

GENETIC ENGINEERING LEARNING PROCESS FAQ

FAQ

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Frequently asked questions

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1. What is genetic engineering?

Genetic engineering is a process that alters the genetic structure of an organism by either removing or introducing DNA. Unlike traditional plant breeding, which involves doing multiple crosses and then selecting for the organism with the desired characteristic, genetic engineering takes the gene directly from one organism and delivers it to the other. The result of genetic engineering is called a genetically modified organism. Gene editing is a different process in which genetic material is removed or altered at locations within the genome of a plant.

2. Why is genetic engineering a topic for FSC to learn more about?

1. There is an ongoing discussion amongst stakeholders on growing the global demand for wood and forest products while at the same time there is an urgent need to protect forests and biodiversity. There is also a drive in the market to apply genetic engineering techniques in forestry for several reasons, including:

- to develop resistance to pests and diseases and accelerate adaptability to climate induced change
- to improve growth and yield of planted trees, whilst easing pressure on land (land sparing)
- to adapt the wood-fibre to new and more efficient industrial uses (e.g. by reduction of lignin content)

2. FSC is aware of several FSC certified companies advancing their genetic engineering research, and FSC's policies in this area do not reflect the current status in research or technologies. To be prepared for this development, FSC needs to review its policies and influence on genetic engineering. There has been significant technological development in forestry related to GE since the *FSC-POL-30-602 Interpretation on Genetically Modified Organisms, 2000* and the *FSC Policy for Association (2009)* were determined. These developments call for an urgent update of FSC definitions as included in *FSC-POL-30-602*, and to do this well, we need to understand the field better.

3. Genetic engineering in forestry is likely to continue to happen with or without FSC, and the learning process explores if and how the experience of FSC as platform for dialogue and stewardship of forests can contribute to minimize the potential negative impacts and optimize the potential benefits of this technology in this sector. The learning process information on this can serve to take decisions on any potential role for FSC in this field, after discussion at the FSC general assembly in 2025.

3. What is the FSC learning process trying to achieve?

FSC does not have sufficient knowledge on genetic engineering. The learning process proposes for FSC to gain sufficient and trusted knowledge on developments in genetic engineering in forestry outside of FSC certified areas and it also explores whether a governance model that provides rigorous safeguarding, risk management and shared value creation can be developed. All learning and research shall be situated in non-FSC certified areas outside FSC certified forests.

4. Why does FSC want to do a learning process of its own instead of relying on already existing research projects?

Many institutions and companies have done research on genetic engineering already. However, FSC does not have full access to that research, its set-up, and the full outcomes. This is because the research activities of companies happen outside of certified areas. These currently allowed research activities are not covered by the audit processes, and FSC has no regular way of obtaining information about them, except in case there is a suspicion that the FSC Policy for Association (PFA) has been violated. With the planned learning project, FSC would be able to request such information to be transparently shared.

The learning process has the aim of learning within FSC about GE in forestry under conditions we have set ourselves, with targets we have set ourselves and experts providing trusted, unbiased, and accurate information on safeguards and conditions. By designing and overseeing our own learning process, we can be assured to have access to all information, and we can set our own conditions.

FSC will not be conducting research but will rely on projects implemented by certificate holders or research institutions based on a set of rules developed by the Expert Panel and approved by the FSC Board.

5. What is FSC's current policy and rules on genetic engineering?

GE material is not allowed in certified forest operations or in FSC certified products under the FSC Principles and Criteria, further explained in FSC policy FSC-POL-30-602 Interpretation on Genetically Modified Organisms, 2000.

The current FSC Policy for Association only allows GMO research and planting *outside* of FSC Certified area by FSC Certified companies under specific conditions (see question: **How will the projects relate to the FSC Policy for Association?**) and prohibits the material used in this research in certified products and from being sold commercially.

6. Is FSC changing its rules on genetic engineering?

There is no intention to change the rules that have been set for genetic engineering in FSC. FSC policy remains that GE material is not allowed in certified forest operations and are not allowed in FSC certified materials. FSC will update the policy FSC-POL-30-602 *Interpretation on Genetically Modified Organisms, 2000* on the interpretation of GMOs to reflect the status of research as the policy (developed in 2000) is outdated.

7. How does the learning process relate to existing concerns from NGOs on new GE technology?

Many NGOs have concerns on new GE technology. Some NGOs are campaigning against any development of GE technology, while others are exploring an approach to influence how these developments happen through governance processes. Following the latter example, FSC will explore if it could play any role in responsible governance of genetic engineering.

Six USA NGOs with concerns on new GE technology (gene editing) developed the following model:

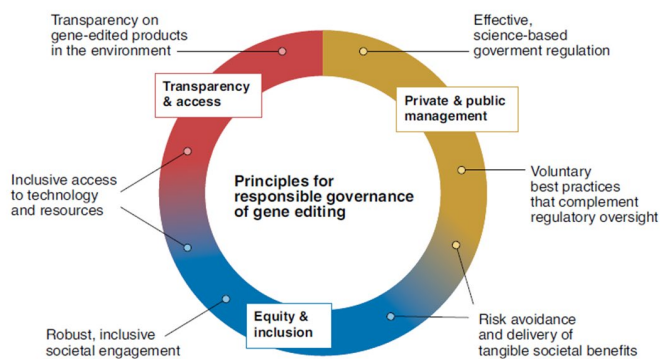


Fig. 1 | Six principles for governance of gene-edited products in agriculture and the environment. These fall within one or more of the three framing concepts of private and public management, equity and inclusion, and transparency and access.

<https://doi.org/10.1038/s41587-021-01023-1>

Based on the Participation Framework to be developed by the Panel of Experts, we expect that it will be a requirement for all learning projects of companies and institutions that they reflect adherence to these six principles. FSC will use the ideas of the six NGOs together with the principles in this model to address the identified concerns through exploring a governance model for the industry best practice for GE developments in the plantation sector outside FSC certified area and bring the principles into practice.

Some initial input from the paper produced by these six NGOs is for example:

Bioethical framework for responsible innovation and governance of GE technologies:

- GE technologies are applied safely, ethically and deliver tangible societal benefits, respecting the precautionary principle and avoiding substantial risk inside and outside of the planted area
- Robust, inclusive societal engagement is ensured
- Public access to clear information identifying which GE applications are in use in plantations and wood products
- Inclusive access to GE technology and resources to drive societal benefit

Legal and operational framework for responsible development and deployment of GE technologies:

- Applicable Government and intergovernmental regulations and safeguards are met
- Best practices to supplement and complement regulatory oversight are implemented
- Stewardship and applied best practices supplement regulatory oversight through engagement, transparency, and product assessments, considering a full range of (health & safety, social, economic, and ecological) impacts before any release into the environment.

8. Why is a governance model for GE in forestry important?

The governance model of this FSC learning process would be designed to ensure:

- involvement of stakeholders in processes to control and put boundaries on GE developments
- creation of shared social, environmental, and economic value from the development of GE in forestry
- respect for rights of Indigenous Peoples and local communities
- safeguards for social and environmental risk and maximization of benefits.

Most of these elements are not part of the requirements from governments and are an essential part of FSC's governance and precautionary approach for this process.

9. What are the phases in the learning process?

The learning process will be developed in two phases:

PHASE ONE: 2022

The GE learning process outside of FSC certified areas will start in two work streams leading up to membership discussion/decision at the FSC general assembly in 2022 and a subsequent set of Board decisions:

1. The development by a Panel of Experts of a Participation Framework for joining a subsequent multi-year learning project for approval by the Board. The participation framework will include requirements on safeguards, risk mitigation, mechanisms to realize shared value and governance to assure effective realization of these requirements outside of certified areas.
2. The development by prospective participants of specific proposals by applicants (companies and research institutions) for participation in the multi-year learning project to be assessed and decided on by the Board.

PHASE TWO: (2023-GA 2025)

Provided proposals are received, in line with the Participation Framework and approved by the Board:

- certificate holders or research institutions can participate in the learning project, between 2023 and 2025
- in 2025, conclusions from the multi-year learning project will be presented to the FSC general assembly.

The decision by the Board to approve the Participation Framework or not will be a go/no-go decision, and there will be further such decisions at least every year during phase two as part of the project monitoring and evaluation process.

In the FSC general assembly 2025, the following is foreseen:

- in 2025, after the Learning Project, the FSC Board will report its results to the FSC general assembly
- at the FSC general assembly, there may be Motions proposing conclusions to the learning project, and the membership will vote and decide on these Motions. The results of such voting will be binding for the organization
- in addition, the Board will ensure a membership discussion in the FSC general assembly 2025 on whether to make a change in the PfA which would permanently enable certificate holders to plant GE trees outside of FSC certified areas and supply chains, provided they follow requirements set by FSC
- based on the outcome of the Motions voting and/or the discussion at the FSC general assembly 2025 on a possible PfA revision, the Board will make a formal decision on whether to change the PfA
- in case the PfA is not changed, commercial planting of GE trees by certificate holders outside FSC certified area will continue to not be permitted.

NOTE: The use of GE materials within FSC certified areas and supply chains is NOT an issue of discussion in the learning process; this remains forbidden.

10. What is the timeline for phase one of this learning process?

- February 2022: Call for independent experts to join a panel of chamber trusted experts; request for proposals for professional process facilitator to plan and drive the process
- March/April 2022: Board appointment of the independent panel of experts and appointment of a process facilitator
- July 2022: Based on engagement with SIAG and other key stakeholders, the Panel of Experts delivers the draft Participation Framework for participation in the multi-year learning project
- August 2022: Board approves the draft Participation Framework for presentation for discussion at the FSC general assembly
- August to October 2022: Members' discussion before and at the FSC general assembly, for further guidance and decisions
- November 2022: Board decision on approval of the Participation Framework
- November to December 2022: Prospective candidates to participate in the GE learning project develop and deliver their proposals for Board approval
- Early 2023: Provided proposals are aligned with the Participation Framework and approved by the Board, companies or research institutions can participate in the learning project in 2023-2025.

11. Will this learning process be theoretical (desk study) or practical (field research study)?

The learning process is both. The Panel of Experts will develop a Participation Framework with a list of safeguards and criteria for field testing of the framework by Board approved participants. In Phase two of the learning process (multi-year learning project) the companies approved to participate would plant trees outside of FSC certified area. This planting would be for the purpose of learning and this phase of the process would be practical and conducted in the field, under monitoring and evaluation of the Panel of Experts and yearly compliance decisions by the FSC Board, based on the reports of the Panel of Experts. .

12. Who is involved in this learning process?

- The FSC Board of Directors: Ultimate decision makers, deciding on the Participation Framework (incl. conditions) and on applications and proposed projects, and making go/no-go decisions at least every year, during the length of all phases of the learning process
- The FSC Membership: Discussing progress and key issues and making decisions on GE-related issues outside GE certified areas; and taking decisions in the FSC general assembly 2025 based on the learnings of the process, in accordance with their authority as defined in the FSC Statutes

- SIAG: Chamber-balanced Advisory Group of FSC members, advising the FSC Board of Directors, ensuring membership concerns and perspectives are considered in the process
- Independent panel of experts: External chamber trusted experts, supporting the development of a participation framework and providing the knowledge on genetic engineering, working with SIAG to advise the Board, including by developing the draft Conditions Framework and other knowledge inside FSC
- Steering Group: of senior staff and three Board members guiding the process and preparing decisions to be taken by the Board
- Certificate holders or research institutions can apply to the Board to participate in the multi-year learning project to planting GE trees or to design other research under controlled processes outside of FSC certified areas (proposals must be based on the participation framework developed by SIAG and the Expert Panel)
- External professional process facilitator: supporting the process management of the process
- Secretariat: process management and planning and executing of the process

13. Who sits in the independent panel of experts and what are their tasks?

Beginning 2022 the FSC Secretariat will send out a call for 3 to 5 experts in the following fields of expertise:

- GE technology including potentials and risks
- Governance to enable stakeholder involvement in social development, including FPIC
- Shared value creation
- Environmental and social impact assessment and risk management.

The composition of the **independent** panel of experts will be set to reflect different focus areas and interests of the FSC chambers.

Appointment of the independent panel of experts will be made by the Board in March/April 2022.

The independent panel of experts will be tasked to:

- Develop a Framework for Participation in the multi-year learning project outside of FSC certified areas, including rigorous safeguarding, risk management, shared value creation and appropriate governance systems, including measures to minimize cost to FSC while avoiding conflicts of interest.
- Be the contact point regarding questions related to the Participation Framework for certificate holders and research institutions that are developing specific proposals for participation in the multi-year learning project. Assess the final proposals from certificate holders and research institutions for participation in the multi-year learning project, once the Participation Framework is accepted, and to provide recommendations for the Board's decision on the

proposals.

14. What are the initial conditions for companies or research institutions to participate in the learning process? How are they defined and by whom?

The independent panel of experts will develop a Participation Framework, in close collaboration with the SIAG (Sustainable Intensification Advisory Group).

Some important commitments have been discussed already. All applicants will be required to respect the Participation Framework that will be approved by the Board, including rigorous safeguarding, risk management, shared value creation and appropriate governance systems. This will be the main condition for participation in the learning project outside FSC certified areas to be approved by the Board.

15. How can my company or research institute be a part of the learning process?

A call for participation will be issued around August 2022, enabling prospective participants to consider and prepare their participation based on the draft Participation Framework. Prospective participants can expect to see the full, approved Participation Framework in November 2022 and can then submit proposals in late 2022 or early 2023.

Until then, you can keep updated by subscribing to the [newsletter](#), visiting the learning process [web page](#) and following the members' engagement activities of the process.

16. How can FSC members engage in phase one (2022)?

Throughout 2022, a diversity of member engagement facilities will be organised around the learning process:

- Transparent reporting on all Board discussions and decisions through Board minutes, newsletters, and other means.
- Quarterly members meetings (such as webinars and chamber meetings) with updates on process status and possibility for membership discussion and feedback.
- Motions discussion process related to Policy Motions 15 and 44 are being planned. This includes a potential Motions Discussion Group with the proposers, webinars etc.
- Discussions and decisions at the FSC general assembly, including a side meeting.
- Members can also participate in the GE Learning Process discussion forum on the FSC Members' Portal [here](#).

17. How will the learning process be monitored and evaluated?

The FSC Board of Directors can stop the learning process if it is found that the conditions for the project are not met. After phase one, which is the preparation phase for the learning project setting the project's framework, the Board has planned for a go/no-go decision to continue to phase two.

Subsequently, the Board will be enabled to assess the performance of the project and to make decisions on it. This will be based on a Monitoring and Evaluation system of the field projects of companies and research institutions developed by the Expert Panel, in consultation with the SIAG, and approved by the Board. The following points will be considered:

- If the Participation Framework is agreed then during the implementation years of the GE Learning Project, the FSC Board will receive annual learning project reports including agreed datasets from the participating certificate holders and research institutions.
- Reports will be assessed by the panel of experts, who will give recommendations for any changes to the safeguards, shared value provision, governance, or other elements of the learning project for the Board's decision on possible improvements.
- In case of serious gaps in the annual reports delivered, the Board will have the power to decide to end the participation of a certificate holder or research institution in the learning project.
- The FSC Board retains the right to stop the learning project at any point in case of any breaches of agreement, or discovery of any unacceptable risk.

Important decision moments for the FSC Board of Directors and membership are as follows:

- March/Apr 2022: Decision on composition of panel of experts
- BM93 (August 2022): Decision on draft Participation Framework for presentation at the FSC general assembly
- FSC general assembly (October 2022): Discussion of Participation Framework; Decision on Motions 15 & 44 (= GO/NO GO)
- BM94 (November 2022): Decision on Participation Framework; (= GO/NO GO)
- Early 2023 possible decision on first participants in multi-year learning project (= GO/NO GO)

18. How does this process relate to the *FSC Policy for Association* in case of indication of potential breaches?

Under the PfA, research plantings are permitted, if they:

- Have a clear investigative purpose (i.e. test a hypothesis).
- Are carried out on a limited scale and with defined timelines that are compatible to the scope of the research.
- Are conducted following all related legal requirements, including safeguards and permits.

These requirements are also expected to be followed by participants in the FSC learning project. Under the current PfA, trees from research plantings outside of FSC certified areas cannot be commercialized, i.e. the trees cannot be sold.

GE trees planted in the learning project are not part of the standard commercial activities of an organization as it includes research efforts in a learning project controlled by FSC, meaning that:

- there are strict conditions set that the certificate holder must meet
- compliance with these conditions is assessed annually by a Panel of Experts, leading to approval or not by the Board
- a final assessment is done by the Board after the FSC general assembly in 2025.

In case of any indication of breaches to the PfA, the PfA Procedure requires a decision panel to investigate the case. The Board agreed to follow this procedure also in the context of the learning project.

19. Is it legally permitted to plant GE trees?

Not everywhere. In the FSC learning project, a legal permission of the country's authorities will be required.

20. Will this learning process allow GE into FSC products or forests?

NO. This is forbidden and that will remain to be valid.

21. How will the process learnings and findings be shared? And to whom?

The process learnings and findings will be shared throughout the process with members through engagement opportunities and communication materials and platforms:

<[GE Learning Process Web page](#)>

<[FSC Members' Portal](#) (Accessible for Members only)>

<[Subscribe](#) to the FSC Sustainable Intensification Newsletter>

22. How can I ask further questions about this process?

Please reach out to us on engagement@fsc.org



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