

PUBLIC CONSULTATION REPORT

Public Consultation on the Interpretation of Genetically
Modified Organism (GMO) Definition (INT-STD-01-001_19)

06 Julio 2026



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FOR ALL
FOREVER**

Title:	Public Consultation Report	
Dates:	6 July 2026	
Contact for comments:	Email: policyinnovation@fsc.org	
Objective of document:	This report provides an overview of the stakeholder feedback on the Interpretation of genetically modified organism (GMO) definition (INT-STD-01-001_19).	
Confidential?	☐ Yes ☒ No	
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INTRODUCTION

Forest Stewardship Council (FSC) received several informal enquires concerning the definition of GMO in FSC Principles and Criteria ([FSC-STD-01-001 V5-3](#)) suggesting a lack of clarity regarding modern genetic engineering technologies, such as CRISPR-based gene editing. [FSC-POL-30-602 V1-0 EN Interpretation on GMO \(Genetically Modified Organisms\)](#) prohibits the use of genetically modified organisms in FSC-certified forest and forest products, while allowing limited research under controlled conditions. FSC Principles and Criteria ([FSC-STD-01-001 V5-3](#)) which stipulates this prohibition under Criterion 10.4 ("The Organization shall not use genetically modified organisms in the Management Unit"), defines a GMO as "An organism in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination."

However, neither this definition nor earlier versions, clearly addresses modern genetic engineering technologies such as CRISPR-based gene editing (e.g., CRISPR/Cas9, a technology to selectively modify the DNA of living organisms¹). This has led to uncertainty in the application of certification requirements, particularly in jurisdictions where organisms generated using such technologies are not classified as GMO under national law.

Therefore, FSC Secretariat started a process to receive feedback and advice from BoD and PSC and moved forward with a draft interpretation for public consultation.

The drafted *Interpretation of genetically modified organism (GMO) definition* ([INT-STD-01-001_19](#)) aims to clarify how FSC addresses organisms developed through modern genetic technologies, reaffirm the prohibition of these technologies in certified operations, and uphold FSC's normative framework intent of preventing the use of GMOs in a manner that could compromise natural forest dynamics or ecosystem resilience.

As part of the drafting phase, FSC conducted a public consultation on:

1. Drafted interpretation [INT-STD-01-001_19](#) Draft 1-0, as in Annex 1.

The consultation aimed to receive stakeholders' comments and inputs on the draft interpretation.

The consultation was open on the FSC Consultation Platform for 60 calendar days, from 30 July 2025 until 23:59 (CET) on 28 September 2025. To analyse and present stakeholder's feedback this consultation report is prepared. The report presents consolidated stakeholders feedback on each topic and FSC comments/response to stakeholder feedback.

The FSC team thanks all the participants for their feedback and valuable inputs to the draft document.

For further information, comments or questions related to the process, please contact the Policy Innovation team at policyinnovation@fsc.org.

¹ National Human Genome Research Institute Glossary/[CRISPR](#)

ABBREVIATIONS

ASI	Assurance Services International
CB	Certification Body
CH	Certificate Holder
CoC	Chain of Custody
FM	Forest management
FSC	Forest Stewardship Council
GMO	Genetically Modified Organism
P&P	Policy and Performance Unit

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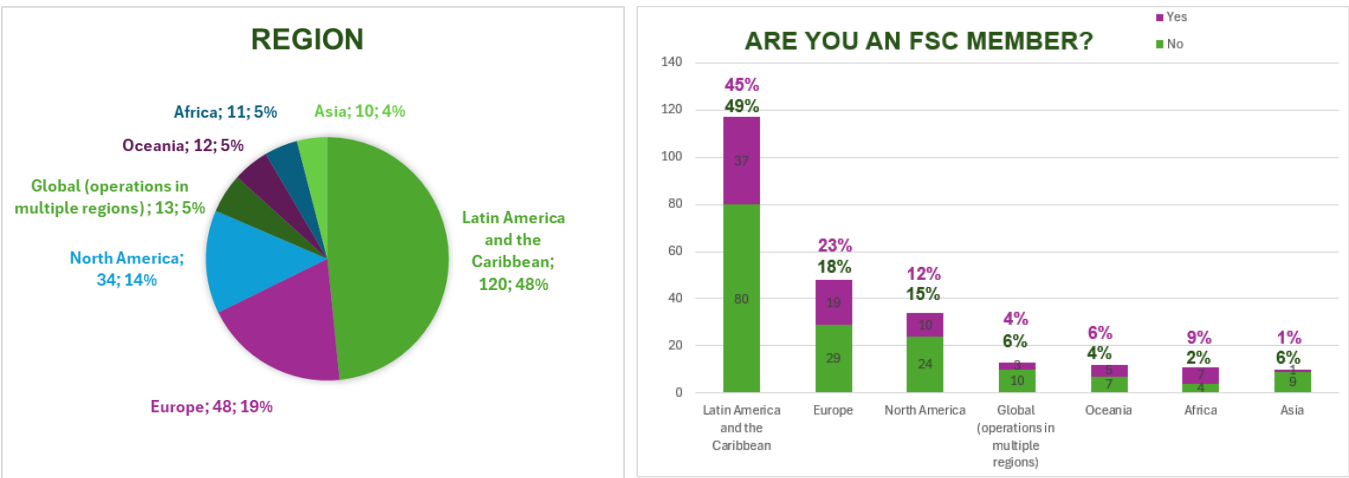
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Part 1. Participation in the Public consultation

Participants background

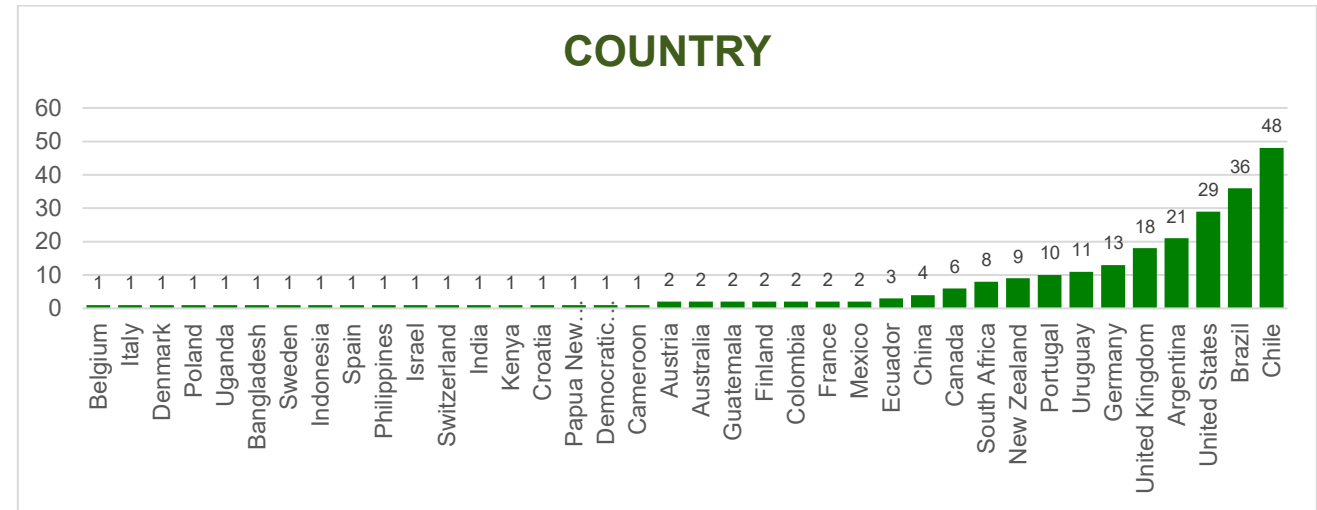
Total: 248 stakeholders provided feedback to the public consultation questions on the draft interpretation.

*Disclaimer: In total, 272 stakeholders accessed the consultation platform and replied to the background questions, but not to the interpretation questions. Additionally, some background information was not provided by respondents (e.g. region, membership, chamber, etc); so, data breakdown produces slight discrepancies in numbers as a result.



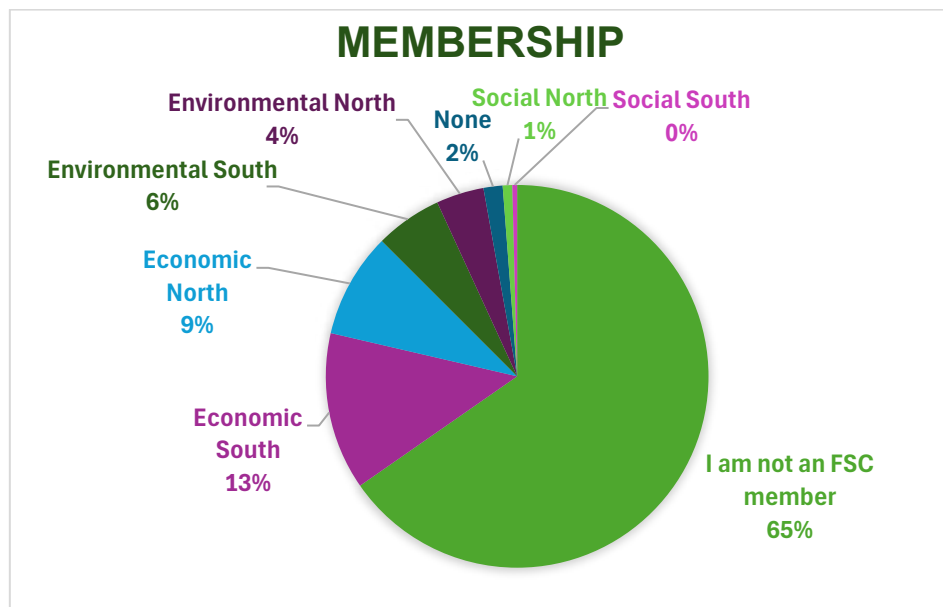
Respondents by region: Most respondents were from Latin America and the Caribbean, 120 (48%); followed by Europe, 48 (19%).

Members by region: When asked about membership status, 82 respondents identified as members, 163 as non-members (3 N/A). Again, most respondents that identified as members, identified their region as Latin America and the Caribbean (45%) followed by Europe (23%) and North America (12%). The lowest region for respondents was Asia (4% total, 1% Members).

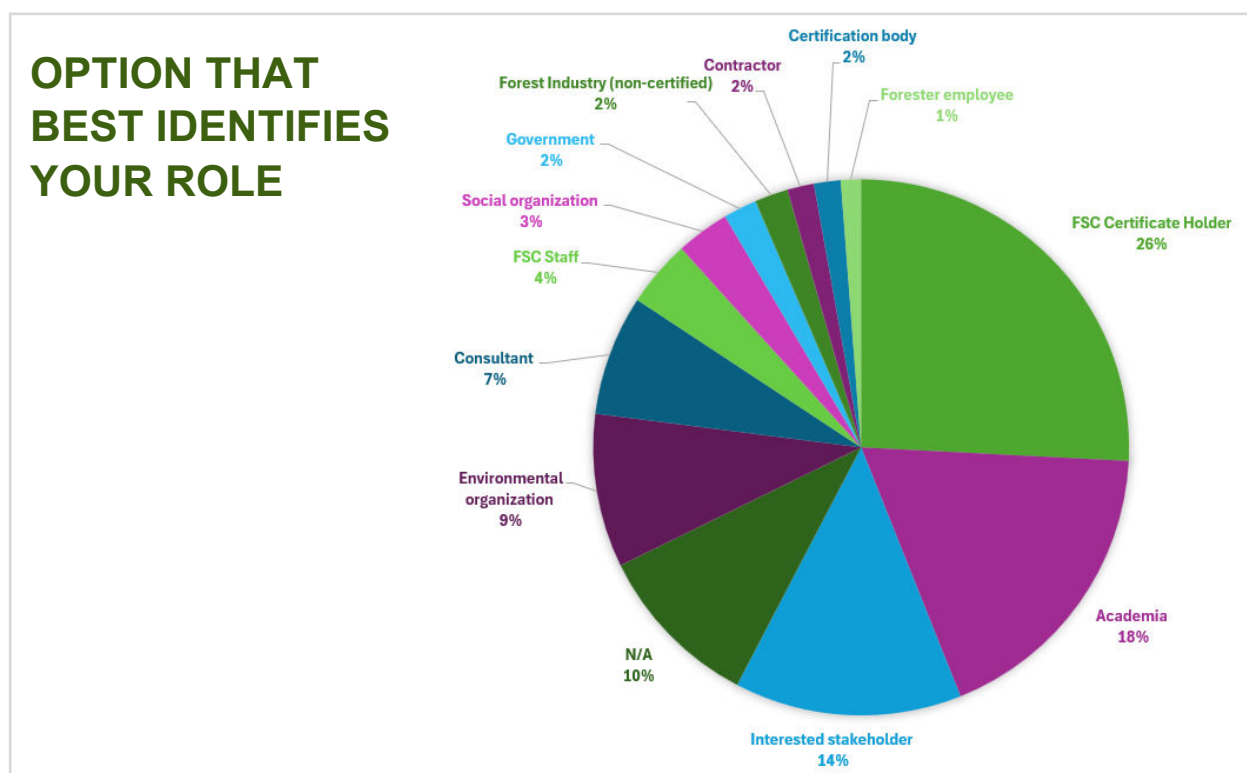


Country: At the country level, most responses were from Chile, 48 (19%); followed by Brazil, 36 (15%) United States, 29 (12%), Argentina 21 (8%); altogether accounting for 54% of total responses.

Type of membership: Participants were asked to identify themselves regarding their type of membership. 65% of the respondents were not FSC members. Amongst FSC members (82), 55 respondents indicated affiliation to the Economic North and South chambers (20%), 24 Environmental North and South chambers (9%) and 3 social North and South chambers (1%); with 4 non-specified respondents (2%).



Option that best identifies your role: Participants were asked to select the option that best identified their role. Amongst respondents, 47 identified as FSC certificate holder of Forest Management (19%), 38 from Academia (15%), 27 identified as “Other” (11%) and 23 as Environmental Organization (9%); with 7 non-specified respondents (3%).



Part 2. Methodology

The consultation was presented digitally on the [FSC Consultation Platform](#), and made available in all official FSC languages: English, Spanish, and French. The consultation was open for 60 calendar days, from **30 July 2025 until 23:59 (CET) 28 September 2025**.

The public consultation opened with a summary statement and supporting documents on GMO definition. The Policy Innovation email (policyinnovation@fsc.org) was provided in case respondents needed additional information.

As supporting documents, pdf files with the draft interpretations were provided:

Supporting documents in the Consultation

[INT-STD-01-001 19 EN GMO-definition.pdf](#)

[INT-STD-01-001 19 ES GMO-definition.pdf](#)

Stakeholder engagement

The consultation was announced in FSC Channels OneFSC Global, Certification Bodies Forum, and Forest Management Community, at the beginning of the process, on 30 of July 2025.

Communications included supporting documents and Policy Innovation email for further information:

Supporting Documents in the Communication Channels

EN: Public Consultation on the [Interpretation on GMO \(INT-FSC-STD-01-001 19\)](#).

ES: Consulta Publica de la [Interpretación sobre OGM \(INT-FSC-STD-01-001 19\)](#)

FR: Consultation Publique sur [Interprétation sur les OGM \(INT-FSC-STD-01-001 19\)](#)

The link to the consultation was also shared in FSC News and Views mailing list: 09/09/2025 - [From bush encroachment to biomass energy](#).

Three email enquiries were received under the email policyinnovation@fsc.org and responded to no later than 2 working days upon receipt.

The consultation was also featured in FSC platforms² and some external platforms³.

² FSC Canada Public Consultation Notice: Interpretation of GMO Definition | Forest Stewardship Council

³ Global Justice Ecology Project [TAKE ACTION: FSC Consultation to STOP GE Trees \(deadline Sept 28\) – Global Justice Ecology Project](#)

Canadian Biotechnology Action Network [Consultation Comments to FSC | CBAN](#)

GM Freeze | Action Alert: Forest Stewardship Council consultation on GMOs

Paper Advance a source of news, analysis, and insight for the North American and global pulp, paper, and forest products industry. [Public Consultation Notice: Interpretation of GMO Definition](#)

[TAKE ACTION: FSC Consultation to help STOP GE Trees \(deadline Sept 28\) - STOPGETREES.ORG](#)

Consultation questions

The public consultation considered three questions, one closed-ended (“yes” or “no”) question and two open-ended questions (Annex 1).

Are trees whose genome has been edited using CRISPR-based technologies falling under the FSC definition of ‘Genetically Modified Organism’?	
Drafted INT	Yes, the definition of Genetically Modified Organism covers also organisms in which the genetic material has been altered using modern, CRISPR-based gene editing technologies. The definition’s element of “altered in a way that does not occur naturally” is understood to refer both to the resulting genome change as well as to the process to induce it, hence any genetic engineering technology falls within the scope of the GMO definition.

- **Q1. “Do you agree with the drafted interpretation?”**

The closed-ended question Q1 asked the respondents to select “yes” or “no” to their agreement with the proposed draft interpretation (i.e., “Q1. Do you agree with the drafted interpretation?”).

- **Q2. “If you answered ‘No’ to Q1, please provide your comments or suggestions.”**

Following this, the Q2 open-ended question asked the respondent to provide their rationale.

- **Q3. “Please provide any additional comments or suggestions, if you have them.”**

A last open-ended question Q3 was added to provide stakeholders an opportunity to provide comments to the topics that might not have been addressed through the targeted questions.

Question 1 was mandatory to answer, Questions 2 and 3 were voluntary.

Data analysis

Analysis of the results was conducted by FSC Staff, with the initial data translated into English and any participants who provided no answers removed. The work included a mixture of both quantitative and qualitative analysis. For the open-ended question types, comments were read, categorized and then grouped or ‘coded’ by topic to provide quantitative results by stakeholder group, region, and FSC membership type.

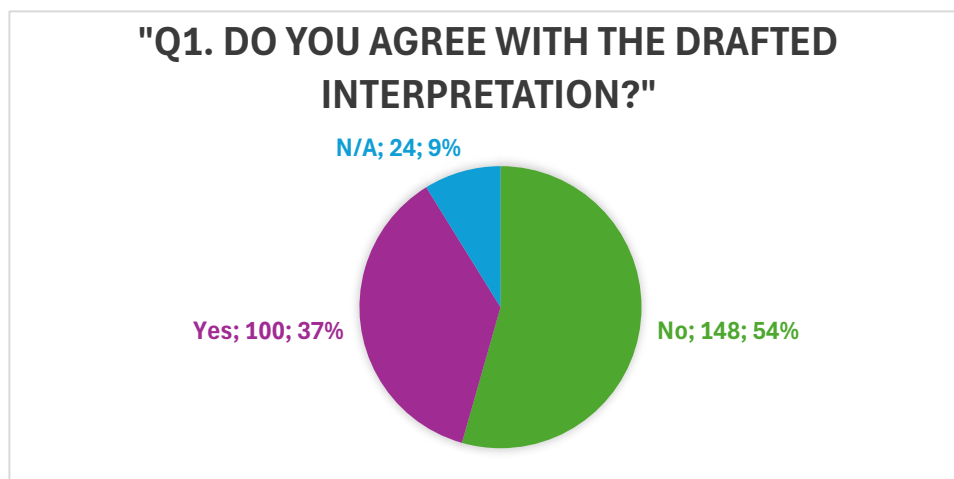
Reference to stakeholder type

The stakeholder types provided in the initial results reflected the options provided on the FSC Consultation Platform. These included: ASI staff, Certificate holder, Certification body/auditor, Consultant, FSC staff, FSC Member, and Other.

For reference to FSC Member, readers should be aware that this is the stakeholder type chosen by the respondent. The number of responses of this type may not reflect the true number of FSC members, as other stakeholder types, such as Certificate holders or Certification body/auditor can also be FSC members.

Part 3. Responses

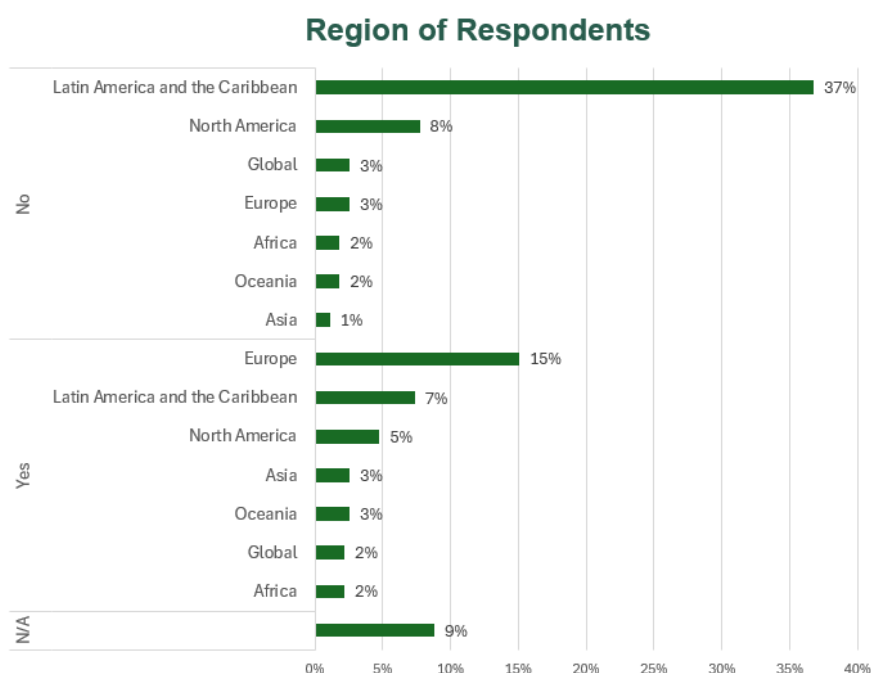
There is a total of 272 entries, however, **248** respondents provided an answer to Q1 regarding the draft interpretation (91% of all respondents).



Q1: 37% Yes | 54% No (in absolute figures, 40% Yes | 60% No)

The answers on the drafted interpretation reveal a differential response from global stakeholders. With a 54% disagreement, the proposal does not show broad support. The feedback also indicates a geographically concentrated disagreement from Latin America, primarily centred on the classification of new gene-editing technologies such as CRISPR. Below is a list of main findings.

1. Finding 1: Important Disagreement from Latin America and the Caribbean

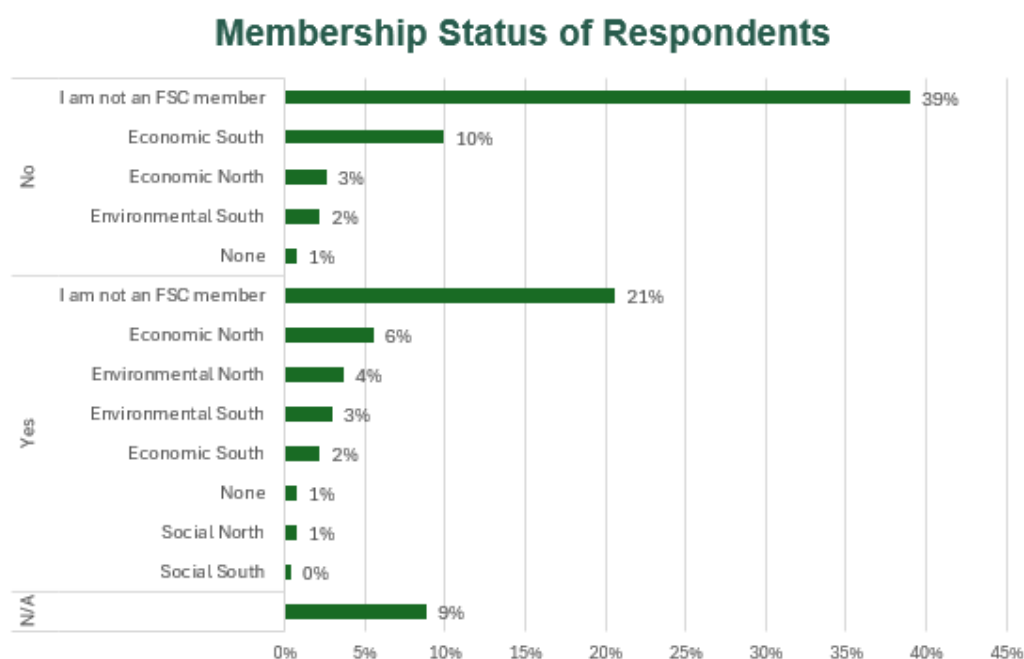


The first finding are the regional differences. Latin America and the Caribbean, which constituted nearly half of all respondents (120 from Latin America alone), mostly answered “No” (Disagree) with the

interpretation representing 37% disagreement vs. 7% agreement of all the responses. This is in opposition to Europe, which showed strong support representing 15% agreement with the draft interpretation vs. 3% disagreement of all the responses. In terms of regional support, of all 48 Europe respondents 85% agree with the interpretation, 15% disagree while for Latin America, of all 120 respondents 83% disagree and 17% agree.

2. Finding 2: Economic South Chamber is the highest percent of Members' disagreement

The Economic South Chamber shows the highest disagreement rate (10%), while the Economic North and Environmental North chambers are in favour.



Members Q1: 16% Yes | 15% No

Non-Members Q1: 21% Yes | 39% No

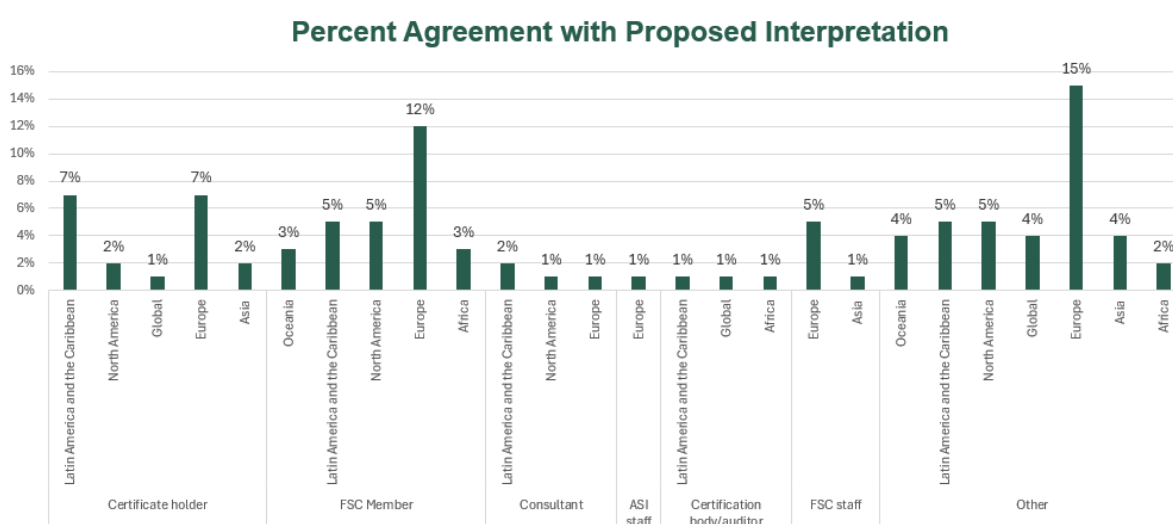
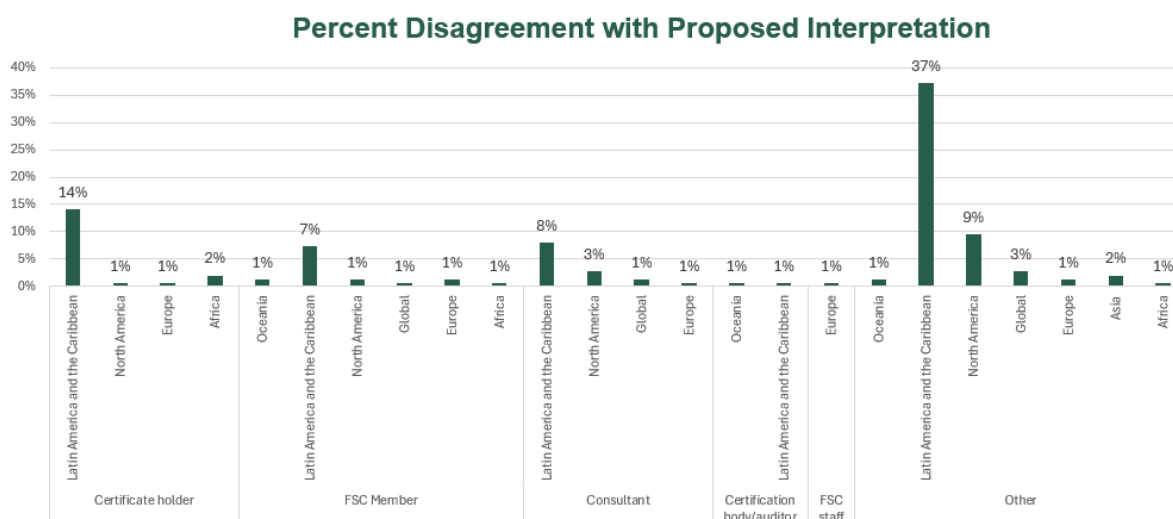
3. Finding 3: Important disagreement from Latin America Certificate Holders

When responses are analysed amongst those who disagree with the interpretation (Q1.“No”; 148 respondents), 37% identified as Others (a group that includes individual stakeholders, academics, independent consultants, and organizations not directly affiliated with core FSC categories), followed by a 14% identified as Certificate Holders from Latin America.

In contrast, when analysing those who agree with the interpretation (Q1.“Yes”; 100 respondents), there is a strong support from Europe, from respondents identified as Others, Members and Certificate Holders (15%, 12% y 7%). This data allows for a better understanding of how perspectives on the interpretation are distributed, and highlights the importance of broad consultation.

Regional Variation Q1: Latin America and the Caribbean 7% Yes | 37% No

Regional Variation Q1: Europe 15% Yes | 3% No



4. Finding 4: The CRISPR Debate seems Central

A total of 252 comments were received, either as answer to Q2 and/or additional comments in Q3:

Q1. Do you agree with the drafted interpretation?	Q2. If you answered 'No' to Q1, please provide your comments or suggestions.	Q3. Please provide any additional comments or suggestions, if you have them.	Total
Yes (Agree)	0	48	48
No (Disagree)	130	74	204
TOTAL	130	122	252

Only disagreeing respondents replied to Q2 (130, 100%), and mostly to Q3 (79, 62%).

Qualitative analysis of the 130 comments from those who disagreed revealed a clear thematic focus. The debate is not about GMOs in the traditional sense, but about how new gene-editing technologies should be classified.

- CRISPR was mentioned in 69% of dissenting comments.

The core of the disagreement lies in whether techniques like CRISPR, which do not introduce foreign DNA, should be classified alongside transgenic GMOs. Stakeholders from the Global South, particularly in the forestry and academic sectors, argue that these technologies are a form of advanced mutagenesis and therefore do not constitute GMOs.

Analysis of Qualitative Responses, Comments and Suggestions

In the qualitative analysis of responses, there was evidence of coordinated participation, where multiple submissions contained similar or identical comments, demonstrating a collective effort to express shared viewpoints during the consultation process. There was a clear clustering of responses from a corporate group of Latin American Certificate Holders, opposing to the proposed interpretation. There were also collective responses from academics, mostly from North America. These included both direct (such as jointly authored responses) and indirect (very similar responses submitted individually) forms of group participation, and these are reflected in the comments that follow.

Most Relevant Comments from the disagreement perspective in Q2 (Answer “No” to Q1)

CRISPR edited organisms are not GMOs (54%)

Most disagreeing respondents commented that CRISPR editing should not be categorized as GMO since it does not involve the insertion of foreign DNA or transgenes, that is, leaves no Foreign DNA in the resulting organism, therefore it is not “transgenic”.

Some responses go further, and state that scientific literature establishes CRISPR-based editing as a mutagenesis tool, enabling modifications that are indistinguishable from natural events and outcomes. Hence, it should be regulated like mutations in conventional breeding. Given that FSC already accepts mutagenesis, then this type of mutagenesis should be allowed.

More specifically, respondents state that SND1 CRISPR-edited organisms should not be classified as GMOs under FSC definition because the CRISPR-Cas system produces precise and targeted modifications in the organism genome without inserting foreign genetic material.

Update definition of GMOs (10%)

Disagreeing respondents’ second preference related to updating the GMO definition, indicating that a more precise definition of modern technologies under GMO is needed.

Some of the comments state that the GMO definition currently applied by FSC was developed in a different scientific and technological context. Respondents added that FSC’s current GMO definition, if applied to all CRISPR-Cas applications, would be scientifically outdated, operationally unenforceable, and strategically risky for FSC integrity.

FSC should segregate by types of modification (9%)

Some respondents indicate that keeping an outdated definition may restrict access to technologies that can be essential for both research and commercial use, limiting the development of more resilient, productive, and sustainable cultivars. Clarifying distinctions between gene-edited products would reflect scientific consensus and reduce ambiguity in certification (“CRISPR-Cas SDN-1 should be recognized as mutagenesis rather than classified as GMO. Definition of GMO should include different “levels” and/or “types” of modification”).

Qualitative Responses to: Q2. If you answered ‘No’ to Q1, please provide your comments or suggestions.

Q1. Do you agree with draft interpretation?	No (Q2. 127 comments)
CRISPR is not GMO CRISPR editing should not be categorized as GMO since it does not involve the insertion of foreign DNA or transgenes.	54%
Update definition of GMO Definition of GMO should be updated; it was established in a different technologic context.	10%
FSC should segregate by types of modification Definition of GMO should include different “levels” and/or “types” of modification. FSC should allow organisms with minor changes (i.e. If no foreign DNA in the resulting organism, then it should be permitted).	9%
Use result and risk approach Banning organisms should be based on the resulting organisms and their risk, not the technology used.	3%
GMO topic needs further review GMO topic should be discussed and reviewed more thoroughly, not just as an interpretation.	3%
CRISPR should be allowed if beneficial CRISPR edited organisms that are beneficial to climate change challenges, avoid use of chemicals, and/or increase productivity should be permitted.	2%
A science-based approach is needed GMO should be defined on a scientific basis; this topic should be discussed with experts.	2%
GMO issue needs consensus with membership GMO topic should be subject to membership discussion and consensus.	1%
GMO Policy outdated GMO Policy should be updated.	1%
N/A Do not responded or argument was not clearly understood.	14%
Total	100%

Qualitative Responses to Q1=“No”. Most respondents from Latin America and the Caribbean, indicated that CRISPR should not be considered GMO (34%), same for Economic South (9%) and CH (7%):

Thematic Class Q2 ("No" to Q1)	Latin America and the Caribbean	North America	Europe	Global	Africa	Oceania	Asia	Total general
CRISPR is not GMO	34%	11%	1%	3%	2%	1%	1%	54%
N/A	10%	1%	1%	1%		1%	1%	14%
Update definition of GMO	8%		1%		1%	1%		10%
Segregate by types of modification	8%	1%					1%	9%
Use result and risk approach	2%	1%						3%
GMO topic needs further review	1%		1%		1%			3%
CRISPR should be allowed, if beneficial.	1%	1%	1%					2%
Science-based approach needed	1%					1%		2%
GMO issue needs consensus with membership		1%	1%					1%
GMO policy outdated	1%							1%
Total general	68%	14%	5%	5%	3%	3%	2%	100%

Thematic Class Q2 ("No" to Q1)	Not an FSC member	Economic South	Economic North	Environmental South	None	Total general
CRISPR is not GMO	42%	9%	1%	2%		54%
N/A	11%	3%	1%			14%
Update definition of GMO	4%	3%	1%	1%	1%	10%
Segregate by types of modification	8%	1%				9%
GMO topic needs further review	1%	1%		1%		3%
Use result and risk approach	3%					3%
CRISPR should be allowed, if beneficial.	1%		1%			2%
Science-based approach needed	1%				1%	2%
GMO issue needs consensus with membership			1%			1%
GMO policy outdated	1%	1%				1%
Total general	72%	18%	5%	4%	1%	100%

Thematic Class Q2 ("No" to Q1)	Other	Certificate holder	Consultant	FSC Member	FSC staff	Certification body/ auditor	Total general
CRISPR is not GMO	32%	7%	7%	6%		1%	54%
N/A	8%	3%	1%	1%			14%
Update definition of GMO	4%	2%		4%			10%
Segregate by types of modification	6%	1%	2%				9%
Use result and risk approach	2%		1%				3%
GMO topic needs further review	1%	1%	1%				3%
Science-based approach needed	1%		1%			1%	2%
CRISPR should be allowed, if beneficial.	1%	1%			1%		2%
GMO policy outdated		1%					1%
GMO issue needs consensus with membership				1%			1%
Total general	55%	18%	13%	13%	1%	1%	100%

Most Relevant Comments from the agreement perspective in Q3 (Q1= “Yes” in response to interpretation and placed comments in Q3).

CRISPR and genome editing are GMOs (18%)

Respondents that support the interpretation mostly point at the process to generate gene-edited organisms. The rationale is that CRISPR is a laboratory-based technology that requires human intervention at the genome level, therefore is a genetically modified organism. CRISPR meets the literal definition of GMO because it doesn't occur naturally, and even if no foreign DNA remains in the final product, it's used in the process. Therefore, the method of modification matters to this group, not just whether foreign DNA is inserted.

Support current interpretation (16%)

Respondents replied in support of interpretation, encouraging a strict approach for FSC to maintain credibility, stating that the interpretation aligns with the precautionary principle. Some participants added that it is aligned with the intent of the policy and the overall understanding of the FSC membership to date.

CRISPR has risks (4%)

Main point in this argument is that CRISPR-edited organisms pose the same environmental risks as traditional GMOs. Respondents argued that precision is not the same as natural. Respondents indicated that new genomic techniques such as CRISPR can achieve even more complex genetic modifications than GMO, and even small, targeted changes can have large ecological effects.

Qualitative Responses to: Q3. Please provide any additional comments or suggestions, if you have them.

Q1. Do you agree with draft interpretation? *N/A responses removed	No (Q3. 74 comments)	Yes (Q3. 48 comments)	Total General (122 comments)
CRISPR should be allowed, if beneficial CRISPR edited organisms that are beneficial to climate change challenges, avoid use of chemicals, and/or increase productivity should be permitted.	8%	0%	8%
CRISPR edited organisms are GMOs CRISPR edited organisms are genetically modified.	0%	7%	7%
Support current Interpretation Fully agree/support this interpretation.	0%	6%	6%
Update definition of GMO Definition of GMO should be updated; it was established in a different technologic context.	4%	0%	5%
CRISPR is not GMO CRISPR editing should not be categorized as GMO since it does not involve the insertion of foreign DNA or transgenes.	4%	0%	4%
A science-based approach is needed GMO should be defined on a scientific basis; this topic should be discussed with experts.	3%	1%	4%
GMO topic needs further review GMO topic should be discussed and reviewed more thoroughly, not just as an interpretation.	3%	1%	4%

Q1. Do you agree with draft interpretation? *N/A responses removed	No (Q3. 74 comments)	Yes (Q3. 48 comments)	Total General (122 comments)
FSC should segregate by types of modification Definition of GMO should include different "levels" and/or "types" of modification. FSC should allow organisms with minor changes (i.e. If no foreign DNA in the resulting organism, then it should be permitted).	2%	0%	2%
CRISPR has risks CRISPR edited organisms still pose risks to the environment, even when small changes are made.	0%	2%	2%
Definition does NOT reflect scientific advancements Definition of GMO is outdated and does not reflect current technology advancements (CRISPR and others).	2%	0%	2%
Against banning technology Prohibiting a technology is a mistake. Problems arise not from technologies, rather from how they are used.	1%	0%	1%
GMO Policy is outdated All the GMO topic needs to be revised, the policy, the definition and the restrictions.	1%	0%	1%
Use result and risk approach Banning organisms should be based on the resulting organisms and their risk, not the technology used.	1%	0%	1%
Follow legislative regulations Suggest that FSC regulations follow the ongoing legislative recommendations of EU.	0,4%	0%	0,4%
Definition reflects the scientific knowledge to date Definition of GMO reflects what science knows until today.	0%	0,4%	0,4%
Group CRISPR under Genetic engineering CRISPR edited organisms should be classified as another technique within genetic engineering, along with GMO. Need a more precise definition of modern technologies under GMO.	0,4%	0%	0,4%
GMO should be allowed, if beneficial GMOs that are beneficial to climate change and other challenges, should be permitted.	0,4%	0%	0,4%
N/A Do not responded or argument was not clearly understood.	30%	21%	51%
Total	60%	40%	100%

- 18 relevant comments for "Yes" (CRISPR = GMO)
- 90 relevant comments for "No" (CRISPR ≠ GMO)

When analysing the arguments disagreeing and agreeing with the interpretation and comparing the comments in Q2 and Q3, the opposing views on the subject are demonstrated:

Thematic class Q2	No	Thematic class Q3	Yes
CRISPR is not GMO	54%	CRISPR is GMO (Support INT)	34%
Update definition of GMO	10%	CRISPR has risks	4%
Segregate by types of modification	9%	GMO topic needs further review	3%
Use result and risk approach	3%	Science-based	2%
GMO topic needs further review	3%	CRISPR is not GMO	1%
CRISPR should be allowed, if beneficial.	2%	CRISPR should be allowed, if beneficial.	1%
Science-based approach needed	2%	Update definition of GMO	1%
GMO issue needs consensus with membership	1%	Definition reflects the scientific knowledge to date	1%
GMO policy outdated	1%	GMO policy outdated	1%
N/A	14%	N/A	52%
Total general	100%	Total general	100%

When analysing the comments supporting the interpretation (100 responses), there is a geographical pattern for Europe where respondents indicate that CRISPR gene edited organisms are GMOs (8%) and other respondents supported the interpretation (9%), both arguments being agreement with interpretation:

Thematic Class Q3 ("Yes" to Q1)	Europe	Latin America and the Caribbean	North America	Oceania	Asia	Global	Africa	Total general
N/A	21%	13%	7%	1%	4%	2%	4%	52%
CRISPR is GMO	8%	1%	5%	1%	1%	1%	1%	18%
Support current INT	9%	2%		4%		1%		16%
CRISPR has risks					1%	2%	1%	4%
GMO topic needs further review	1%	1%	1%					3%
Science-based		2%						2%
CRISPR is not GMO					1%			1%
CRISPR should be allowed, if beneficial.	1%							1%
Update definition of GMO				1%				1%
Definition reflects the scientific knowledge to date	1%							1%
GMO policy outdated		1%						1%
Total general	41%	20%	13%	7%	7%	6%	6%	100%

Etiquetas de fila	I am not an FSC member	Economic North	Economic South	Environmental North	Environmental South	None	Social North	Social South	Total general
N/A	26%	7%	3%	8%	6%	2%			52%
CRISPR is GMO	15%	2%					1%		18%
Support current INT	8%	3%		2%	1%		1%	1%	16%
CRISPR has risks	3%				1%				4%
GMO topic needs further review		2%	1%						3%
Science-based	1%		1%						2%
CRISPR is not GMO	1%								1%
CRISPR should be allowed, if beneficial.		1%							1%
Update definition of GMO	1%								1%
Definition reflects the scientific knowledge to date	1%								1%
GMO policy outdated			1%						1%
Total general	56%	15%	6%	10%	8%	2%	2%	1%	100%

Thematic Class Q3 ("Yes" to Q1)	Other	FSC Member	Certificate holder	FSC staff	Consultant	Certification body/auditor	ASI staff	Total general
N/A	11%	16%	13%	5%	3%	3%	1%	52%
CRISPR is GMO	15%	2%			1%			18%
Support current INT	7%	7%	1%	1%				16%
CRISPR has risks	3%	1%						4%
GMO topic needs further review		1%	2%					3%
Science-based			2%					2%
CRISPR is not GMO	1%							1%
CRISPR should be allowed, if beneficial		1%						1%
Update definition of GMO	1%							1%
Definition reflects the scientific knowledge to date	1%							1%
GMO policy outdated			1%					1%
Total general	39%	28%	19%	6%	4%	3%	1%	100%

Geographic Patterns

- Latin America: Emphasize scientific distinction between transgenesis and gene editing, regulatory harmonization, and practical implementation challenges.
- Europe: Emphasizes precautionary principle, legal precedent (European Court of Justice ruling), and environmental risk.
- North America: Mixed, with academic institutions emphasizing scientific distinction and verification challenges, while environmental NGOs emphasize precaution.
- Oceania: Strong precautionary stance, emphasizing community concerns and zero-tolerance policies.

Summary Arguments from answer “YES” to interpretation: “CRISPR is GMO”

1. **Process-based definition:** Laboratory intervention = GMO, regardless of outcome.
2. **Precautionary principle:** Unknown risks require conservative approach.
3. **Legal precedent:** EU Court of Justice 2018.
4. **Environmental risk:** Potential for off-target effects and ecosystem impacts.
5. **Consistency:** All genetic engineering should be treated the same.
6. **Foreign DNA is in the process:** Even if not in final product, used during modification.
7. **Precision is unnatural:** The very accuracy makes it unnatural.

Summary Arguments from answer “NO” to interpretation: “CRISPR is not GMO”

1. **Product-based definition:** CRISPR with no foreign DNA = not transgenic.
2. **Mutagenesis precedent:** FSC already accepts random mutagenesis.
3. **Indistinguishability:** Results identical to natural mutations.
4. **Scientific consensus:** Leading bodies distinguish transgenesis from editing.
5. **Outdated policy:** 25-year-old framework doesn't reflect current science.
6. **Regulatory alignment:** Many countries don't classify SDN-1 as GMO.
7. **Verification challenge:** Can't audit if you can't detect.
8. **Risk-based approach:** Assess organism characteristics, not technology used.
9. **Segregated classification:** Different techniques pose different risks.
10. **Beneficial applications:** Climate adaptation and forest health improvements with gene-editing.

Most Relevant Comments

Position about the proposed interpretation	Stakeholder Feedback
Agree	
Technical definition	“Genome Editing is evidently a form of genetic engineering, and in specific, a targeted laboratory-based intervention. These genome editing techniques, including CRISPR/Cas based techniques, are not natural processes. Instead, they override the natural mechanisms of an organisms and instigate changes outside of the control of the organism.”
	“There is a false notion that only the presence of ‘foreign DNA’ constitutes a risk or constitutes a GMO. Risk arises through the actual changes of the DNA, whether these are tiny point mutations,

Position about the proposed interpretation	Stakeholder Feedback
	insertions or deletions. The impact is not related to the size of the change, but to the position of the change.”
Environmental risk	“New genomic techniques can be used to achieve the same or even more complex genetic modifications than GMO. Even small or targeted genetic edits can lead to unintended effects.”
Precision ≠ Natural	“CRISPR based modification result in genome alteration that is too precise to be called natural.”
Process is important	“Genome-edited plants receive genetic changes through direct genomic modification, whereas classically bred plants receive genetic changes through human-facilitated selection and crossing”.
Disagree	
CRISPR produce results indistinguishable from natural	“CRISPR without foreign DNA insertion produces results indistinguishable from natural mutations that could occur through conventional breeding.”
CRISPR is a form of advanced mutagenesis	“FSC has historically accepted mutagenesis as conventional breeding. CRISPR is just precise mutagenesis, not genetic modification.”
	“The mutation is induced by natural cell repair, making it equivalent to other FSC-accepted mutagenesis methods”.
Verification is a challenge	“Such edits introduce no foreign (recombinant) DNA, and are indistinguishable from natural or conventionally induced mutations, and therefore lie outside the intent of GMO restrictions. Treating them as GMO would create excessive auditing challenges, trigger unnecessary disputes, and divert attention from real risks.”
	“Although advanced genomic analysis tools exist, in the absence of exogenous DNA, it is not possible to distinguish whether a mutation is natural, originated from conventional breeding, or obtained by gene editing.”
Results are important	“An altered genotype should be evaluated on what change has actually been made and what the effects are and might be, rather than artificially eliminating genotypes based on how they were produced”.
Policy is outdated	“The current GMO policy is more than 25 years old. Science, regulation, and global governance have advanced significantly.”
Regulatory Harmonization	“Since 2020, several countries have already adopted gene-edited technology as non-GMOs for the case of agricultural crops.”

Position about the proposed interpretation	Stakeholder Feedback
Segregate by type of modification	“CRISPR-Cas SDN-1 should be recognized as mutagenesis rather than classified as GMO. This approach is justified because such edits introduce no foreign (recombinant) DNA, and are indistinguishable from natural or conventionally induced mutations, and therefore lie outside the intent of GMO restrictions.”
CRISPR should be allowed, if beneficial	“DNA-free CRISPR mutagenesis can offer environmental, and social benefits directly aligned with FSC’s mission. It enables the development of climate-resilient, pest-resistant, and resource-efficient tree varieties, lowering the industrial footprint of wood processing, etc. For these reasons, we believe FSC should adopt a more nuanced approach that distinguishes between transgenesis and non-transgenic gene editing, ensuring policy coherence while supporting responsible innovation in sustainable forestry”.
Issue needs further discussion	“This issue warrants broader discussion and meaningful consultation, particularly given its complexity and the rapidly evolving scientific landscape. One possible way to address the question in the short term would be: “Yes — at this stage, CRISPR-based technologies are considered GMO under FSC policy. FSC recognizes, however, that national interpretations may differ, and that in some jurisdictions, CRISPR may not fall under the legal definition of GMO. In line with the precautionary principle, FSC will treat CRISPR as a form of GMO until further research and national-level consultation can better inform its position. Through the national standards development process, countries may propose exceptions where the benefits demonstrably outweigh the risks and where robust risk assessment, and stakeholder consultation support its use.”
Relationship with P&C revision process	“FSC has started the process to revise its Principles and Criteria, and the revision also includes GMO requirements and definitions, allowing potential changes if the FSC membership so prefers. The Advice Note should not in any way try to pre-empt FSC’s future direction regarding GMO and new technologies. This is why transparency about the potentially temporary nature of the proposed interpretation is needed.”

Part 4. Summary of comments and FSC feedback

Summary of Results and Recommendations

The results of the consultation reveal fundamental tensions underlying the interpretation and reflect deeper paradigms around:

1. Risk perception and precautionary preferences
2. Practical policy regulation versus effective verification implementation,
3. Scientific technologies, methods, versus resulting products and its effects, and
4. Appropriate tools for climate adaptation and resilience versus conservation.

The debate highlighted a fundamental divide: process-based vs. product-based regulation. Those who support “CRISPR = GMO”, represented mainly by European Members and Certificate Holders, focus on how the modification is made (laboratory intervention of the genome). Those who oppose, mainly represented by Latin America and the Caribbean Certificate Holders, Consultant and Members, focus on what the final product is (presence or absence of foreign DNA). Both sides present scientifically informed arguments.

Proposal

The proposal from this analysis is to **accept** the interpretation that all CRISPR and gene-edited techniques are classified as GMO under FSC-POL-30-602, and provide a thorough clarification note for the arguments on which the decision is based upon.

FSC’s decision to classify all organisms produced with CRISPR and other gene-editing techniques as genetically modified organisms (GMOs) under FSC-POL-30-602 is grounded in a careful review of the arguments received in the past consultation, guided by the precautionary principle and in alignment with FSC’s mission to promote environmentally appropriate, socially beneficial, and economically viable management of the world’s forests.

FSC appreciates the diverse and high-quality input from stakeholders, including scientific, technical, economic, social, and ethical perspectives. The decision is based on the substance of these arguments, not just numerical majority or regional trends. Below, we respectfully clarify the key rationales that underpin FSC’s position:

1. **Opposing views and fundamental divide.** There is a fundamental divide and opposing positions among respondents. Even though all arguments were carefully considered, between these divergent positions there is no intermediate formulation to balance perspectives along with FSC foundational principles and values of precaution, transparency, and ecological safeguards.
2. **FSC commitment to uphold precautionary principle.** As gene-editing technologies advance rapidly, there remain scientific uncertainties about the long-term ecological, social, and economic impacts of gene-edited trees in forest ecosystems. FSC remains committed to uphold the precautionary principle even though there are opposing views on what constitutes risk. Applying the precautionary principle ensures that FSC’s high standards for environmental protection and sustainability are upheld while potential risks and unintended consequences are better understood.

3. **Alignment and consistency with existing definition.** FSC Gene-editing technologies, despite their precision, introduce alterations that do not arise through natural processes, thus fitting FSC current definition of GMO. FSC's historical position has been to prohibit genomic alterations through biotechnology in certified forest management based on point 2, above. Extending this to gene-edited organisms maintains consistency and clear messaging, limiting the risk of misinterpretation or inconsistency across regions.
4. **Acknowledgment of verification challenges.** FSC acknowledges current limitations in detecting certain gene-editing techniques that leave no foreign DNA in the remaining organism. However, FSC verification is based on disclosure not on detection. FSC requests CH for disclosure on the use of gene-editing in breeding programs, not proof of absence. Auditors verify through documentation review in a way many other requirements are verified, through compliance and transparency.
5. **International Regulations.** Several international treaties (such as the Cartagena Protocol) and national frameworks consider gene-edited organisms as GMOs for regulatory purposes. The Cartagena Protocol adopts a broad interpretation of Living Modified Organisms (LMOs⁴), emphasizing that even genome-edited plants without foreign DNA (e.g., NGT-1 or SDN1 organisms) fall under its definition and obligations, because the precautionary principle dictates wide applicability to safeguard biodiversity. Maintaining this alignment reduces the risk of trade disagreements or confusion for FSC products in the global marketplace.
6. **Commitment to Ongoing Engagement and Science Review.** FSC recognizes and appreciates the innovation and potential benefits of gene-editing in forestry, and is committed to continuing dialogue, reviewing new evidence and practices, and refining policy, given broad membership engagement and agreement.

FSC thanks all participants for their support and feedback and invites stakeholders to engage and continue to contribute to the evolution of our policies. While this decision reflects the current level of knowledge and precaution, FSC will continue to monitor developments and foster an open, informed dialogue for the benefit of forests and communities worldwide.

Next Steps

Communicate the consultation results

Acknowledge and Communicate: Publicly acknowledge the significant feedback from the consultation, the diverse perspectives and the participation. Thank stakeholders for their engagement and announce results of the process.

Stakeholder communication plan:

- Direct Email to all consultation participants who agreed to be contacted, include consultation summary, thanks, and a link to full report.
- Members Portal: Full report and a clarification note.
- Public FSC.org Website: Executive summary, key findings, and summarized clarification note.
- OneFSC Newsletter: Announce conclusions and where to find more detailed information.

⁴ "Living modified organism" means any living organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology. Source: The Cartagena Protocol on Biosafety.

Annex 1. On the interpretation of genetically modified organism (GMO) definition INT-STD-01-001_19

INT-STD-01-001_19 ON THE INTERPRETATION OF GENETICALLY MODIFIED ORGANISM (GMO) DEFINITION

Code	INT-STD-01-001_19
Requirement (s)	FSC-STD-01-001 V5-3 EN FSC Principles and Criteria for Forest Stewardship / Criterion 10.4. and Section F. Glossary, 'Genetically Modified Organism' FSC-STD-01-001 V4-0 EN FSC Principles and Criteria for Forest Stewardship / Criterion 6.8 and Glossary FSC-POL-30-602 V1-0 EN Interpretation on GMO (Genetically Modified Organisms)
Publication date	<i>To be filled in by P&P</i>
Emergency Request	☐ Yes ☒ No
Are trees whose genome has been edited using CRISPR-based technologies falling under the FSC definition of 'Genetically Modified Organism'?	
P&P Conclusion	Yes, the definition of Genetically Modified Organism covers also organisms in which the genetic material has been altered using modern, CRISPR-based gene editing technologies. The definition's element of "altered <u>in a way</u> that does not occur naturally" is understood to refer both to the resulting genome change as well as to the process to induce it, hence any genetic engineering technology falls within the scope of the GMO definition.



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