Synopsis report

SECOND CONSULTATION INTERNATIONAL GENERIC INDICATORS FOR HIGHLY HAZARDOUS PESTICIDES

This document has been prepared in accordance FSC-PRO-01-001 *Development and Revising of FSC Normative Documents* and contains an analysis of the range of stakeholder groups that submitted comments, as well as a summary of the issues raised, a general response to the comments, and a response on how they were addressed.

14/04/2023

FSC FORESTS FOR ALL FOREVER™

Title:	Second consultation International Generic Indicators for Highly Hazardous Pesticides
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1. CONSULTATION BACKGROUND

The consultation on the 2nd draft of the the international generic indicators for the use and risk management of highly hazardous pesticides took place between the 10 February and the 18 April 2021.

The draft and the supportive documents including a crosswalk document which compares the changes from the 1st draft to the 2nd draft were uploaded, together with the information about the development process and a questionnaire to the FSC Consultation Platform (https://consultation-platform.fsc.org/) .

The consultation was announced on the FSC website, newsletters, and circulated to FSC regional and national offices, certification bodies, FSC membership, consultative forum and representatives of the standard development groups.

Stakeholders were asked to provide their feedback on the 2nd draft overall, including their views on the proposed approach, as well as for their suggestions on how to improve specific elements of the document.

During the consultation period, the FSC Forest Management Programme and the Technical Working Group (TWG) conducted three webinars in English and one webinar in Spanish for different time zones to present the draft 2-0, respond to questions and collect feedback. A report with the questions from stakeholders and replies from TWG members and the project team is uploaded at the project page (https://fsc.org/en/current-processes/international-generic-indicators-igi-implementation-for-the-fsc-pesticides-policy).

After the stakeholder consultation, the TWG and the project team analyzed the comments received in the FSC consultation platform, webinars, and via email and identified the core topics to be discussed in the development of the final draft.

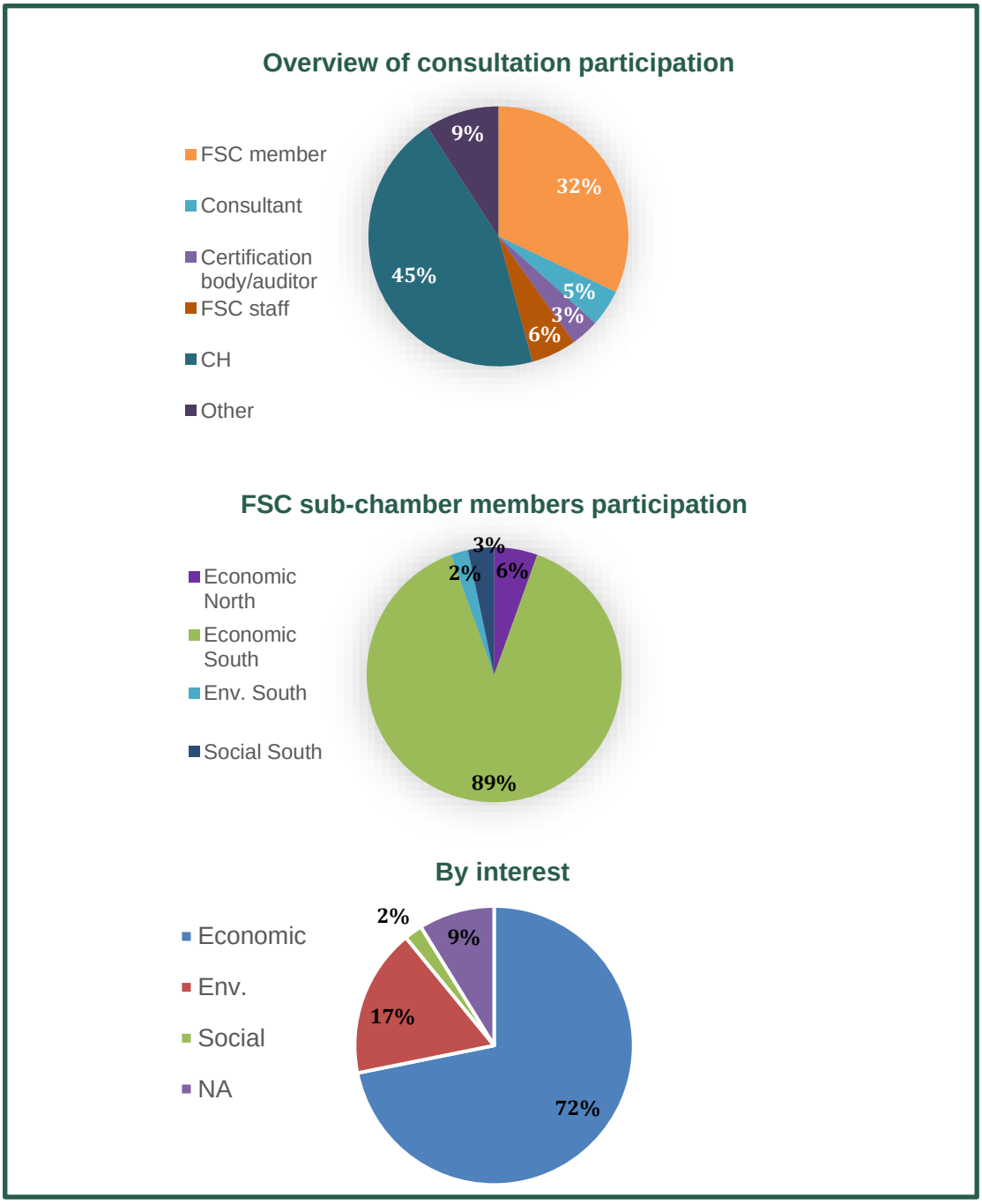
During the weekly TWG virtual meetings held from May to November, the TWG members assessed the feedback received and agreed on the responses to the comments and on how to reflect them in drafting the standard.

The FSC Forest Management Programme and the TWG appreciate the high participation and the feedback received.

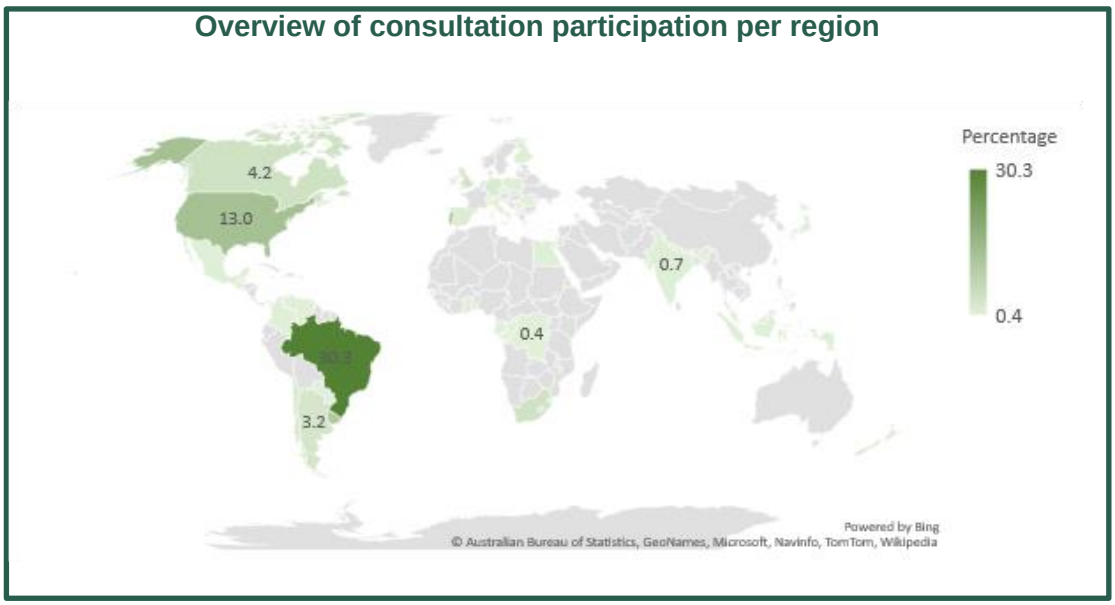
For further information related to the use and risk management of highly hazardous pesticides, please visit the project page here. For more information related to the report, please contact forestmanagement@fsc.org.

2. RANGE OF STAKEHOLDER CONSULTATION PARTICIPANTS

A total of 284 stakeholders from 36 countries provided comments through the consultation platform. The respondents identified themselves in the following ranges:



CH = Certificate Holder
Env. = Environmental



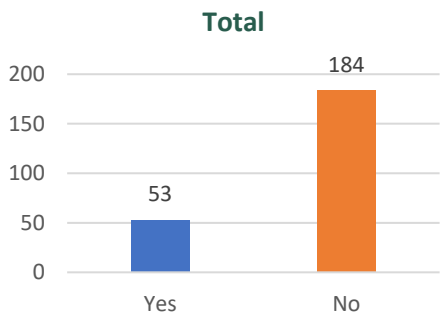
3. SUMMARY OF CONSULTATION RESULTS AND TWG SOLUTIONS

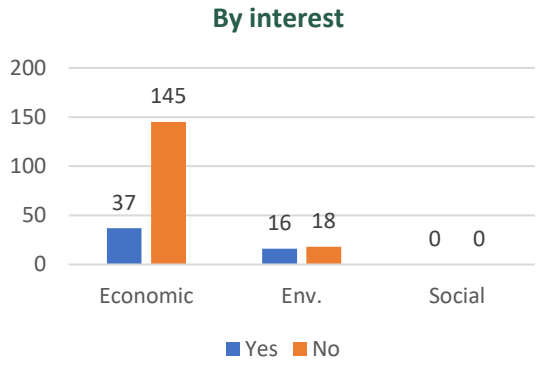
3.1 Biomonitoring (1) – Appendix 1

Question presented to the public consultation:

3.1.1 Have the changes made to this draft provide sufficient clarification about what is expected from certificate holders in terms of required biomonitoring?

In total, 237 out of 284 participants answered. General quantitative results are below:





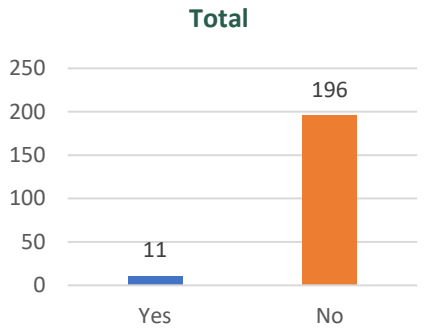
3.1.2 Please briefly explain your rationale for your response above.

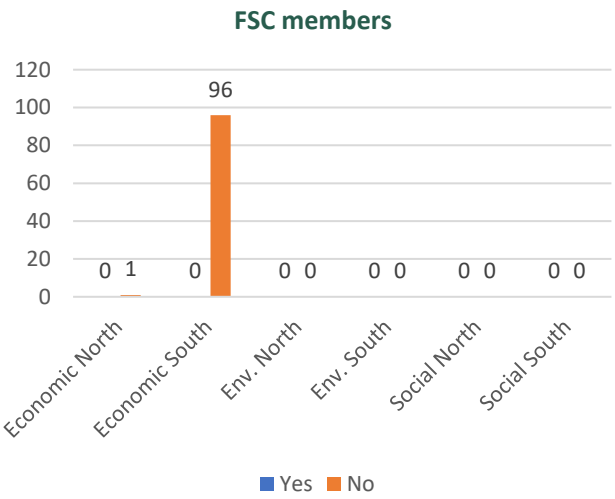
Stakeholder's main feedback	TWG solution
Lack of clarity 1. The 'frequency and duration' in the appendix 1 are not precise according to each case in terms of the unit of measurement and the data collection periods. 2. Required biomonitoring is not clear/detailed enough for each type of pesticide. 3. How to address the case of aerial or ground applications where the applicators do not have direct exposure to the pesticide. 4. Interrelation between the Environment and Social Risk Assessment (ESRA) and the biomonitoring. 5. How should Certificate Holders (CHs) navigate compliance tracking for contractors (or employees) who are applying pesticides on non-certified lands, other certified lands, or for personal use? 6. It is unclear what is considered fair compensation for an affected worker 7. Not clear how one determines if there is "over-exposure" to HHPs based on biomonitoring if there are no guidelines or standards that identify what constitutes levels of HHPs in blood, urine, or other bodily fluids/tissues that are "too high" or represent "over-exposure?"	Taking into consideration of the concerns and feedback that have been submitted regarding biomonitoring, the TWG members have had a long, intensive discussion and agreed to shift the focus from biomonitoring to mitigation measures (see new indicator 10.7.17, 10.7.18 and 10.7.19). Therefore, the requirement of biomonitoring is omitted in the final draft but remain in the note under indicator 10.7.18, as one of the examples of monitoring approaches that can be included for monitoring exposure of workers. Appendix 1 is no longer containing information about biomonitoring as well.

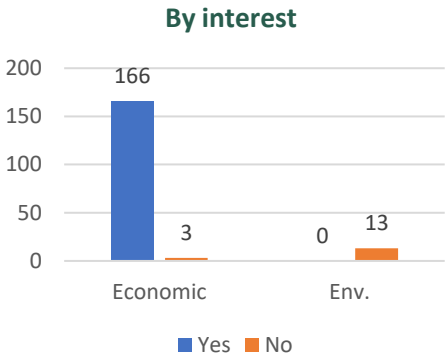
ESRA is not considered 1. The biomonitoring requirement is not considering the result that may arise from the ESRAs for the justification. Nor is the concept of SIR (scale, intensity and risk) incorporated. 2. If it is verified that the permissible exposure limit is not exceeded, it is not logical to require biomonitoring of all applicators.	
Feasibility and accessibility 1. Difficult to consult experts, not easy to find and very time consuming. 2. In some countries, no labs available.	
Cost The implementation of biomonitoring would significantly increase the costs for CHs.	
Biomonitoring tests management As there are no reference values, there are no criteria specified what to do with the biomonitoring results obtained "before and after".	
SDGs flexibility 1. Make a clear statement to clarify the flexibility that national standard development groups (SDGs) have in this matter. 2. Provide direction to SDGs to review national labor contexts in planning for requirements for, and implementation of, any medical biomonitoring that may be required.	
Employees' right 1. What happens if an employee or contractor refuses biomonitoring? 2. Medical information should be confidential.	

3.1.3 Please answer only if you are a certificate holder. Do you have capability to conduct the tests for biomonitoring described in the draft and are they available in your country?

In total, 207 out of 284 participants answered. General quantitative results are below:







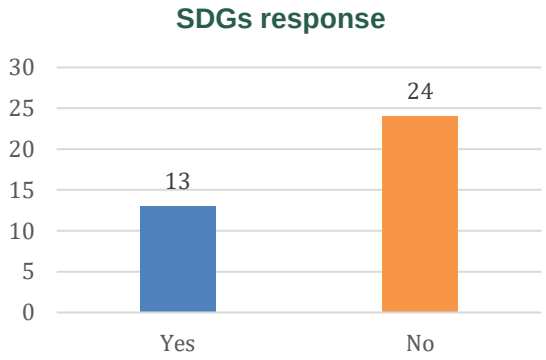
3.1.4 If you selected 'no' then could you give us examples of biomonitoring methods that are not available in your country/region? The baselines are best available information and Appendix 1.

Stakeholder's main feedback	TWG solution
Lack of availability 1. Availability of professionals and/or labs 2. The selection of cheaper and more accessible methods that are used as reference belong to the European and Canadian-US context, not considering Global South. 3. According to the 1st consultation synopsis report (page 11), 136 of 195 responded that the proposed biomonitoring methods were not available in their region. This	Taking into consideration of the concerns and feedback that have been submitted regarding biomonitoring, TWG members have had a long, intensive discussion and agreed to shift the focus from biomonitoring to mitigation measures (see new indicator 10.7.17, 10.7.18 and 10.7.19). Therefore, the requirement of biomonitoring is omitted in the final draft but remain in the note under indicator 10.7.18, as one of the examples of monitoring approaches that can be included for monitoring exposure of workers.

means that almost 70% of those who answered the query do not have the available methodology. Given that the second draft continues along the same lines, it is not evident that the opinions of the public consultation have been incorporated. 4. Not possible for Small and Low Intensity Management Forest (SLIMF)	
Examples of not available tests provided by stakeholders during the consultation: 1. Argentina: Field tests with AChE verification control device from Securetec obtainable at www.securetec.net 2. Paraguay: Nexera liquid chromatography together with the Triple Quad 6500 mass spectrometer Analysis AChe Genotoxicity Kit Comet Assay In some of these cases, the professionals were unaware of this method. 3. Australia:testing for glyphosate in blood samples 4. Uruguay: Only Plasma Cholinesterase (not acetylcholinesterase) for Organophosphates and Carbamates are developed, available and validated. (Ordinance MSP 145/009) 5. Ireland: no labs to complete the analysis, limited number of labs and accredited labs.	

3.1.5 Please answer only if you are an SDG and refer to the 'Note for public consultation'. Do you find the Annex 3. Guide to biomonitoring needed according to FSC Pesticides Policy Hazard Criterion in the synopsis report helpful/useful?

In total, 37 participants answered. General quantitative results are below:



3.1.6 Please briefly explain your rationale.

SDG's main feedback	TWG solution
Lack of clarity 1. Not clear how to incorporate it, since since it's not part of HHPs IGI. 2. Clarity regarding time of starting and time of ending testing and attributing any results to a specific CH 3. Table 1: Acute toxicity risk of Hazard Criterion 7: use High, mod, low with no reference to exactly what these figures are or how they can be measured. 4. If tropical regions use the EU trigger values then consideration needs to be given for the inclusion of an extrapolation factor of 10 – what is this based on? 5. it is not at all clear how it is supposed to help SDGs.	Taking into consideration of the concerns and feedback that have been submitted regarding biomonitoring, TWG members have had a long, intensive discussion and agreed to shift the focus from biomonitoring to mitigation measures (see new indicator 1.7, 1.8 and 1.9). Therefore, the requirement of biomonitoring is omitted in the final draft but remain in the note under indicator 1.8, as one of the examples of monitoring approaches that can be included for monitoring exposure of workers. Term trigger values is no longer in indicator level, but as examples of monitoring approaches that can included to monitor environmental impacts.
Too much information and too complicated The calculation of the trigger values is too complicated.	
Lack of information It does not provide the information how to interpret the result of the test. For example, how much increase from the initial test is considered problematic?	
Financial burden In order to provide enough information for the SDG to understand and analyse the HHP IGIs, we would need to hire very expensive consultants to translate medical information.	
Other comments If biomonitoring requirements are going to stay in the IGIs (which we do not support), then Annex 3 and more guidelines are needed and it's essential for guiding the adjustment of biomonitoring indicators.	

3.2 Biomonitoring (2) – Additional biomonitoring tests

From section 3.2. to section 3.3 questions address the different aspect related to biomonitoring, and the TWG has decided to shift the focus from biomonitoring to mitigation measures and prevent of exposure. Therefore, the requirement of biomonitoring is omitted in the final draft but remain in the note under indicator 10.7.18, as one of the examples of monitoring approaches that can be included for monitoring exposure of workers.
Below are the summary of stakeholder's main feedback.

Question presented to the public consultation:

3.2.1 Are there any other scientifically based tests for the biomonitoring for each Hazard Criterion that you recommend the TWG to consider?

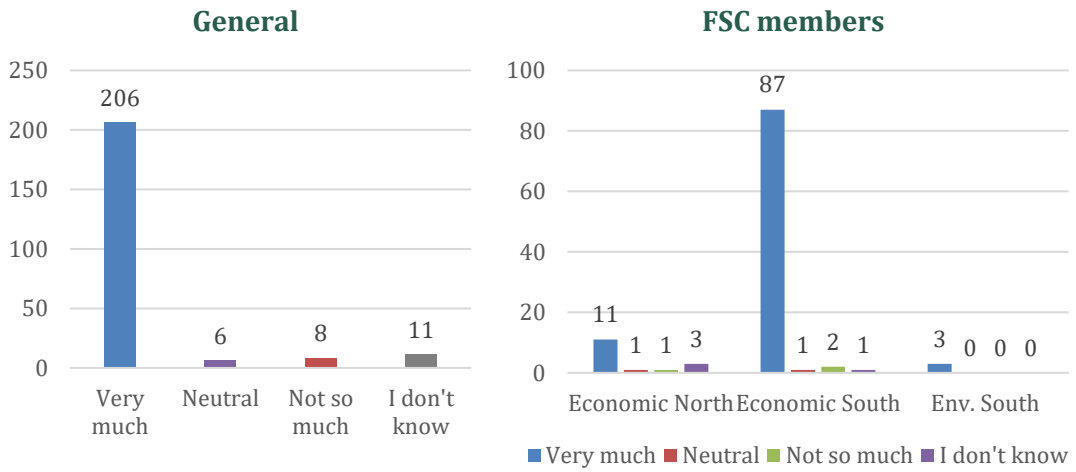
Stakeholder's main feedback
Tests recommendation 1. In Argentina, cholinesterase biomonitoring is carried out on workers who handle organophosphate pesticides or WHO class II and III carbamates, to evaluate the possible impact on their health. 2. Methods approved by WHO's ICOH Scientific Committee of Occupational Toxicology (http://www.icohweb.org/site/scientific-committee-detail.asp?sc=21) or the Partnership for European Research in Occupational Safety & Health (https://perosh.eu/).
General recommendation/suggestion 1. Recommend switching focus from biomonitoring of individuals to monitoring of actual exposure levels associated with different product and use technique situations in order to better understand and reduce exposure in the workplace. 2. The real focus of the pesticides IGI should be to highlight preventive measures already adopted and described in the ESRAs, such as the use of individual protection equipment (IPE), choice for less dangerous pesticides, adoption of Integrated Pest Management (IPM), etc.

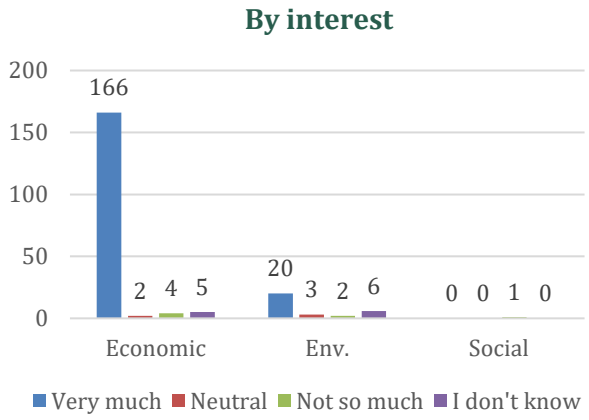
3.3 Biomonitoring (3) – Contractors

Question presented to the public consultation:

3.3.1 In your opinion, how much do the biomonitoring requirements influence contractors?

In total, 231 out of 284 participants answered. General quantitative results are below:



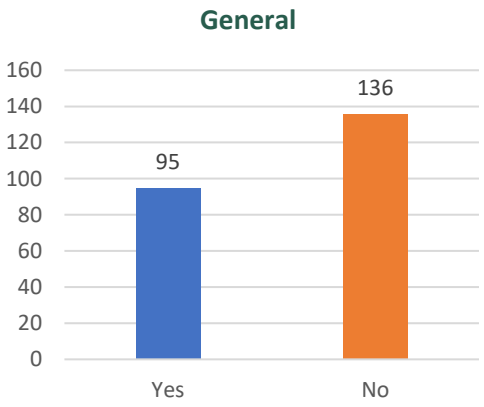


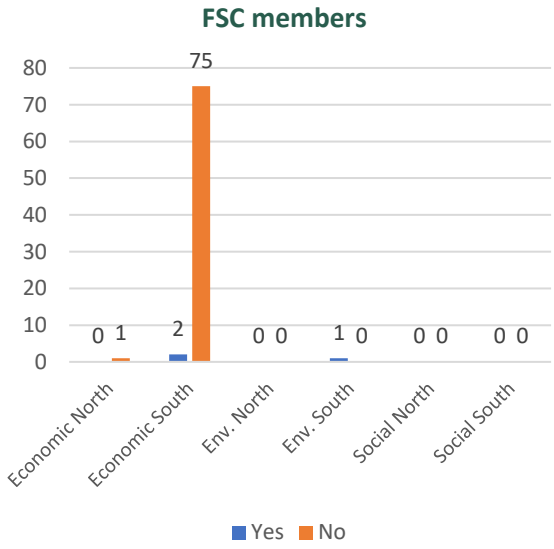
2.3.2 Please briefly explain your rationale.

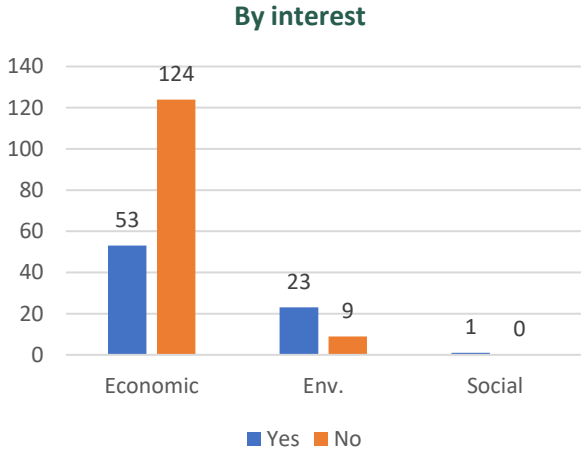
Stakeholder's main feedback
Biomonitoring adds complexity and will be a burden because… 1. Heavily depends on contractor companies. 2. The high staff turnover. 3. Major impact on costs and operational complexity. 4. Too demanding on contractors, with a need for record keeping and data sharing and testing costs. Concerned about potential legal liabilities associated with biomonitoring. 5. Violates the contractor relationship in the US.
Lack of clarity 1. What if the same contractor works, at the same time, working for certified and non-certified companies? 2. What is the contractor's responsibility? and how a contractor would operationalize these requirements, including action levels and corresponding actions? 3. What if contractors refuse biomonitoring?

3.3.3 In your opinion, should the IGI HHPs clarify the responsibilities between the contractor and the certificate holder regarding the biomonitoring?

231 participants answered. General quantitative results are below:







3.3.4 Please briefly explain your rationale.

Stakeholder's main feedback
YES
To clarify responsibility 1. This will be important in developing the specifications and aligning procurement and awarding of contracts if both parties are aware of their responsibilities 2. Employees of the contractor are not under the direct control of the CH. 3. Who is responsible to follow-up with a contractor's employees? It is not feasible for the CH to have this responsibility. 4. The IGIs provide no guidance on how to address responsibilities between CHs and contractors and their workers or between multiple companies working with multiple contractors who themselves maintain an often-changing employee base.
Differentiation is needed 1. Permanent (regular) contractor vs short-term. 2. Employee vs contractor. 3. Applicator vs non-applicator.
Recommendation 1. Explain what is reasonable for the certificate holder to demand, and what the contractor is allowed to decline. 2. Responsibilities could be negotiated between the parties who will take what responsibility and who will assist where required.
NO
Responsibility 1. As established in the entire FSC standard, the final responsibility for everything that happens in the Management Unit rests with the certificate holder. It should be up to the certificate holder to ensure the standard is met by working with the contractor and their workers. We should not prescribe how this is undertaken. 2. Each certificate holder and contractor have its own reality and it is up to them to assess how to determine responsibilities for biomonitoring.

3.4 Instructions for standard developers

We received a request in the first consultation to consider the worker's right to refuse to use highly hazardous pesticides.

Therefore, TWG added the following paragraph to the "Instructions for Standard Developers":

Standard Developers shall* consider workers'* rights in relation to the use of pesticides in accordance with the ILO Code of Practice Safety in the use of chemicals at work, including the right to refuse to use HHPs.

Background information
The ILO Code of Practice Safety in the use of chemicals at work, 2.5.6 (b), dependent with 2.7.4, and 2.5.8 are provided below:

2.5.6 Workers should have the right: (b) to remove themselves from danger resulting from the use of chemicals when they have reasonable justification to believe that there is an imminent and serious risk to their safety or health; such workers should inform their supervisor immediately;

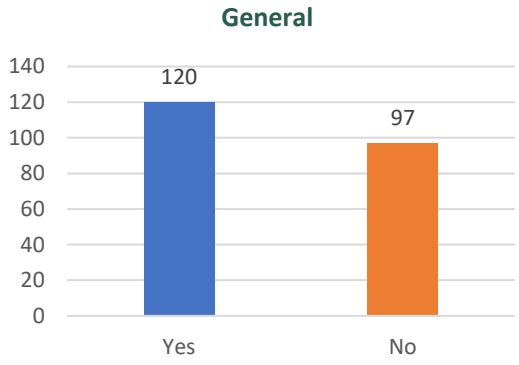
2.7.4. Where workers have removed themselves from danger in accordance with paragraph 2.5.6 (b) (removal from danger), the employer, in cooperation with the workers and their representatives, should immediately investigate the risk and take any corrective action necessary.

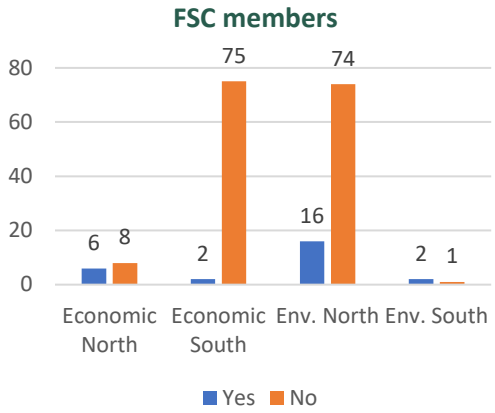
2.5.8. Women workers should have the right, in the case of pregnancy or breastfeeding, to alternative work not involving the use of, or exposure to, chemicals hazardous to the health of the unborn or nursing child, where such work is available, and the right to return to their previous jobs at the appropriate time."

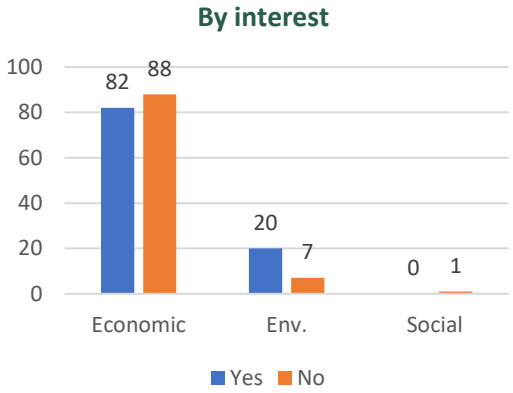
Question presented to the public consultation:

3.4.1 Does this sufficiently enable the consideration of a workers' right to refuse to use a Highly Hazardous Pesticide? (in particular, does the instruction enable the implementation of "ILO Code of Practice Safety in the use of chemicals at work", 2.5.6 (b), dependent with 2.7.4, and 2.5.8?) (Please see 'background information')

In total, 217 out of 284 participants answered. General quantitative results are below:







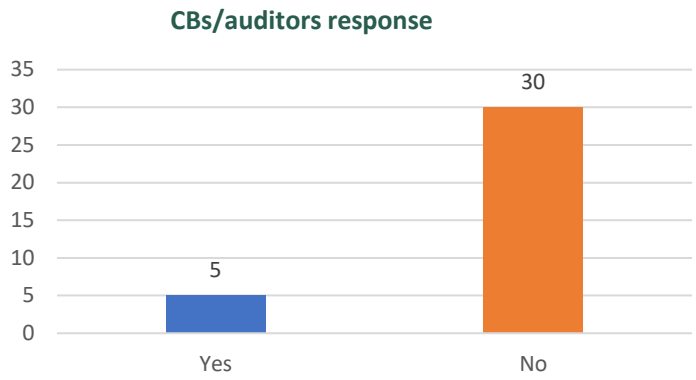
3.4.2 Please briefly explain your rationale.

Stakeholder's main feedback	TWG solution
YES	
Workers must know the product(s) they apply and what the risks are and must not be exposed to the dangers	TWG members believe this issue is adequately addressed through requirements to comply with ILO. Therefore, no changes have been made to the final draft.
This concept is already addressed in the ILO Code of Practice on Safety and Health in Forestry Work, which is IGI 2.3.1 in FSC-STD-60-004 V2-0 EN. Thus, we are not clear as to why it also needs to be re-referenced.	
Many countries already follows ILO regulations or have their own legislation.	
The "reasonable justification" is important. Where training, correct PPE, bio-monitoring, recording of hours along with active ingredient used and enquiring about pregnancy, such cases should be minimal.	
NO	
Worker's safety and their right to safe work permeates all forest management activities, not just the application of pesticides.	Same as above
Lack of clarity 1. It is not clear the need to bring this issue of refuse specifically to pesticide use activities, since the worker has the guaranteed right to refuse risky activities not only involving the use of pesticides, but for all forest management activities that offer danger of being executed. 2. This misrepresents what the ILO document says. This is not about a worker's right to refuse to use a HHP just because it's an HHP, as this question implies. Rather, it is intended to address a situation in which, e.g., appropriate PPE has not been provided or some equipment malfunction results in increased exposures for which the PPE in use does not provide adequate protection.	

3.5 Auditability of HHPs IGIs

Question presented to the public consultation:

3.5.1 Please answer only if you are a certification body. Do you consider the IGI auditable in their current form?



3.5.2 If you selected 'no', please explain and suggest changes to improve the auditability of the IGI HHP.

CBs/auditors main feedback	TWG solution
Biomonitoring - Cost issue	Taking into consideration of the concerns and feedback that have been submitted regarding biomonitoring, TWG members have had a long, intensive discussion and agreed to shift the focus from biomonitoring to mitigation measures (see new indicator 1.7, 1.8 and 1.9). Therefore, the requirement of biomonitoring is omitted in the final draft but remain in the note under indicator 1.8, as one of the examples of monitoring approaches that can be included for monitoring exposure of workers.
Auditors' capabilities, team sizes and time The level of detail (specifically with biomonitoring requirement) which is required would mean that a substantial amount of time of the audit will be dedicated to auditing this	-
Biomonitoring - Contractor issue It will be hard to deliberate where the accountability lies for the "exposure" that a worker has undergone when working for multiple clients	Mentioned as above, the requirement of biomonitoring is omitted in the final draft but remain in the note under indicator 1.8, as one of the examples of monitoring approaches that can be included for monitoring exposure of workers.
Lack of clarity 1. HHP 1.3 "take account of" is very vague and hard to audit 2. HHP 1.5 could be strengthened/clarified with changed "trend" to "plan" is easier to audit a plan	1. Requirement of biomonitoring is omitted in the final draft, and the indicator 1.3 has been edited. Please see new indicator 1.2 2. Not accepted. The trend would include peaks and troughs of use over time but these would get lower over time.

3. HHP 1.7 “culturally appropriate engagement” definition is not included in the document. Would be good to have as a reference or link to definition somewhere else to look up	3. “culturally appropriate” and “engagement” definitions are in the existing IGI. Please see them in the glossary terms.
National law against HHPs IGI In the US context, we will need to make portions of the IGI not applicable when US laws cover the requirement. Without knowing the level of flexibility that will be provided to SDGs, we cannot confirm that these IGIs are auditable in the US context.	As mentioned above, the requirement of biomonitoring is omitted in the final draft but remain in the note under indicator 1.8, as one of the examples of monitoring approaches that can be included for monitoring exposure of workers.
Biomonitoring not applicable 1. there are no labs that can test individual samples for the biomonitoring. **2.** An individual's test cannot be linked solely to one CH, as there are so many other environmental factors in play. How can an auditor ask for a test result and then directly link that result to the use of pesticide on one CH's land base?	Taking into consideration of the concerns and feedback that have been submitted regarding biomonitoring, TWG members have had a long, intensive discussion and agreed to shift the focus from biomonitoring to mitigation measures (see new indicator 1.7, 1.8 and 1.9). Therefore, the requirement of biomonitoring is omitted in the final draft but remain in the note under indicator 1.8, as one of the examples of monitoring approaches that can be included for monitoring exposure of workers.
Suggestions	
1. Keep highlight on preventive measures already adopted and described in the ESRAs, such as the use of individual protection equipment (IPE), choice for less dangerous pesticides, adoption of IPM, etc.	TWG members agreed to shift the focus from biomonitoring to mitigation measures (see new indicator 1.7, 1.8 and 1.9).
2. A recent Interpretation regarding getting hold of rejected derogations in order to prepare ESRAs said these could be obtained from Certification Bodies. However, CBs will only know rejections for their own clients, so a database and wide availability of these would be good for all CBs and Certificate Holders to be able to access.	Comment taken. PSU will internally further discuss this.
3. Flexibility is needed in some indicators for SLIMF/Community forest	Rejected. TWG concluded that SLIMF/Community forests will be best covered in the national indicators and ESRA: Pesticides Policy (Annex 4, Clause 5) requires the national Standard Development Groups to take scale, intensity and risk (SIR) into consideration in developing the national indicators to the HHP Pesticides Policy (Chapter 4, Clause 12.2) states that the organizations shall “Undertake a comparative ESRA according to scale, intensity and risk (SIR) as part of its integrated pest management”

4. Duplicated/similar indicators – can they be combined?	Comment taken. The final draft is with the shortened structure to make it more user friendly and avoid duplication.

3.6 Synopsis report annexes

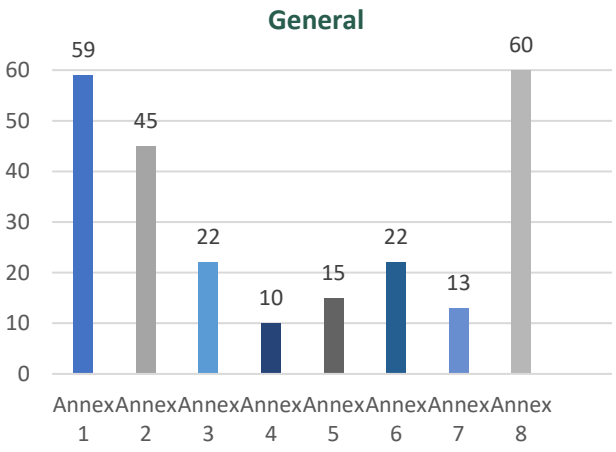
Below is the list of annexes:

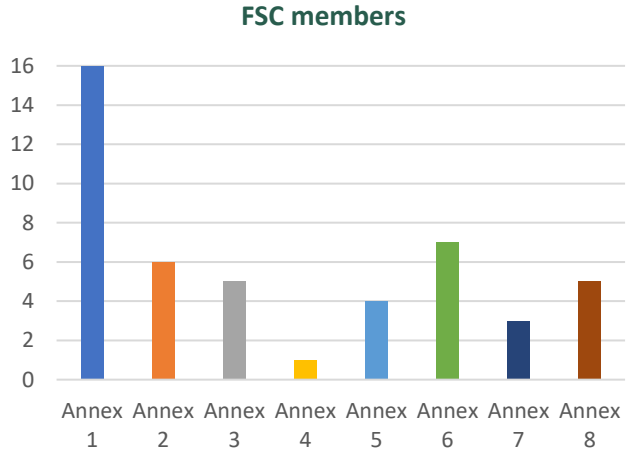
- Annex 1. IPM-ESRA flow chart p.25
- Annex 2. Records of HHP Usage and IPM Implementation p.26
- Annex 3. Guide to biomonitoring needed according to FSC Pesticides Policy Hazard Criterion p.29
- Annex 4. Human biomonitoring in various countries and the associated legislation (DRAFT) p.50
- Annex 5. Guidance to the most relevant documents for standard developers to guide the development of national indicators for HHP (DRAFT) p.57
- Annex 6. Medical biomonitoring guidance triggers summary table p.71
- Annex 7. General summary of roles and responsibilities regards to appendix 1 in the draft 2-0. p.74
- Annex 8. Condensed version –FSC-STD-60-004a International generic indicators for the use of highly hazardous pesticides Draft 2-0 p.75

Question presented to the public consultation:

3.6.1 Which one(s) do you find the most helpful and recommend to be addressed in the revision of the FSC Guide to Integrated Pest, Disease and Weed Management (IPM guidance)?

In total, 101 out of 284 participants answered. General quantitative results are below



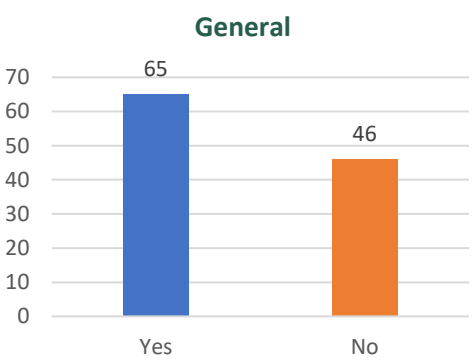


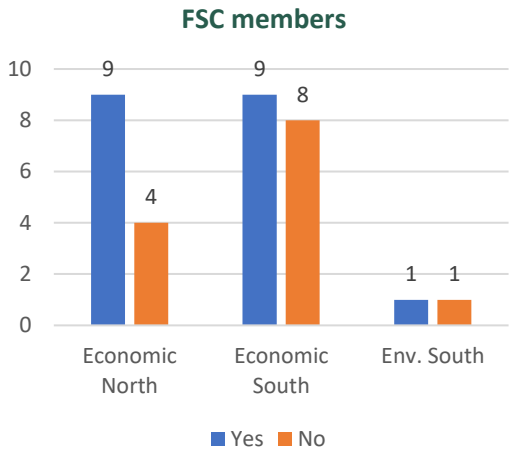
3.6.2 Please briefly explain your rationale.

Stakeholder's main feedback	TWG solution
Annex 1	
It adds clarity 1. It shows how the ESRA's fit into an IPM programme which is what FSC Guide to Integrated Pest, Disease and Weed Management (IPM guidance) is about.	This feedback is being discussed within PSU to be considered in the revision of the IPM Guidance
Very helpful	
Annex 3	
It adds clarity 1. It provides WHO guides on methods. 2. It's clear when before testing is not required. 3. Helpful to calculate trigger values. We absolutely do not agree with requiring this type of technical calculation. However, without this guidance, the IGI would be nearly impossible for certificate holders to comply with.	
Recommendation 1. It's not clear how to use and apply the PEC and TER tables? Examples would be useful.	
Annex 4	
Add more countries 1. The examples only includes European and Global North countries.	
Annex 6	
It adds clarity 1. It provides a more clear synopsis on when to undertake biomonitoring.	
attention to the fact that the identified levels don't make sense, since the maximum hours defined for the pesticides application, presuppose an activity for 26h/ 30 days (more than 575 hours/ month), which of course it isn't viable. This type of inaccuracy only reinforces the idea that the process needs to be adjusted to reality.	
Annex 8	
It adds clarity	
Other	
It's too complicated 1. All the annexes add more complexity.	
Annexes do not address main concerns 1. Although we recognize the dedicated efforts to build these annexes we consider that the main concerns raised in this consultation are not sufficiently addressed. 2. As it is not considered that biomonitoring should be applied, we exclude all related Annexes	

3.6.3 The TWG has received several comments during the 1st consultation highlighting that many indicators are repeated through the draft in the different hazard criteria. Thus, FSC is exploring other more user-friendly formats and and has developed a condensed version (Annex 8 of the synopsis report). Do you find this version more useful/user friendly?

In total, 111 out of 284 participants answered. General quantitative results are below:





3.6.4 Please briefly explain your rationale.

Stakeholder's main feedback		TWG solution
	YES	
It's user friendly: Less redundant		Comment taken. TWG members discussed and agreed that the condensed version is more useful/user friendly. Therefore, the final draft is condensed version.
	NO	
NOT user friendly 1. It is still very technical. Keep the detail for each hazard criteria. 2. The importance of some of the indicators are lost when you lump them together and the same references are used but different sections point to different indicators 3. Clearer if full set of indicators		-

presented for each hazard criterion		
Current version is easier to follow 1. Even if more condensed and not repetitive, as already stated the longer version is probably easier to follow, even if many indicators are repeated		

3.7 Further comments

Stakeholders' main feedback	TWG solution
Terms and definitions	
Acute poisoning: The definition presented includes cases of "suspected" exposure as acute intoxication. The question is: how to affirm that acute intoxication occurred when the exposure is suspected? The FAO definition to "Acute poisoning" (used as reference for this definition) does not include "suspected" exposure, but only the cause/effect direct relationship.	1. Acute poisoning is taken out from the final draft, as it is not mentioned in SDG indicator and indicator.
Pesticides: These IGIs aim to address aspects related to chemical pesticides. Defining the term "pesticide", and not "chemical pesticide", inserting biological products and growth regulators, it causes misunderstanding. Considering that the FSC's pesticide policy itself excludes biological products and growth regulators from its context, this inclusion does not make sense here. In addition, there is a conceptual misunderstanding regarding growth regulators, once they are used as protectors of plants, not as repellents, destroyers or controllers of any pest.	2. TWG considered the response carefully, but it did not result changes to the IGI. Definition of pesticides is from Pesticides Policy.
The definition for "environmental biomonitoring" is not in the draft.	3. Definition for "environmental biomonitoring" is added in the final version.
Section F. Adjustments to criterion 10.7	
1. **Indicator 10.7.4:** The process of informing and offering an opportunity to engage interested stakeholders should be restricted to local communities. The indicator allows the involvement of	TWG considered the response carefully, but it did not result changes to the IGI. Interested stakeholders is a very open and wide concept and it may include government institutions.

government institutions, which is not appropriate.	
2. Indicator 10.7.7: It is necessary to include "or any national interpretation of this document in National Standards", just the same as it is in instructions to Standards Developers.	TWG considered the response carefully, but it did not result changes to the IGI. Indicator 10.7.7 is already existing IGI. HHP IGI TWG do not have mandate to revise the existing IGI.
3. Indicator 10.7.10 item 2): do not agree when the indicator requires that a pesticide just be used when it is the only effective, practical and economically viable method to combat the pest. In general, there are several effective, practical and feasible methods, and the CH should evaluate them and select the best option to its reality. Once the indicator 10.7.1 is met, this item is not necessary and could be excluded. If it not excluded, we suggest replacing the term “only” by “most”.	TWG considered the response carefully, but it did not result changes to the IGI. Indicator 10.7.7 is already existing IGI. HHP IGI TWG do not have mandate to revise the existing IGI.
Section G. INTERNATIONAL GENERIC INDICATORS FOR ALL HHPS	
1. Instructions to Standard Developers: a. It is necessary to include "or any national interpretation of this document in National Standards", just the same as it is in Instructions to Standards Developers. It is very important that this possibility be explicated. b. About the excerpt: “Standard Developers shall * consider total formulations including active ingredient and inert or co-formulants (e.g. surfactant, wetter, adjuvant, additive).” It is necessary to clarify that the Standard Developers will not interfere in what has already been defined by the policy, as well as in the existing products lists. They can interfere only in the specific indicators of their region according to their local specificities. c. About the excerpt: “Standard Developers shall * specify research, identify and test alternatives to replace FSC highly restricted HHPs and restricted HHPs with less hazardous alternatives, subject to scale, intensity and risk *.” Standards Developers should not research,	a. Comment taken. TWG members agreed to include the proposed sentence which is now in the final draft. b. Mentioned SDGs instruction is taken out from the final draft. SDGs should already have considered formulations as part of the ESRA framework in complying with Policy Annex 4. Also, TWG members agreed that it is not so clear what this consideration would mean in practice. c. This was a mistake in the 2nd draft, therefore, taken out.

identify and test alternatives, neither define the replacement of HHPs by less dangerous alternatives. This is the understanding of the current wording. If the intention is to recommend for organizations to carry out such actions, we suggest a rewritten to make it clear. It is suggested: the SDG "can" recommend research	
2. **Indicator 1.4:** Insert “when applicable”. In some situations, there is no prior control measure.	TWG considered the response carefully, but it did not result changes to the IGI. Expression “when applicable” is hard to evaluate by the Certification Bodies.
3. **Indicator 1.9**: If the emergency situation or governmental order demands a Highly Restricted or Restricted HHP, why should the certificate holder conform to Annex 3 for the use of FSC prohibited HHP?	Revised. Please see new indicator 2.1. and the following note, which explains why should the CH conform to Annex 3 for of the Pesticides Policy. While Annex 3 of the FSC Pesticides Policy addresses exceptional the use of Prohibited HHPs in emergency situations or by government orders, this indicator allows certificate holders to apply the same procedure to Restricted and Highly Restricted HHPs in these situations, thus providing a window of 30 days after starting the use of the chemical pesticide in which to complete a site specific ESRA.
4. **Indicator 1.10:** A small holder is unable to implement research programs as required by this indicator. Thus, we suggest to include a note in this indicator, clarifying that certificate holders can access, participate and / or monitor such tests and their results, incorporating those that are pertinent for them. Another possibility would be to include in this indicator a relativization by scale, intensity and risk. We suggest to consider the scale of use of pesticides and establish a process of prioritizing studies, considering the existence of alternatives to be evaluated and aiming not only the replacement of pesticides, but their rational use.	TWG considered this response well justified. However, the TWG concluded that the research requirements to smallholders will be best covered in the national indicators and ESRA.
Section H. INTERNATIONAL GENERIC INDICATORS FOR HAZARD CRITERIA	
1. **Regarding the Table 2. Acute toxicity risk of pesticides in Hazard Criterion 7** The Table 2 is about acute toxicity to aquatic organisms (Subject of Hazard Criterion 7), but includes other organisms. This might cause misunderstandings. We	Table 2 has been removed.

suggest to keep only the categories relevant and applicable to hazard criterion 7.	
2. Trigger values (indicators 7.1, 7.2, 7.3, 8.1, 8.2 and 8.3) Trigger value brings in its own definition the information of being "local" and based on "exposure parameters". Thus, it is not acceptable that FSC brings generic values, such as those presented in Table 3.	Term trigger values is no longer in indicator level, but as examples of monitoring approaches that can included to monitor environmental impacts.
General	
Does not fit to the new FSC global strategy to 'streamline policies and standards' to make them easier to understand and implement consistently. 1. HHPs IGIs include 3 new indicators within 10.7 2. It does not reduce complexity or clarify requirements. 3. Several indicators appear to contradict each other (e.g.10.7.1 vs 10.7.5) or are repetitive (e.g. 10.7.1 vs Annex Indicator 1.1) 4. Several interrelated documents are referenced and not aligned (eg.: 10.7 Indicators vs Annex Indicators; Appendix 1 in main document vs Table 6) 5. It does not reflect reflect risk-based approach.	These IGI will replace the very complex HHP derogation procedure, which had been criticized by all three chambers and their sub-chambers. Therefore, the TWG feels that these IGI will 'streamline policies and standards'. The five points listed in the response were recognized by the TWG and the latest version of IGI aims to respond to these concerns.
Excessive external references **1.** This will drop the responsibility to analyze those documents to CBs and CHs, creating a system with rules within rules within rules, posing unfeasible practical application in the field. **2.** TWG should include the specific relevant aspects rather than delegate this attribution down the system chain, under the risk of creating a system impossible to implement and audit	Point taken. The TWG has reduced the number of excessive external references.

4. SUMMARY OF DESK STUDY RESULTS AND TWG SOLUTIONS

4.1 Range of volunteers

Type of stakeholder	Type of forest	N/S	Region	Country	HHP
SDGs	Plantations	North	Europe	UK	(1) Acetamiprid (2) Glyphosate
	Plantations	North	Europe	Italy	
CB	Plantations	North	Europe	Italy	(1) Cypermethrin (2) Dodine
CH	Plantations	North	APAC	New Zealand	
	Plantations	North	Europe	Italy	
	Plantations	South	LATAM	Brazil	(1) Glyphosate
	Plantations	South	Africa	South Africa	(1) Glyphosate (2) Paraquat (3) Clethodim (4) Clopyralid

4.2 Feedback from CB & TWG solutions

4.2.1 Auditability

CB's main feedback	TWG solution
Indicator 1.2 Level of pest infestation is not an useful record, except that for an emergency use. For most of diseases (particularly fungus) the application of HHP has to start before the infestation is clearly visible, depending on the age of the plants and of the climate conditions. An estimate could be made, but for some pests is impossible (ie: woolly aphid), for others, as already written, not useful.	To make the final HHP IGI simple/short, understandable and on the basis that this indictor is already adequately address under Criterion 10.7 and new indicator 1.5 and 1.8, the TWG members decided to remove indicator 1.2.
Indicator 1.4 Not always are present intervention thresholds.	Revised. Intervention threshold is no longer mentioned in the indicator. Please see the new indicator 1.1.
Indicator 1.5 With regards to justification more than demonstration of activities performed: replacement is often difficult because only few products are registered in Italy as applicable to poplar; reduction is difficult because the quantity depends on the critical issues of the year and on the age of the plant	Revised. Please see the new indicator 1.12. Also, TWG would like to comment; Replacement could also be with non-chemical alternative. See IPM Guide. You will have to replace a product only if there are new options available and also considering environmental, social and economic aspects. (Those criteria are common for chemicals replacement in international agreements - as Stockholm Convention.)

Indicator 1.7 The information is provided through fixed signboards, and any other way required from applicable national and local legislation. The only problem is due to the word "before" HHP are used. If before is meant as "before each use" it becomes impossible due to the high costs. "before" for companies means having fixed signboards in suitable places	TWG agreed to change the indicator as part of the shift to focussing on risk mitigation measures. Engagement with stakeholders via the ESRA process is already required under Criterion 10.7. Please see the new indicator 1.7.
Indicator 1.10 It's not possible, due to size of companies and related costs, implement such programmes for a single company.	TWG members agreed that the indicator needs to be changed to cover activity beyond searching for alternative pesticides – give more options to choose as 'research'. Please see the new indicator 1.13 and its note.
Indicator 2.1 Medical monitoring is conducted on the basis of what required form national health and safety laws (DLgs 81/08), asking for specific monitoring for workers of the company exposed to chemical and biological risks, according to scale and frequency of use and exposition. Impossible to know about monitoring of workers of other companies in charge of conducting some activities related to HHP use, also for health data protection required by GDPR.	Taking into consideration of the concerns and feedback that have been submitted regarding biomonitoring, TWG members have had a long, intensive discussion and agreed to shift the focus from biomonitoring to mitigation measures (see new indicator 1.7, 1.8 and 1.9). Therefore, the requirement of biomonitoring is omitted in the final draft.
Indicator 7.1, 7.2 and 7.3 Size of companies (very small) and their location (among other poplar plantations) prevent an effective monitoring performed by companies itself, for the impossibility to discern responsibilities of any damn. Anyhow cost would prevent single companies to perform this kind of monitoring. Currently such monitoring is performed by local authorities (province, region) on a larger scale.	Revised, to shift the focus from biomonitoring to mitigation measures. Please see the new indicator 1.16 and 1.17.

4.2.2 Recommendations for FSC International

Feedback summary: The language is clear, even though not always is clear the rationale behind some requirements, on the basis of actual management of HHP. Most of requirements are already inserted in Italian legislation about health and safety. Difficult to verify are requirements about biomonitoring, both on workers and on environment, and both for competencies required and for the effectiveness of results.

TWG solution: Taking into consideration of the concerns and feedback that have been submitted regarding biomonitoring, TWG members have had a long, intensive discussion and agreed to shift the focus from biomonitoring to mitigation measures (see new indicator 1.7, 1.8 and 1.9). Therefore, the requirement of biomonitoring is omitted in the final draft.

4.2.5 Impact on costs of the forest management evaluations

Feedback summary: Surely including these IGIs has an impact on the cost of the evaluation, estimable in half a day; even though most activities are already done with current standard (FSC-ITA-01-2017 v1.0), verification of what realized from companies related to biomonitoring requires specific training to auditors or the presence of an expert. Competences of auditors must be increased both technically and from a legislative point of view.

TWG solution: Same as above. Biomonitoring requirement is taken out, so it is expected to be less burdensome.

4.2.6 Other suggestions and observations

Suggestion: to keep in consideration that, when in presence of an effective regulatory system, the conformity can be reached even only respecting laws in force.

4.3 Feedback from CHs & TWG solutions

4.3.1 General: HHPs IGI requirements

Feedback summary: Some of the IGIs (in particular environmental and worker biomonitoring) are not clear and difficult to implement both for the significant additional cost, and in any case for the low significance of the results that would be obtained, in the face of the reduced extension of the certified surfaces, their fragmentation and proximity surfaces with similar use or urban centers, highways, and the use of external personnel to carry out many of the operations relating to HHP.

Below are the indicator specific comments, which are similar to the CB's feedback above.

CH's main feedback	TWG solution
Indicator 1.2 we speak of recording the level of infestation linked to the use of HHP although, especially in the case of the use of fungicides, a preventive use linked to the environmental and meteorological situation is necessary, and one cannot expect the manifest full-blown infestation, as the timeliness of the intervention is essential to achieve the result. The estimates on the level of infestations are also difficult to implement, and in some cases impossible to carry out (eg: wool aphid) generic requirement.	To make the final HHP IGI simple/short, understandable and on the basis that this indictor is already adequately address under Criterion 10.7 and new indicator 1.5 and 1.8, the TWG members decided to remove indicator 1.2.
Indicator 1.5 the reduction trend required by the requirement cannot be theoretically hypothesized, as each annuity is different from the others as regards possible infestations and may therefore require	The term 'trend' is used for this very reason. The trend would include peaks and troughs of use over time but these would get lower over longer period of time. Also, TWG would like to comment; Replacement could

higher quantities of HHP than those of previous years; the interventions also depend on the age of the plant. The trend towards substitution is also hampered by the ever smaller number of registered products that can be used on poplar generic requirement.	also be with non-chemical alternative. See IPM Guide. You will have to replace a product if there are new options available and also considering environmental, social and economic aspects. (Those criteria are common for chemicals replacement in international agreements - as Stockholm Convention.)
Indicator 1.7 information to stakeholders before each use becomes impractical if it refers to each individual use, and not to the presence of stable information in the places of use requirement	TWG agreed to change the indicator as part of the shift to focussing on risk mitigation measures. Engagement with stakeholders via the ESRA process is already required under Criterion 10.7. Please see the new indicator 1.7.
Appendix 1 It is unclear whether Appendix 1 applies to only those pesticides and groups of pesticides specifically listed in the Appendix.	Revised. Please see the revised Appendix 1 in the final version.
Table 3 Table 3 (page 24) and the whole approach of using trigger values & PECs and TERs is completely confusing.	Term trigger values is no longer in indicator level, but as examples of monitoring approaches that can included to monitor environmental impacts.

4.3.2 Biomonitoring: HHPs IGIs requirements

Feedback summary: Currently biomonitoring operations are carried out by the competent territorial authorities on the subject on larger scale surfaces. The monitoring of workers that goes beyond what is already provided for by current health and safety legislation is difficult to apply, also due to the widespread use of third-party companies to carry out activities relating to HHP and the consequent limitations related to data protection legislation.

TWG solution: The requirement of biomonitoring is omitted in the final draft.

4.3.3 Monitoring: HHPs IGIs requirements - Please let us know how was harm to workers or the environment avoided and how was this determined or monitored? What were the measures to avoid exceeding trigger values?

Feedback summary

Italy - In Italy there is specific legislation on health and safety aimed at preventing damage to workers in charge of carrying out operations concerning HHP, through the use of appropriate methods, equipment, PPE as well as compliance with the dosages and prescriptions reported in the safety data sheets of each product, in addition to the fact that to handle such products it is necessary to have a suitable license. The same legislation also deals with the health monitoring of these workers.

New Zealand - Harm to workers and the environment is avoided by:

- Review and understanding of information in SDSs and associated documents (EPA approval documents, referenced research studies etc).
- ESRAs completed for each chemical used to assess all available information and identify the associated risks to people and the environment

- Training for all personnel
- Procedures for use including the appropriate PPE (based on the SDS)
- Work prescriptions identifying any potential environmental risks and the appropriate controls (application rates, buffer zones, weather conditions, wind direction etc).
- Use of the correct equipment for the job, including the appropriate nozzle technology

Monitoring is carried out via:

- Contractor audits to confirm adherence to all of the requirements above
- For herbicide spraying:
    - post operation checks to ensure no off-target impacts.
    - A targeted water quality monitoring programme at the time of spraying to check for losses to surface water

Brazil - All workers involved in pesticide spraying receive regular training, ensuring that they are always up to date and alert on all safety protocols, whether for human health or the environment. Usage of right PPE and follow the instructions in the label and the MSDS of the product used. Brazil adopts in its legislation for homologation of pesticides the GHS standards, where the National Health Agency (ANVISA) is responsible for analyzing all pesticides from the point of view of safety to the applicator, following internationally accepted criteria for their homologation. When the spraying is near to communities, they are informed in detail about the operation, what will be done, and what precautions will be taken. In addition, the CH has a free telephone channel to record any complaints or comments from stakeholders.

The table with the trigger values is not clear enough and we had difficulties in interpreting the results. It was not possible to see additional benefits in its use when compared to the use of other criteria adopted in Brazil.

4.3.4 Emergency or government requirement: HHPs IGIs requirements - Are there any (or potential) examples of emergency or government requirement where prohibited pesticides are necessary?

Currently none in; Italy, New Zealand, Brazil.

4.3.5 Compensation - Was there any (potential) situation where treatment of compensation was required for over exposure? If yes, please explain how this was (could be) addressed?

Up to now, no situation has been encountered for which compensation has been requested in; Italy, New Zealand, Brazil.

4.3.6 Impact on costs of the audit - Please indicate the impact on the cost of the operations of implementing the HHPs IGIs (especially biomonitoring).

Feedback summary:

HHP IGI should elaborate more in terms of man/days whether you had to hire technical consultants or external experts, whether you had additional evaluation

costs, additional travel costs or any other cost related to the implementation of the field test.

Regarding biomonitoring, workers weren't tested due to the lack of accredited laboratories in the country for this activity. In this way, scenarios were created using real CH data.

Unclear as to date we have been unable to find a laboratory to undertake blood testing for Glyphosate and many of the other herbicides we use. Assuming this does become available it is not anticipated the costs will be prohibitive. Availability is currently the issue.

TWG solution: Taking into consideration of the concerns and feedback that have been submitted regarding biomonitoring, TWG members have had a long, intensive discussion and agreed to shift the focus from biomonitoring to mitigation measures (see new indicator 1.7, 1.8 and 1.9). Therefore, the requirement of biomonitoring is omitted in the final draft.

4.4 Feedback from SDGs & TWG solutions

4.4.1 General: HHPs IGI requirements

SDGs main feedback	TWG solution
The concepts of intervention threshold and critical population density (IGI 1.4) were not felt to be useful in many real-world situations; it was considered more appropriate to recognise that thresholds for action might be based on observed economic, environmental or social impacts.	
Rather than emphasising communication with stakeholders (IGI 1.7), it was felt to be more appropriate to emphasise avoidance of exposure in the first instance, and communicating to the extent necessary once exposure had been managed.	Point taken. The order of the indicators changed accordingly.
Biomonitoring requirements (IGIs 2.1, 2.2, 3.1 and 3.2) were not felt to be practicable or useful. The SDG proposed dropping these IGIs entirely and replacing them with monitoring of PPE usage and health concerns. SDG we will need the help of some competent authorities/experts as our internal level of expertise is not sufficient in order to address issues like biomonitoring indicators.	Point taken. Biomonitoring requirement in the final draft is omitted.

4.4.2 Instruction for standard developers

SDGs main feedback	TWG solution
It is not clear what SDGs are expected to do with the information in Appendix 1.	Revised. As biomonitoring requirement is omitted, relevant information in the table is taken out and the Appendix 1 is now more focused on PPE. SDGs instruction for Appendix 1 is revised accordingly.
Documents references in the instructions for SDGs too extensive, not user friendly.	Revised. Now the reference documents information for SDGs is available as a table, more easy to read and follow.

4.4.3 Emergency or government requirement: HHP IGI requirements

Participants replied that there was no examples of emergency or government requirement where prohibited pesticides are necessary from their region.