais Stoppe	Geonoma	Brazil	Yes, the definition is appropriate. For tropical environments, the practices described as intensive agriculture virtually eliminate the whole seed bank of native species, drastically reducing their self-recovery potential.
569	ANONYMOUS #25	N/A	N/A	I agree with this definition.
570	ANONYMOUS #26	N/A	N/A	In addition to intensive agriculture, there could be another condition in which introducing non-native monoculture(s) would be appropriate in the context of ARR and WRC projects in the VCS Program to ensure ecosystem health is protected. This could be the situation of land degraded by intensive

				livestock undertaken for decades or centuries, with poor management (e.g. overgrazing) that could result in biodiversity and/or soil degradation.
571	ANONYMOUS #27	N/A	N/A	Regarding “intensive agriculture” definition we believe that intensive agriculture today may easily include rotational grazing, an activity considered an improved land management. For this reason, in terms of natural ecosystem replacement, we should be discussing whether it is degraded or modified. In this line, in order to analyse the level of modification of a natural ecosystem both time and intensiveness should be taken into consideration. In the case of Uruguay, most areas have been under cattle grazing for the last 200 years and as result, the botanic composition, compaction and erosion are in very different levels to the pristine situation. Regarding non-native monoculture appropriateness, as mentioned, those projects with FSC certification have shown to follow conservation parameters in line with VCS spirits with this standard changes. In this line, the evidence of certification should be evidence of compliance with many of these points.
572	ANONYMOUS #28	N/A	N/A	To complement the definition of intensive agriculture, the description can be expanded to include that it is an agriculture that presents a high degree of modernization and large-scale production. In addition to mechanization, fertilizers, and pesticides, the use of terracing, soil drainage, the installation of large irrigation systems, the destination of production, and the use of genetically modified organisms are also included in the inputs. To ensure the health of the ecosystem, safeguards must be strengthened to ensure that the project minimizes or does not generate significant negative effects with the introduction of non-native monocultures. Safeguard compliance should include evidence supporting the notion that the introduction of a carefully selected non-native monoculture would provide significant ecological and carbon benefits while minimizing potential damage to native ecosystems. There must be a thorough assessment of potential risks and benefits, including considerations of local ecological conditions, community participation, and long-term management plans. The decision-making process should involve consultation with local experts, scientists, and stakeholders to ensure a comprehensive understanding of potential impacts and weigh all available options.
573	James Hewitt	independent	United Kingdom	Intensive agriculture is never appropriate, especially if it increases the use of pesticides, fertilisers, genetic modification, dominance by a small number of large enterprises (often based in tax havens or in countries which do not accept requests for extradition), subsidies.

574	Nadine Block	Sustainable Forestry Initiative	United States and Canada	We do not have a comment on this question.
575	Camilla Marangon	Ibá - Brazilian Tree Industry	Brazil	The definition of intensive agriculture should include cattle pasture areas because the carbon and other benefits of ARR projects on cattle pastures are as great as the benefits of ARR projects on agricultural lands. Not every intensive agricultural practice necessarily uses all additional inputs, but rather a combination depending on the local characteristics of the soil and environment. Therefore, we suggest the following adaptation to the definition: "Agricultural land use practices that require one or more additional inputs such as machinery, fertilizer, and pesticides to increase or maintain agricultural outputs or to keep as many animals as possible on the amount of land available." We would also suggest clarifying some points that were not addressed in the public consultation document: i) Should validated and registered projects (with or without new instances to be validated in the next verifications) also comply with the conditions? ii) Will projects that are in the final validation process, such as in the accuracy review with Verra, have to be updated? If yes, in what period would it be? (i.e. before completing the validation or just in the subsequent verification).
576	ANONYMOUS #29	N/A	N/A	The definition of intensive agriculture should include cattle pasture areas because the carbon and other benefits of ARR projects on cattle pastures are as great as the benefits of ARR projects on agricultural lands. Not every intensive agricultural practice necessarily uses all additional inputs, but rather a combination depending on the local characteristics of the soil and environment. Therefore, we suggest the following adaptation to the definition: "Agricultural land-use practices that require one or more additional inputs such as machinery, fertilizer, and pesticides to increase or maintain agricultural outputs or to keep as many animals as possible on the amount of land available." We would also suggest clarifying some points that were not addressed in the public consultation document: i) Should validated and registered projects (with or without new instances to be validated in the next verifications) also comply with the conditions? ii) Will projects that are in the final validation process, such as in the accuracy review with Verra, have to be updated? If yes, in what period would it be? (i.e. before completing the validation or just in the subsequent verification).

577	ANONYMOUS #30	N/A	N/A	The definition of “intensive agriculture” itself is a reasonable definition, but it is not clear why it alone is a focus. Presuming a starting point in which native ecosystems are not being converted for intensive agriculture, intensive (high input high output) agriculture is generally an efficient use of land on a per-unit basis and can remove pressure from more marginal landscapes. By contrast, low-input or extensive agriculture is less productive on a per-unit basis and thus requires more land occupation to produce the same output. Land used for extensive agriculture, including grazing and pasturelands, is often land that is generally better suited for ARR activities, which can increase carbon stocks on areas of land that are producing relatively low yields. Replacing intensive agricultural land both increases competition for scarce productive land, and is unlikely anyway, as land values for intensive agriculture land are almost always far too high to be financially viable for ARR activities. It remains unclear why Verra is focused on this as a prior state for land used for ARR activities. As noted above, it is unclear why a land use condition criteria should be required beyond “degraded land;” however, if agricultural land is going to be referenced, then 3.19.28(2)(b) should also include land used for extensive agriculture, including pasture. Pasture does not meet the currently proposed definition of “intensive agriculture,” but it is a major, direct cause of degradation, deforestation, and/or conversion in many parts of the world, and likely the primary pre-project land use for most ARR projects in Latin America and elsewhere. Pasture appears to be excluded from the proposed definition, but I am not aware of any ecological, equity, practical, or other reason to exclude restoration and reforestation of cattle pasture from climate finance? In many parts of the world, pasture is simply where ARR projects happen, and I believe it is critical that pasture be included as within the scope of ARR activities—explicitly included if agricultural land is specified or included by default where it is a degraded land type relative to native ecosystem condition.
578	Tobias Dorenkamp	DEG	Germany	The definition of “intensive agriculture” itself is a reasonable definition, but it is not clear why it alone is a focus. While we do not advocate conversion of native ecosystems for intensive agriculture, it is important to understand that intensive agriculture is generally an efficient use of land on a per-unit basis (i.e., production per area of land), which concentrates production on relatively small land areas. By contrast, low-input or extensive agriculture is less productive on a per-unit basis and thus requires more land occupation to produce the same output. Land used for extensive agriculture, including grazing and pasturelands, is often land that is generally better suited for ARR activities, which can increase carbon stocks on areas of land that are producing relatively low yields. Replacing intensive

				agricultural land both increases competition for scarce productive land, and is unlikely anyway, as land values for intensive agriculture land tend to be too high to be financially viable for ARR activities. Though we do not object to the inclusion of "intensive agriculture," we are unsure why Verra is focused on it as a prior state for land used for ARR activities. As noted above, we do not believe a land use condition criteria should be required beyond "degraded land;" however, if agricultural land is going to be referenced, then 3.19.28(2)(b) should also include land used for extensive agriculture, including pasture (and other types of land cover, as noted in our answer to Question 3). Pasture does not meet the proposed definition of "intensive agriculture," but it is a major, direct cause of degradation, deforestation, and/or conversion in many parts of the world, and likely the primary pre-project land use for most ARR projects in Latin America and elsewhere. Extensive cattle pasture is the land use with which reforestation with carbon finance can potentially compete economically. Once land is converted to intensive agriculture, it is typically too expensive for ARR projects to be financially viable. Pasture appears to be excluded from the proposed definition, but we are aware of no ecological, equity, practical, or other reason to exclude restoration and reforestation of cattle pasture from climate finance. In many parts of the world, pasture is simply where ARR projects happen, and we believe it is critical that pasture be included as within the scope of ARR activities—explicitly included if agricultural land is specified or included by default where it is a degraded land type relative to native ecosystem condition.
579	Yann-Olivier de Jouvancourt	Terraformation	United States	The definition of "intensive agriculture" seems appropriate. It could be added that it needs to be justified that, the area percentage that includes non-native monocultures, contributes to the permanence of the project as a livelihood activity, and that the project would not be possible/viable without it, or something similar justifying the use of non-native monoculture.
580	MaryKate Bullen	Forest Investment Associates	United States	The definition of "intensive agriculture" itself is a reasonable definition, but it is not clear why it alone is a focus. While we do not advocate conversion of native ecosystems for intensive agriculture, it is important to understand that intensive agriculture is generally an efficient use of land on a per-unit basis (i.e., production per area of land), which concentrates production on relatively small land areas. By contrast, low-input or extensive agriculture is less productive on a per-unit basis and thus requires more land occupation to produce the same output. Land used for extensive agriculture, including grazing and pasturelands, is often land that is generally better suited for ARR activities, which can increase carbon stocks on areas of land that are producing relatively low yields. Replacing intensive agricultural land both increases competition for scarce productive land, and is unlikely anyway, as land values for intensive agriculture land tend to be too high to be financially viable for ARR activities.

				Though we do not object to the inclusion of "intensive agriculture," we are unsure why Verra is focused on it as a prior state for land used for ARR activities. As noted above, we do not believe a land use condition criteria should be required beyond "degraded land;" however, if agricultural land is going to be referenced, then 3.19.28(2)(b) should also include land used for extensive agriculture, including pasture (and other types of land cover, as noted in our answer to Question 3). Pasture does not meet the proposed definition of "intensive agriculture," but it is a major, direct cause of degradation, deforestation, and/or conversion in many parts of the world, and likely the primary pre-project land use for most ARR projects in Latin America and elsewhere. For example, in Brazil, often identified as the country with the single highest global NCS potential, there are more than 170 million hectares of cattle pasture, most of which used to be forested. Extensive cattle pasture is the land use with which reforestation with carbon finance can potentially compete economically. Once land is converted to intensive agriculture, it is typically too expensive for ARR projects to be financially viable. Pasture appears to be excluded from the proposed definition, but we are aware of no ecological, equity, practical, or other reason to exclude restoration and reforestation of cattle pasture from climate finance. In many parts of the world, pasture is simply where ARR projects happen, and we believe it is critical that pasture be included as within the scope of ARR activities—explicitly included if agricultural land is specified or included by default where it is a degraded land type relative to native ecosystem condition.
581	Marek Guizot	Stafford Capital Partners	United Kingdom	Yes. The proposed definition is adequate for the purposes of this methodology.
582	Justin Mercer	New Forests	Singapore, Kenya, Australia, New Zealand, United States	The definition of intensive agriculture is appropriate, but it is difficult to understand why this limitation is necessary. Intensive agriculture will not capture the range of agricultural practices (or other land use practices) that lead to significant and ongoing vegetative degradation or otherwise low productivity from a carbon sequestration / storage standpoint. Many areas used for intensive or extensive livestock grazing for example are burned annually in Southeast Asia to promote fresh herbaceous growth for fodder; are subjected to compaction, erosion and sediment transport; have limited shrub and herbaceous layers with associated low biodiversity

				value; and continue to support low carbon stocks even decades after initial forest clearance. Livestock grazing and potentially other examples of extensive agriculture should be eligible, where evidence of ongoing degradation can be substantiated.
583	Brett Hundley	Agroforestry Partners	United States	The proposed definition is appropriate.
584	Indradeep Das	ReNew	India	Since intensive agriculture refers to a method of farming which employs activities such as use of machinery, pesticides, fertilizers, and other chemicals as well as labor and investment to boost the yield of the land, its definition is clearly defined in the amendments.
585	Agustin Inthamoussu	CLIMIT	Uruguay	Once again, the term “intensive agriculture” may have different interpretations. As an example, “intensive” may not mean aggressive or non-conservationist. Intensive agriculture could be done in very fertile soils where forest plantation will never happen: food security is at a higher level of importance in respect to fibre production. Intensive agriculture could also mean non-sustainable ways of production which could end in degraded soils. In our understanding, “intensive agriculture” is only another way to demonstrate “soil erosion” and should not be considered as a requirement itself. Regarding the “threshold, test, or condition in which introducing non-native monoculture(s) would be appropriate in the context of ARR and WRC projects in the VCS Program to ensure ecosystem health is protected”, it is our understanding that presume of guilt should be replaced by proof of guilt, as it has been the approach in version 4.4 of the Standard. The project shall demonstrate that no significant harm is done to the environment, rather than establishing requirements presuming every plantation is harmful.
586	Jean	Beijing forestry university	China	Maybe the time of the non-native tree species introduced to a country could be a threshold. For example, if a non-native tree specie has been introduced in a country over 100 years then this tree specie could be considered relatively safe non-native tree specie since it has been coexist with local ecosystem peacefully for a long time. And this non-native monoculture(s) is acceptable.
587	Jim Heyes	Criterion Africa Partners	South Africa	Because of the use of “or” between a) and b), the definition is appropriate. In Africa, most agriculture is practiced by smallholders, who do not use machinery, and sometimes no fertilizer and pesticides, and therefore this definition would not apply to them, but rather only to commercial larger scale operations. Because of the “or”, these smallholder areas could be consolidated into larger than 100 ha projects, due to their already degraded condition.

588	ANONYMOUS #31	N/A	N/A	Yes, it is appropriate. The threshold for introducing non-native monocultures should be based on the level of degraded land, ensuring that projects are only applicable in areas where ecosystem health is compromised. A careful balance must be struck to promote sustainable practices and safeguard biodiversity.
589	ANONYMOUS #32	N/A	N/A	restoration projects as proposed in the 3.19.28 requirement, for introduction of non-native tree monocultures in part of the land, combined with native trees for native ecosystem restoration. One important condition to consider is proof and evidence that the non-native exotic tree species to be used are non-invasive, and therefore will not thrive as part of the project activities and will not threaten the existence of endangered species.
590	ANONYMOUS #33	N/A	N/A	The definition provided by Verra is in line with the following definitions and therefore appropriate. Oxford definition (3): Agriculture which involves intensive management of land, designed to maximize output through the use of chemicals (fertilizers) and machinery, the reseeding of grassland, clearance of unproductive areas (such as hedges and small copses), and drainage of wetland. Cambridge dictionary (4): Farming that uses a lot of machinery, labour, chemicals, etc. in order to grow as many crops or keep as many animals as possible on the amount of land available: The use of chemical fertilizers and pesticides in intensive agriculture has dramatically increased crop yields. (3) https://www.oxfordreference.com/display/10.1093/oi/authority.20110803100006181#:~:text=Agriculture%20which%20involves%20intensive%20management,)%2C%20and%20drainage%20of%20wetland. (4) https://dictionary.cambridge.org/dictionary/english/intensive-agriculture#:~:text=farming%20that%20uses%20a%20lot,has%20dramatically%20increased%20crop%20yields.

591	ANONYMOUS #34	N/A	N/A	The definition of intensive agriculture should include cattle pasture areas because the carbon and other benefits of ARR projects on cattle pastures are as great as the benefits of ARR projects on agricultural lands. Not every intensive agricultural practice necessarily uses all additional inputs, but rather a combination depending on the local characteristics of the soil and environment. Therefore, we suggest the following adaptation to the definition: "Agricultural land-use practices that require one or more additional inputs such as machinery, fertilizer, and pesticides to increase or maintain agricultural outputs or to keep as many animals as possible on the amount of land available." We would also suggest clarifying some points that were not addressed in the public consultation document: i) Should validated and registered projects (with or without new instances to be validated in the next verifications) also comply with the conditions? ii) Will projects that are in the final validation process, such as in the accuracy review with Verra, have to be updated? If yes, in what period would it be? (i.e. before completing the validation or just in the subsequent verification).
592	ANONYMOUS #35	N/A	N/A	The definition of “intensive agriculture” itself is a reasonable definition. However, intensive agriculture is generally an efficient use of land, which provides agricultural products by concentrating production on relatively small land areas. Land used for extensive agriculture, including grazing and pasturelands, is the land use that is generally better suited for ARR activities, which can increase carbon stocks on areas of land that are producing relatively low yields. Replacing intensive agricultural land with ARR projects is both undesirable, because it increases competition for scarce productive land, and unlikely, because land used for intensive agriculture tends to be priced in a way that maintains its intensive agricultural use. Land used for intensive agriculture is typically too expensive for ARR projects to be financially viable. Though we do not object to the inclusion of “intensive agriculture,” we are unsure why Verra is focused on it. 3.19.28(2)(b) should also include land used for extensive agriculture, including pasture (and other types of land cover, as noted in our answer to Question 3). Pasture does not meet the proposed definition of “intensive agriculture,” but it is a major, direct cause of degradation, deforestation, and/or conversion in many parts of the world, and likely the primary pre-project land use for most ARR projects in Latin America and elsewhere. For example, in Brazil, often identified as the country with the single highest global NCS potential, there are more than 170 million hectares of cattle pasture, most of which used to be forested. Previously forested land that is now being used for cattle pasture was never an intact native grassland

				ecosystem. Pasture can be readily distinguished from native grassland by the presence (in most cases) of non-native grasses (in Latin America, Brachiara spp.); by the presence of livestock and facilities used for grazing; and by other site characteristics that are readily apparent to observers. In other words, determining areas of pasture that are suitable for ARR activities and demonstrating that project sites were not native grassland ecosystems will be easily handled by Verra's existing criteria comprising government classification, peer-reviewed literature, and/or expert judgment. Pasture appears to be excluded from the proposed definition, but we are aware of no ecological, equity, practical, or other reason to exclude restoration and reforestation of cattle pasture from climate finance. In many parts of the world, pasture is simply where ARR projects happen, and we believe it is critical that pasture be explicitly included as within the scope of ARR activities. Excluding it would remove an enormous area of suitable land, which was already converted from its original land cover and ecosystem use, from consideration for restoration and reforestation activities. Our suggested language would read: 3.19.28 2) The area of the project to be populated by non-native monoculture(s): a) Meets the definition of a "degraded ecosystem," as defined by the VCS Program Definitions; or b) Has been converted from a native ecosystem at least 10 years prior to the project start date (to include for use for intensive agriculture or animal husbandry).
593	ANONYMOUS #36	N/A	N/A	Yes.
594	ANONYMOUS #37	N/A	N/A	The definition of intensive agriculture should include cattle pasture areas because the carbon and other benefits of ARR projects on cattle pastures are as great as the benefits of ARR projects on agricultural lands. Not every intensive agricultural practice necessarily uses all additional inputs, but rather a combination depending on the local characteristics of the soil and environment. Therefore, we suggest the following adaptation to the definition: "Agricultural land-use practices that require one or more additional inputs such as machinery, fertilizer, and pesticides to increase or maintain agricultural outputs or to keep as many animals as possible on the amount of land available." We would also suggest clarifying some points that were not addressed in the public consultation document: i) Should validated and registered projects (with or without new instances to be validated in the next verifications) also comply with the conditions? ii) Will projects that are in the final validation process, such as in the accuracy review with Verra, have to be

				updated? If yes, in what period would it be? (i.e. before completing the validation or just in the subsequent verification).
595	ANONYMOUS #38	N/A	N/A	We agree that a definition must be clear and widely mentioned in the definition of VCS. The definition “Agricultural land-use practices that require additional inputs such as machinery, fertiliser, and pesticides to increase or maintain agricultural outputs” is quite open to many different interpretations. We think this definition should be linked to the footnote of the previous paragraph, linking intensive agriculture that leads to a highly degraded area, whose ecosystem function is disrupted to the extent that it can no longer sustain its original ecosystem characteristics. This analyses can be demonstrated with local analysis of soils, landscape and biodiversity previous the activities. This definition should be included in the VCS definitions: “The VCS Program Definitions defines a degraded ecosystem as “an ecosystem where ecosystem function is disrupted to an extent where it can no longer sustain its biotic and abiotic characteristics as demonstrated by peer-reviewed literature or expert judgement.” (This footnote would not be included in the VCS Standard.)” Additionally: In the definition of intensive agriculture, what does MACHINERY refer to? Everything that uses fuel? For example, could a scythe or a back pump qualify as machinery? On the additional question, it is very difficult to define specific criteria or conditions that are appropriate for all cases. If you want to avoid deterioration in the health of the ecosystem, the environmental impact of the practice to be implemented should be evaluated, case by case.
596	ANONYMOUS #39	N/A	N/A	Yes, in cultivated croplands for years or abandoned agricultural land.. It could be defined as lands with historical soil disturbance better than intensive agriculture. Land which, in the baseline, is subjected to a defined list of land-use and management practices and inputs. It can be adjusted to a range of existing practices. Cropland management modifies soil C stocks to varying degrees depending on how specific practices influence C input and output from the soil system (Paustian et al., 1997; Bruce et al., 1999; Ogle et al., 2005). The main management practices that affect soil C stocks in croplands are the type of residue management, tillage management, fertilizer management (both mineral fertilisers and organic amendments), choice of crop and intensity of cropping management (e.g., continuous cropping versus cropping rotations with periods of bare fallow), irrigation management, and mixed systems with cropping and pasture or hay in rotating sequences. In addition, drainage and cultivation of organic soils reduces soil C stocks (Armentano and Menges, 1986).

597	ANONYMOUS #40	N/A	N/A	Including agriculture and livestock, even if they do not receive inputs, is important (and may be an even greater indication of land degradation). It is also important to understand the water balance of introducing non-native species in a monoculture system (depending on the planting cycle), so as not to impact the availability of water in water resources or the rainfall regime.
598	ANONYMOUS #41	N/A	N/A	I think the definition is ok, but, it doesn't consider deforestation and land usurpation/encroachment issues, which are essential in the implementation of "intensive agriculture" in Paraguay (and in most of the Southern Cone region) when considering ARR and WRC projects.
599	ANONYMOUS #42	N/A	N/A	On heavily degraded soils, where ecosystem health is absent and hence cannot be protected, non-native species, not necessarilly in monocultures, might be a valid option.
600	ecosecurities	ecosecurities	Switzerland	ecosecurites believe that credits should only be assigned to the restoration or conservation, not the the monoculture plantation.
601	Matthew Kerr	New Zealand Carbon Farming	New Zealand	See answers to questions above. "Degraded" needs to be broadly defined with a situationally specific approach considering government data, peer reviewed scientific literature, and site specific assessments from local experts. "Intensive agriculture" should be more clearly defined as: "Agricultural land-use practices that require additional inputs such as machinery, fertilizer, or pesticides to increase or maintain agricultural outputs. Both should be used as considerations as part of a wider context based "Do no harm" test. The test could be based on whether "The afforestation activity, regardless of species introduced, does not have a negative impact on biodiversity, climate and community relative to the baseline activity."
602	Charlie Sichel	Forestry Linked Securities / Radius Zero	Switzerland / Paraguay	In our view, the concept of anthropization is a more pertinent criterium. For example, land subject to periodic 'slash-and-burn' activities may not be considered as intensive agriculture, but is equally conducive to poor biodiversity and bad habitat conditions for all but very few species. There is very good universal data available to monitor fires and crop burning on an on-going basis

603	Beatriz Zavariz	Manulife Investment Management Timberland and Agriculture	United States	Limiting non-native monoculture plantations to degraded or intensive agriculture lands is excluding, or not clear regarding the inclusion, of other lands that could benefit from afforestation activities. Eligibility should include and be clear about the eligibility of degraded grasslands, degraded pasturelands, abandoned non-native grasslands and other land types that are not associated to agriculture like mine reclamation sites. The use of intensive agriculture as an eligible land type could be interpreted as an assumption that intensive agriculture is inherently unsustainable. While in some cases that might be true, in many cases it likely would not. We advocate for the use of the term degraded land, inclusive of any causes as listed in the paragraph above and informed by data sources as listed in our answer to question 6 above