Breaking through barriers in communicating the impact of sustainability standards

THE VIA INITIATIVE

APPENDIX
CONTENTS

3 VIA ENDORSEMENT APPLICATION PROCEDURES

14 TEMPLATE 1
ENDORSEMENT APPLICATION FORM
- METHOD

16 TEMPLATE 2
DOCUMENT OF RECORD FOR METHODS

17 TEMPLATE 3
ENDORSEMENT APPLICATION FORM
- STATEMENT AND MESSAGES

19 TEMPLATE 4
DOCUMENT OF RECORD FOR STATEMENTS

21 TEMPLATE 5
DOCUMENT OF RECORD FOR BUSINESS READY MESSAGES

22 VIA ENDORSED METHOD FOR AREA CALCULATIONS

29 VIA ENDORSED GUIDELINES FOR THE STUDY OF CORRECTIVE ACTION REQUESTS

43 VIA ENDORSED EVIDENCE TYPOLOGY & LANGUAGE GUIDELINES

48 VIA ENDORSED SUPPORTING EVIDENCE FRAMEWORKS

76 VIA ENDORSED GUIDELINES FOR PUBLICATION INCLUSION CRITERIA

79 ENDORSED BUSINESS READY MESSAGES AND STATEMENTS

113 CORE MEMBERS OF THE TECHNICAL ADVISORY GROUP FOR THE VIA PILOT
APPENDIX BREAKING THROUGH BARRIERS IN COMMUNICATING THE IMPACT OF SUSTAINABILITY STANDARDS

THE VIA INITIATIVE
VALUE & IMPACTS ANALYSIS FOR CERTIFICATION

VIA ENDORSEMENT PROCEDURE

This document outlines the different aspects of the VIA endorsement process. If you are presenting material for endorsement, please find detailed instructions on how to fill out the templates in section 5. Please note that all material that is endorsed by the Technical Advisory Group of VIA is subject to certain conditions, described in section 3.

For any questions or further information, please contact Kristin Komives, ISEAL’s Director for Impacts and Innovations, at Kristin@isealliance.org.

Document sections:

1. SIGNIFICANCE OF VIA ENDORSEMENT
2. OVERVIEW OF VIA ENDORSEMENT PROCESS
3. CONDITIONS OF ENDORSEMENT
4. TYPES OF PRODUCTS THAT CAN BE ENDORSED
5. INSTRUCTIONS FOR FILLING ENDORSEMENT APPLICATION TEMPLATES
   - TEMPLATE 1. APPLICATION FORM FOR METHODS
   - TEMPLATE 2. DOCUMENT OF RECORD FOR METHODS
   - TEMPLATE 3. APPLICATION FORM FOR STATEMENTS AND BUSINESS READY MESSAGES
   - TEMPLATE 4. DOCUMENT OF RECORD FOR STATEMENTS
   - TEMPLATE 5. DOCUMENT OF RECORD FOR BUSINESS READY MESSAGES

1. SIGNIFICANCE OF VIA ENDORSEMENT

The VIA initiative convenes an impartial group of experts to critically appraise different approaches for synthesizing and analysing evidence for the performance and impacts of sustainability standards, and to agree on simple wording that can most accurately represent that evidence. This group of multi-disciplinary experts, referred to as the Technical Advisory Group (TAG), endorses proposed methods of analysis that meet defined quality standards, and uses agreed upon language guidelines to construct messages from an assessed evidence base that stakeholders can use to better communicate about the sustainability benefits of certification.

It is hoped that an endorsement by the VIA TAG, of research methodologies and results statements they generate, will engender users of such statements to communicate about the performance and impacts of FSC accurately, transparently and with confidence.

2. OVERVIEW OF THE VIA ENDORSEMENT PROCESS

There are FOUR steps in the VIA endorsement process.
APPENDIX BREAKING THROUGH BARRIERS IN COMMUNICATING THE IMPACT OF SUSTAINABILITY STANDARDS

STEP I: Application

- Applications for TAG endorsement can be submitted at any time.
- The instructions on how to fill the application templates are provided in section 4 of this document.
- Applications should be sent to Kristin Komives, ISEAL’s Director for Impacts and Innovations at Kristin@isealalliance.org.

STEP II: First review by the TAG

- Applications will be checked by the ISEAL Secretariat for completeness and shared with all TAG members for their review within 30 days of receipt of a complete submission.
- Individual TAG feedback will be collected through a closed but anonymous Survey Monkey.
- The ISEAL Secretariat will provide the results of the TAG’s first review to the applicant.

STEP III: Iterative process

- IF this first review indicates that the material seeking endorsement has potential but requires changes, the applicant will be asked to present revised material to the TAG.
- Upon request from the TAG, the ISEAL Secretariat may convene the TAG for a live discussion on the revised material. The TAG works under Chatham House rules.
- The iterative review process will continue until the TAG decides either to block or endorse the material, or the applicant withdraws from the application process.
- The TAG is likely to suggest caveats and limitations for associated communications of statements. In such cases that review requires reframing or edits to the content, the final statement will be resubmitted with explanation of the changes made for endorsement to be finalised.

STEP IV: Endorsement

- Endorsement requires that the TAG reaches a consensus, which is defined as “the absence of sustained opposition but does not require unanimity”. This means that any one member of the TAG may express concerns but choose not to block endorsement.
- The TAG requires a quorum to review content and provide decision in order for endorsement process to be completed. A quorum is defined as a majority of TAG members. In the event that a TAG member does not provide a decision during the allotted endorsement time period, they are by default, agreeing with the quorum decision.
- Endorsed material will be subject to the conditions outlined in section 3 ‘Conditions of Endorsement’.

3. CONDITIONS OF ENDORSEMENT

If a methodology and/or its related communications statements are endorsed (separately, in part or in their entirety), the proposing organizer(s) agree to the following conditions:

- The materials reviewed remain the intellectual property of the original author(s).
- The following hierarchy for dissemination (including first right of refusal for use) will be adhered to chronologically:
  1. VIA Steering Committee members
  2. FSC International
  3. Participating TAG members
4. Public

- In line with its objective to compile a comprehensive methodology for the measurement and communication of FSC’s impacts, the VIA Initiative has the right to repost or link to the methods used and, in line with the hierarchy above, make them available as open source access.
- The materials, methodology and/or communications statements are only to be considered as endorsed by the TAG if a notice is received from the VIA coordination team that confirms this.
- Any caveats and limitations for associated communications of endorsed statements should be strictly adhered to.
- Any endorsement will only be referred to as a statement of support from the TAG of VIA.
- Individual and organisation members of the VIA initiative will not be referred to as having approved the materials, methodology and/or communications statements.
- Individual and organisation members of the VIA initiative will only be referred to when describing the VIA TAG membership and its objectives.
- Authorship regarding methods or analyses will be acknowledged.
- The VIA Initiative, its TAG and the individuals or the organisations they represent assume no financial responsibility or liability for use of the endorsement statements or business ready messages.
- In all cases, the VIA Secretariat will communicate the decision to the applicant.

4. TYPES OF PRODUCTS THAT CAN BE ENDORSED

There are THREE types of products that can be presented to the TAG for endorsement:

Methods: Under VIA Phase 1, describes an analytical approach to information synthesis or data analysis that was developed, piloted or revised within the VIA initiative once adopted for maturation by the VIA Technical Advisory Group. A method can also include recommendations for data collection that may be applied through FSC audit activities.

Statements: A statement is a concise representation of key conclusion(s) from a specific analysis. The analysis can take different forms based on the method and body of evidence considered.

Business ready messages: A business-ready message is stylized to be a more lay accessible interpretation of analytical results and can be based on one or more summary statements. A business ready message is defined as follows:

- Useful and useable within the business context.
- Truthful and based on substantiated evidence.
- Uses plain, uncomplicated language.
- Is easily understood and free from misleading details.
- Is about an issue that is material or significant to the product or business.
- Is meaningful for the different stakeholders.

5. INSTRUCTIONS FOR FILLING ENDORSEMENT APPLICATION TEMPLATES

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1 A decentralized use of the materials is encouraged for open collaboration and continued improvement.
The VIA initiative uses a combination of ‘application forms’ and ‘documents of record’ to present material to the TAG for endorsement. Applicants have two options available to them:

**Option 1.** Applicants wishing to present a method for endorsement must fill out the application form and documents of record that are specific for methods.

**Option 2.** Applicants wishing to present statements and business-ready messages must fill out an application form specific to communication materials, and the corresponding documents of record. Please note that business ready messages can only be presented with the supporting statements.

**TEMPLATE 1: APPLICATION FORM FOR METHODS**

1. **General submission details**
   1.1. **Name of applicant (pitch lead).** Name of the person submitting the application.
   1.2. **On behalf of which organisation (if applicable).** Name of the organisation submitting the application, if applicable.
   1.3. **Name of corresponding pitch.** Name of the method or set of statements that were originally pitched to the Technical Advisory Group. In line with VIA’s Pitch Process, a pitch (both internal and external) must first be adopted by the Technical Advisory Group before it can submit material for endorsement.
   1.4. **Other pitch members.** Names of other people working in the pitch.
   1.5. **Date of adoption of pitch.** The day the Technical Advisory Group voted to adopt the pitch.
   1.6. **Type of pitch.** Pitches can be external or internal. External pitches are not matured within VIA, meaning that they do not benefit from VIA’s financial support and from the collegial advice of the Technical Advisory Group, as explained in VIA’s Pitch Process.
   1.7. **If external to VIA, please list funding sources.** Please indicate the source of funding for pitches that are not matured within VIA.
   1.8. **VIA themes addressed.** Between July and September 2015, the VIA coordination team interviewed various key stakeholders to identify priority themes for communications about the sustainability impacts and performance of the Forest Stewardship Council (FSC). The priority themes identified were Biodiversity; Ecosystem services; Relationship with local communities; Health, safety and labour; Minimised forest degradation; Forest standing; and Legality, transparency and trade. Identify the themes addressed by the methods presented for endorsement.
   1.9. **Applicable geographic scope.** Identify the relevant geographic scope for the methods proposed.
   1.10. **Forest type.** Indicate whether the methods presented apply to plantations and/or natural forests. “FSC defines plantations as “forest areas lacking most of the principal characteristics and key elements of native ecosystems, which result from the human activities of planting, sowing or intensive silvicultural treatments.” (...) FSC defines natural forests as “forest areas where many of the principal characteristics and key elements of native ecosystems such as complexity, structure and diversity are present, as defined by FSC approved national and regional standards of forest management.” (...) FSC certified plantations must meet the same social, environmental and economic criteria that natural forests do, as outlined in Principles 1-9, but they must also comply with Principle 10” ².

² Source: [http://plantations.fsc.org/content/en/faq.htm](http://plantations.fsc.org/content/en/faq.htm) (last visited: July 2017)
1.11. **Forest biomes.** Indicate whether the methods apply to tropical and/or temperate and/or boreal forests. ‘Tropical’ include tropical and subtropical moist forests, tropical and subtropical dry forests, and tropical and subtropical coniferous forests.

2. **List of documents of record for endorsement enclosed to this application.** Enumerate and provide the title for each document of record for method enclosed to this application.

3. **How do you categorize your proposed method(s)?** Mark with an ‘x’ the types of evidence that best describe the methods presented in this application for endorsement.

3.1. **Systematic review.** A study that collates, critically appraises, and synthesizes all available studies relevant to a question. Reviewers use pre-defined methods to minimize bias in the literature review and thus provide reliable findings that could inform decision-making. A systematic review is highly structured and uses an a priori specified standardized protocol-driven process for synthesising evidence; always includes an extensive search for all relevant evidence and critical appraisal of the included evidence; may quantitatively combine evidence to improve precision; can also present qualitative findings in a systematic review narrative. Systematic reviews can suffer from publication bias stemming from the fact that typically significant (either positive or negative) effects are more likely to be published or provided as working papers than studies that find no effect. The goal is to provide findings that are generalizable across locations and time periods. The following wording can be used: “as a result”, “caused”, “lead to”, “reduced”, “increased”. Currently, there are only a handful of studies that can show causation. Additionally, wording of statements can be used to represent the geographic/temporal/thematic scope of a meta-analysis: “in the South Amazon region”, “across the tropics”, “in Malaysia”, “animal species” rather than “in an FSC-certified forest in Malaysia”, or “invertebrate species” which would be the appropriate wording for a case study. Language guidelines have to be based also on the type of evidence was in individual studies (i.e., if only Study I were included, language implying causality cannot be used).

3.2. **Meta-analysis.** A study that synthesizes findings of individual papers, reports, etc., in order to draw conclusions that hold for broader geographic regions or time periods, or test emerging hypotheses based on the syntheses. In contrast to systematic reviews, a meta-analysis tends to be more quantitative by summarizing previous work by in tabular form, creating variables that may explain the observed patterns, and using statistical techniques to test hypotheses that are based on the syntheses or data of previous studies. For hypothesis tests, it requires a relatively large number of studies. The type of evidence that a meta-analysis can provide depends ultimately on the quality of information used and reported in the individual studies. In performing a meta-analysis, an investigator must make choices which can affect the results, including deciding how (e.g., key words) and where to search for studies, determining the criteria to include or drop a study in the analysis, dealing with incomplete data, and analysing the data. Meta analyses can suffer from publication bias stemming from the fact that typically significant (either positive or negative) effects are more likely to be published or provided as working papers than studies that find no effect. The wording used should reflect the type of studies that were used in the meta-analysis (see below). Additionally, wording of statements can be used to represent the geographic/temporal/thematic scope of a meta-analysis: “in the South Amazon region”, “across the tropics”, “in Malaysia”, “animal species” rather than “in an FSC-certified forest in Malaysia”, or “invertebrate species” which would be the appropriate wording for a case study. Language guidelines have to be based also on the type of evidence was in individual studies (i.e., if only Study I were included, language implying causality cannot be used).

3.3. **Randomized controlled trial (RCT).** A study that evaluates the impacts of an intervention by comparing outcomes for a sample unit (e.g. household, forest concession, individual) where the intervention had been implemented (treatment observations) with outcomes in units where the intervention had not been implemented (control observations). The observations are assigned
into treatment and control categories randomly, in order to balance the covariate distributions of observed and unobserved factors and eliminate potential biases. RCTs are rare and often of limited use in conservation (except, perhaps, emerging studies of payments for ecosystem services) because many conservation strategies aim to protect an area with specific features and at large scales (e.g. areas that are important for biodiversity conservation), thus randomization often is not possible or does not make sense. The following wording can be used: “as a result”, “caused”, “lead to”, “reduced”, “increased”. Currently, there are only a handful of studies that can show causation.

3.4. **Study III (quasi-experimental research designs).** A study that evaluates the impacts of an intervention by comparing outcomes for a sample unit (e.g. household, forest concession, individual) where the intervention had been implemented (treatment observations) with outcomes in units where the intervention had not been implemented (control observations). The selection of appropriate controls is embedded into the study design, so that the units of comparison (e.g. forest concession) that are chosen to be similar in most important aspects as possible to the treatment observations and ideally differ only in terms of the presence of the treatment (e.g. FSC certification or conservation strategy). For example, we could up front select our control forest concession that are not FSC-certified so that they would be similar in terms of the logging intensity, type of forest, altitude, deforestation pressures, etc. Statistical approaches in this class of study design are referred to as quasi-experimental, as they mimic experimental processes (because certification most often cannot be randomly placed across a landscape) and generate balanced observed covariate distributions across the treatment and control groups. The quasi-experimental statistical techniques include matching, regression discontinuities, instrumental variables, panel data regression techniques and combinations thereof. The goal of these techniques is to establish the causal impact of an intervention, and the process of selecting appropriate controls so that they are as similar in their observed characteristics as possible to the treatment observations. The choice of which characteristics to include in the model is driven by the factors that determine the placement of the conservation intervention and the outcome (e.g. deforestation). Some modelling studies, if accounting for the counterfactual scenario (e.g., in case when a policy is to be implemented), can also generate results that have a causal interpretation. The following wording can be used: “as a result”, “caused”, “lead to”, “reduced”, “increased”. Currently, there are only a handful of studies that can show causation.

3.5. **Study II (Takes some confounders into account).** A study that evaluates the impacts of an intervention by comparing outcomes in an area where the intervention had been implemented (treatment) with outcomes in an area where the intervention had not been implemented (control). Alternatively, the study can compare a variable before and after implementation. In contrast with Study I, this type of study takes some (typically not all) confounding variables into account. However, in contrast with Study III, it does not select controls a priori, it only takes the confounding variables into account after the fact and assumes there is sufficient overlap in the distributions of these variable between the treatment and control groups. For example, it could take into account the logging intensity in certified and conventional concessions, and calculate the canopy loss per tree extracted. It can show correlation between implementation and outcome relatively reliably, especially in cases where the system is well-understood and most of the potentially biases are measurable (such as in the case of structural changes to the forest due to different types of logging). The following wording can be used: “is associated with”, “was found to have”, “is correlated with”, “even when [logging intensity, distance to cities, population size, …] are taken into account, certification is correlated with”. 
3.6. **Study I (case-control).** A study that evaluates the impacts of an intervention by comparing outcomes for a sample unit (e.g. household, forest concession, individual) where the intervention had been implemented (treatment observations) with outcomes in units where the intervention had not been implemented (control observations). Alternatively, the study can compare a variable before and after implementation. The study design does not take confounding variables into account. This means that we cannot establish whether the potential difference in outcomes between the treatment and control is due to the intervention itself, or whether it is due to another, independent factor. For example, a forest concession that is FSC-certified could have a lower canopy loss due to logging, when compared to a neighbouring concession which is not certified. This difference could be due to improved logging brought about with certification, but also for example because the FSC-certified concession had a lower abundance of commercially desirable trees to begin with, and so it was logged less intensively. This type of study can potentially show a true correlation between implementation of a conservation strategy (e.g. certification) and an outcome (e.g. lower canopy loss), however, it is possible that unknown mechanisms in fact drive the correlation, such as self-selection or another type of systematic bias. Wording that implies any type of causation cannot be used. Instead, wording such as “is associated with”, “was found to have”, “is correlated with” can be used. Note that this is still valuable evidence and can be often reliable used in meta-analyses.

3.7. **Case report.** A study that evaluates the impacts of an intervention by critically assessing outcomes in areas where the intervention had been implemented. A case study does not formally compare outcomes in the treatment instance (where intervention had been implemented) with an instance where the intervention had not been implemented (control). As a result, it is difficult to assign any outcomes to the actual implementation of the intervention. However, case studies can be very useful in providing an understanding of the potential mechanisms that could link an intervention and an impact. Case studies often use interviews with project participants, asking questions about satisfaction, perceived outcomes, or fairness of an intervention. In many instances, case studies are retrospective. Wording that implies any type of causation cannot be used. Instead, wording such as “was found to have” can be used.

3.8. **Expert opinion.** A study that compiles knowledge and/or opinions of a range of independent experts for a specific issue or question. This can be done in group meetings or individual interviews. The approach is used when there is no prior information (e.g., about a key parameter, driver of forest loss etc.) in the published literature. Wording that implies any type of causation cannot be used. Instead, wording such as “findings suggest, or findings indicate” are appropriate. Guidelines on selecting experts and the data elicitation process should be clear.

3.9. **Other types of evidence (please describe).** This may include raw data and descriptive statistics, internal reports, conference proceedings and other grey literature. Wording that implies any type of causation cannot be used. Instead, wording such as “findings suggests, or findings indicates” are appropriate.

4. **Overview of the proposed approach or method.** Please provide a brief description (max. 150 words) of each method presented for endorsement in this application.

5. **Bibliography.** Please indicate whether you are enclosing a bibliography to this application.

6. **Statement and agreement with conditions of endorsement.** Please sign and date the application to confirm that the information provided is accurate and that you agree with the conditions of endorsement, as outlined in part 3 of this document.

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**TEMPLATE 2: DOCUMENT OF RECORD FOR METHODS**

1. **Title of the method.**

2. **Introduction.** Provides background information on the need for this method.
3. **Description of method.** More detailed description of the method to complement the summary provided in the application form for methods. Please include: 1) description of your sampling or study selection approach; 2) sample size and total population if relevant; 3) any dropped observations and why they were dropped.

4. **Contextual information.** Information that is important to consider to understand the significance of the method and the results that it can produce.

5. **References.** Provide details for any source cited in the description of the method.

6. **Method number.** The number assigned to the proposed method in the current version. To be completed by the VIA coordination team before sharing the document of record with the Technical Advisory Group.

7. **Survey Monkey link.** Link to the survey to be completed with feedback for the proposed method. To be completed by the VIA coordination team before sharing the document of record with the Technical Advisory Group.

8. **Summary of comments received and voting results from the Technical Advisory Group during previous revisions of M-(number).** Summary of the comments received for every previous version of this method. To be completed by the VIA coordination team before sharing this document of record with the Technical Advisory Group.

9. **Summary of comments received and voting results from the Technical Advisory Group for M-(number).** Summary of the comments received for the proposed method in the current version. To be completed by the VIA coordination team after voting on M-(number) closes.

10. **Overall period of endorsement.** Refers to the whole period from the moment the method was first presented for endorsement to the moment a final endorsement decision is made. To be completed by the VIA coordination team after a final endorsement decision has been made.

11. **Number of revisions.** Number of revisions during the period of endorsement. To be completed by the VIA coordination team after a final endorsement decision has been made.

12. **Endorsement results.** Final decision by the Technical Advisory Group. To be completed by the VIA coordination team after a final endorsement decision has been made.

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**TEMPLATE 3: APPLICATION FORM FOR STATEMENTS AND BUSINESS READY MESSAGES**

1. **General submission details.** Please see Template 1, section 1 for details on this section.

2. **Overview of the evidence used to generate statements, and messages (if applicable).** The tables in this section summarize the study design for the evidence you considered when formulating the summary statements and messages. For each type of study design, please indicate how many studies you reviewed, rejected, and used. A detailed description is provided for each type of evidence in Template 1, section 3 above).

3. **Overview of the approach used to generate the statement and messages.** Please describe the criteria you used to accept or reject considered evidence.

4. **List of documents of record presented for endorsement in this application.**
   4.1. **Documents of record for statements.** Please enumerate and write down the full statement for each document of record for statements enclosed.
   4.2. **Documents of record for business ready messages.** Please enumerate and write down the full message for each document of record for message enclosed.

5. **Detail of enclosed material.**
   5.1. **Bibliography.** Please indicate whether you are enclosing a bibliography to this application.
5.2. **Other.** Please describe any other documents you are enclosing to this application, apart from the bibliography or documents of recorded listed in section 4.

6. **Statement.** Please sign and date the application to confirm that the information provided is accurate and that you agree with the conditions of endorsement, as outlined in part 3 of this document.

**TEMPLATE 4. DOCUMENT OF RECORD FOR STATEMENTS**

1. **Proposed statement.** This is a succinct summary of the summary of the key results derived from the evidence base being considered. Focused on external (to FSC) change or contrast.

2. **Type of outcome.** This refers to the type of effect we’re seeing. Is it about biodiversity, working conditions, etc.? This should align with the VIA themes identified in the linked endorsement application form.

3. **Why is this significant?** (Explain why the outcome/contrast matters. Who is affected and how? Is it durable? What are the likely long term/broader ramifications? Are they appropriately considered in the evidence base) This should include a description of the time frame for impacts based on data collection time frame (e.g. a point in time, over several months, versus time series over several years). For example a piece of evidence examined selective logging and focused on ground disturbance outcomes. Selective logging can also affect changes to species composition, thus the evidence base did not fully consider all the likely long-term ramifications of selective logging.

4. **How did FSC influence this outcome?** This is to capture attribution of observed results to FSC certification or specific FSC P&C related practices (e.g. reduced impact logging). This should be sufficiently detailed to allow readers to understand how and to what degree the evidence base justifies meaningful attribution of outcomes to FSC.

5. **Describe the evidence base.** What was actually measured and how? Describe the outcome/contrast in a few sentences. Who has done what differently?

6. **Limitations arising from the evidence base (sampling strategy, age of data).** Characterises the methods such as sample size, location, type of forest where it is based. This should include enough detail so that reader does not have to refer to the original research material(s). It should include lists of types of data collected (e.g. field transects for DBH, understory, etc.), definition of statistical method, and how issues of selection bias were addressed, etc.

7. **Limitations arising from the methodology.** This could include what kind of data was actually collected in the study. We can also use this to explain the rigor of the study – link it to the evidence typology.

8. **Language guidelines to reflect attribution to FSC.** This is where we link to the language guidelines prepared by the Evidence Map pitch.

9. **Reference.** Provide the full reference to the evidence based used to formulate the summary statement.

10. **Access to relevant evidence / studies.** Provide link to full study or identify how readers can gain access to the underpinning original evidence base.

11. **Statement number.** The number assigned to the proposed statement in the current version. To be completed by the VIA coordination team before sharing the document of record with the Technical Advisory Group.

12. **Survey Monkey link.** Links to the survey to be completed with feedback for the proposed statement. To be completed by the VIA coordination team before sharing the document of record with the Technical Advisory Group.

13. **Summary of comments received and voting results from the Technical Advisory Group during previous revisions of this statement (number...).** Summary of the comments received for every
previous version of this statement. To be completed by the VIA coordination team before sharing this document of record with the Technical Advisory Group.

14. **Summary of comments received and voting results from the Technical Advisory Group for current revision of ST-(number)**. Summary of the comments received for the proposed statement in the current version. To be completed by the VIA coordination team after voting on St-(number) closes.

15. **Overall period of endorsement**. Refers to the whole period from the moment the statement was first presented for endorsement to the moment a final endorsement decision is made. To be completed by the VIA coordination team after a final endorsement decision has been made.

16. **Number of revisions**. Number of revisions during the period of endorsement. To be completed by the VIA coordination team after a final endorsement decision has been made.

17. **Endorsement results**. Final decision by the Technical Advisory Group. To be completed by the VIA coordination team after a final endorsement decision has been made.

**TEMPLATE 5. DOCUMENT OF RECORD FOR BUSINESS READY MESSAGES**

1. **Proposed business ready message**. Messages produced in collaboration with communication specialist.

2. **Corresponding statements**. List all statements that were used in crafting the business ready message. Please feel free to add extra rows as needed.

3. **Type of outcome**. This refers to the type of effect we’re seeing. Is it about biodiversity, working conditions, etc.?

4. **Acknowledge limitations and caveats for use**. Describe all relevant limitations and caveats for use to clarify the totality of the evidence base considered in formulating the statement to guide users in estimating their risk tolerance in using the endorsed business ready message. Because the evidence base is so limited, VIA is increasing access to the existing evidence and devising valid approaches to provide companies with a critical assessment of a subset of the evidence base that supports communication on important themes and issues. It is VIA’s belief that this will help synthesize the evidence base into credible, business-ready messages, while also helping to expand and improve the evidence base on the performance and impacts of FSC.

5. **Message number**. The number assigned to the proposed message in the current version. To be completed by the VIA coordination team before sharing the document of record with the Technical Advisory Group.

6. **Survey Monkey link**. Links to the survey to be completed with feedback for the proposed message. To be completed by the VIA coordination team before sharing the document of record with the Technical Advisory Group.

7. **Statement number**. The VIA coordination team will use this box to provide the numbers of each corresponding statement listed in number 2 above, before sharing the document of record with the Technical Advisory Group.

8. **Summary of comments received and voting results from the Technical Advisory Group during previous revisions of BRM-(number)**. Summary of the comments received for every previous version of this message. To be completed by the VIA coordination team before sharing this document of record with the Technical Advisory Group.

9. **Summary of comments received and voting results from the Technical Advisory Group for current revision of BRM-(number)**. Summary of the comments received for the proposed
statement in the current version. To be completed by the VIA coordination team after voting on BRM-(number) closes.

10. **Overall period of endorsement.** Refers to the whole period from the moment the statement was first presented for endorsement to the moment a final endorsement decision is made. To be completed by the VIA coordination team after a final endorsement decision has been made.

11. **Number of revisions.** Number of revisions during the period of endorsement. To be completed by the VIA coordination team after a final endorsement decision has been made.

12. **Endorsement results.** Final decision by the Technical Advisory Group. To be completed by the VIA coordination team after a final endorsement decision has been made.
ENDORSEMENT APPLICATION FORM – STATEMENTS AND BUSINESS READY MESSAGES

For detailed instructions on filling this application document and associated documents of record, please refer to VIA’s Endorsement Procedure

Submit completed applications with corresponding documents of record to Kristin Komives, ISEAL’s Director, Impacts and Innovations, at Kristin@isealliance.org.

1. General submission details

1.1. Name of applicant (pitch lead):

1.2. On behalf of which organisation (if applicable):

1.3. Name of corresponding pitch:

1.4. Other pitch members:

1.5. Date of adoption of pitch:

1.6. Type of pitch:

☐ internal or ☐ external

1.7. If external to VIA, please list funding sources:

n/a

1.8. VIA themes addressed:

☐ avoided deforestation
☐ transparency related to legality
☒ biodiversity
☐ provision of ecosystem services
☐ relations with indigenous and/or local communities
☐ worker health, safety and rights
☐ habitat alteration or degradation of natural forests
☐ other (please describe): Protected areas

1.9. Applicable geographic scope:

☐ forest management unit (FMU)
☐ district or community
☐ country

☐ region
☐ global
☐ other (please describe): forest management types,

 e.g. community, non-timber forest products

1.10. Forest type:

☐ Plantation ☐ Natural forest

☐ Tropical ☐ Boreal ☐ Temperate
2. Overview of the evidence used to generate statements, and messages (if applicable)

Please fill out the table below according to the guidance in the Endorsement Procedure and enclose a bibliography. Criteria for accepting/rejecting evidence are described in Section 3.

<table>
<thead>
<tr>
<th>Type of evidence</th>
<th>Reviewed</th>
<th>Rejected</th>
<th>Used</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2.2. Meta-analysis.</td>
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<td>2.3. Randomized controlled trial.</td>
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<tr>
<td>2.9. Other types of evidence. Please describe: Raw data from FSC forest management audit reports.</td>
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</table>

3. Overview of the approach used to generate the statement and messages. Please describe the criteria you used to accept or reject considered evidence.

4. List of documents of record presented for endorsement in this application.

4.1. Documents of record for statements

<table>
<thead>
<tr>
<th>No.</th>
<th>Full statement:</th>
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4.2. Documents of record for business ready messages

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<th>No.</th>
<th>Full message:</th>
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</table>

5. Detail of enclosed material

5.1. Bibliography: □ yes or □ no

Other (describe):

6. Statement

I confirm the accuracy of the information included, and agree with the conditions of endorsement outlined in VIA’s Endorsement Procedure document available on the VIA page at www.isealalliance.org/VIA.

Signature: ____________________________

Name: ________________________________

Date of submission: _________________
For information on how to complete this document, please consult the VIA Endorsement Procedure.

<table>
<thead>
<tr>
<th>1. Title of method</th>
<th>6. Method number:</th>
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<tbody>
<tr>
<td>2. Introduction</td>
<td>7. Survey Monkey link:</td>
</tr>
<tr>
<td>3. Description of method</td>
<td></td>
</tr>
<tr>
<td>4. Contextual information</td>
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</tr>
<tr>
<td>5. References</td>
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<td>8. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of M-(number)</td>
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<td>11. Number of revisions:</td>
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<td>12. Endorsement results:</td>
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</table>
ENDORSEMENT APPLICATION FORM – STATEMENTS AND BUSINESS READY MESSAGES

For detailed instructions on filling this application document and associated documents of record, please refer to VIA’s Endorsement Procedure

Submit completed applications with corresponding documents of record to Kristin Komives, ISEAL’s Director, Impacts and Innovations, at Kristin@isealalliance.org.

1. General submission details

1.1. Name of applicant (pitch lead):
1.2. On behalf of which organisation (if applicable):
1.3. Name of corresponding pitch:
1.4. Other pitch members:

1.5. Date of adoption of pitch:
1.6. Type of pitch:
1.7. If external to VIA, please list funding sources:

1.8. VIA themes addressed:
☐ avoided deforestation
☐ transparency related to legality
☒ biodiversity
☐ provision of ecosystem services
☐ relations with indigenous and/or local communities
☐ worker health, safety and rights
☐ habitat alteration or degradation of natural forests
☐ other (please describe): Protected areas

1.9. Applicable geographic scope:
☐ forest management unit (FMU)
☐ district or community
☐ country
☐ region
☐ global
☐ other (please describe): forest management types, e.g. community, non-timber forest products

1.10. Forest type:
1.11. Forest biomes:
☐ Plantation ☑ Natural forest
☐ Tropical ☐ Boreal ☐ Temperate
2. Overview of the evidence used to generate statements, and messages (if applicable)

Please fill out the table below according to the guidance in the Endorsement Procedure and enclose a bibliography. Criteria for accepting/rejecting evidence are described in Section 3.

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<thead>
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<th>Type of evidence</th>
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<th>Used</th>
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5. Detail of enclosed material

5.1. Bibliography: [ ] yes or [ ] no

Other (describe):

6. Statement

I confirm the accuracy of the information included, and agree with the conditions of endorsement outlined in VIA’s Endorsement Procedure document available on the VIA page at www.isealalliance.org/VIA.

Signature: ____________________________

Name: ________________________________

Date of submission: ____________________
For information on how to complete this document, please consult the VIA Endorsement Procedure.

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<td></td>
<td>12. Survey Monkey link:</td>
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</tr>
<tr>
<td>2. Type of outcome:</td>
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<td></td>
</tr>
<tr>
<td>3. Why is this significant?</td>
<td></td>
<td></td>
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<tr>
<td>4. How did FSC influence this outcome?</td>
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<tr>
<td>5. Describe the evidence base. What was actually measured and how?</td>
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<tr>
<td>6. Limitations arising from the evidence base (sampling strategy, age of data).</td>
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<td>7. Limitations arising from the methodology.</td>
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<tr>
<td>8. Language guidelines to reflect attribution to FSC.</td>
<td></td>
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<tr>
<td>9. Reference.</td>
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<tr>
<td>10. Access to relevant evidence /studies via:</td>
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<td>14. Summary of comments received and voting results from the Technical Advisory Group</td>
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15. Overall period of endorsement:

16. Number of revisions:

17. Endorsement results:

for current revision (number...).
**THE VIA INITIATIVE**

VALUE & IMPACTS ANALYSIS FOR CERTIFICATION

**DOCUMENT OF RECORD FOR BUSINESS READY MESSAGES**

For information on how to complete this document, please consult the VIA Endorsement Procedure.

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<th><strong>3. Type of outcome:</strong></th>
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<table>
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<th><strong>4. Acknowledged limitations and caveats for use</strong></th>
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**The VIA Initiative**  
*Value & Impacts Analysis for Certification*

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**Document of Record for Method**

For information on how this document was completed, please consult the VIA Endorsement Procedure.

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<thead>
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<tr>
<td>AREA CALCULATIONS</td>
<td>M-1b</td>
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<table>
<thead>
<tr>
<th>2. Introduction</th>
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</table>
| Forest management certification by the Forest Stewardship Council (FSC) is a voluntary process for verifying responsible forest practices. FSC accredited certification bodies audit each FSC certified forest management operation at least once a year. FSC then makes all of these audit summary reports publicly available through [https://info.fsc.org/](https://info.fsc.org/). In July 2017, reports for each of the over 1,500 certified forest management operations were accessible.

The FSC Standard 20-007b details what an audit summary report shall contain. The reports inform about a certified forest operation’s compliance and non-compliance with country-specific FSC criteria and indicators, and the actions that foresters have to implement to address any non-compliances. The reports also contain information on key characteristics such as the ownership status, number of employees, the political history and bio-geographical key features such as soils, climate (boreal, temperate, tropical, sub-tropical), the type of forest management (natural forest, semi-natural, or plantation) In addition, each report provides various ‘area data’, for example, the total number of hectares under certification, set aside areas, high conservation value (HCV) areas, and areas managed for non-timber forest products (NTFPs).

FSC monitors the vast amount of data from the audit summary reports for evaluation purposes. However, because each summary report is provided to FSC as an individual PDF and because there is a certain degree of variability across the reports, it is challenging for FSC to aggregate this information for analysis and to communicate about FSC’s performance and impacts.

In 2016-2017, as part of the Value and Impacts Analysis (VIA) initiative, a group of experts sought to produce business-ready messages based on a dataset that FSC had collated back in 2014 with information from audit summary reports data valid at the time. The group produced various business-ready messages and statements based on area calculations, and this document captures the methodology they used, starting with a description of the existing FSC dataset and its limitations.
It is worth noting that FSC is taking significant steps to standardise audit data reporting and enable real-time, electronic reporting. These steps should reduce the high variability described in section 4, and facilitate data extraction, aggregation and analysis.

3. Description of method

THE FSC DATASET

To facilitate the work of the VIA initiative in producing business ready messages based on information from audit reports, FSC kindly agreed to share with the VIA group of experts a data set it had created in 2014. The data set compiles information from publicly available reports and does not contain personal information of certificate holders. It was shared with the VIA group of experts upon signing an agreement where they commit to not share the data in its raw form.

Characteristics of the raw data included in the FSC data set

In 2014, the Monitoring and Evaluation staff at FSC compiled a data set with information for 97% of the 1,278 FSC certified forest management units valid in May 2014. All of this information was manually extracted from publicly available audit summary reports for certificates located across 81 countries. The exercise required numerous data quality checks and standardisation of information, and took FSC a few months to complete.

The audit reports valid in May 2014 all assessed compliance with the respective FSC National Standards based on version 4 of the FSC Principles & Criteria (FSC-STD-01-001 V4-0). The audit reports valid in May 2014 all assessed compliance with the respective FSC National Standards based on version 4 of the FSC Principles & Criteria (FSC-STD-01-001 V4-0), and the reporting is along the requirements FSC-STD-20-007b ‘for public summaries of forest management evaluations.

For each one of the certificates, FSC reviewed at least one corresponding report (generally the most recent).

Limitations of the FSC dataset in terms of aggregability and comparability

- The data set does not cover the entirety of the FSC management certificates: The FSC data set is based on reports of 1,250 out of the 1,278 forest management certificates that were valid in May 2014. A total of 28 reports were excluded because the relevant data was too fragmented or it was not clear whether the certificates had not merged into group certificates.

- The data set includes reports with data collected at different times (chronological mix): The FSC data set is based on reports produced between 2012 and 2014, but some of these reports contain information gathered as far back as 2007. This is because the first time a forest operation is audited, auditors write a more comprehensive ‘main assessment’ report. Subsequent audits over the 5 year validity of a certificate are largely ‘surveillance audits’ to assess status against deficits (non-conformity) found through the main assessment in the first year. Surveillance audits will only collect new data for indicators related to the non-conformity, but do not always indicate the age of the other data in the report. The FSC dataset was built with the data available in the most recent report and there is therefore a chronological mix of data that must be kept in mind.
The data set is not complete (information gaps): The data set has gaps because some audit reports did not contain information for certain data points. For example, the number of male and female workers in a production site is often missing in the data set. Additionally, it is possible that some of the HCV classes had overlaps. Where possible, efforts were made to ensure that the area statistics for the inclusive HCV classes matched and when combined, provided the correct total area. However, this was not always the case.

- The data set might be inaccurate or have errors of misinterpretation: There might also be some inaccuracies in the data set because not all summary reports are in the same language or use the same units of measurement or are written in the same template. For some data points, data variability is due to the national interpretation of the FSC-STD-01-001 V4. For others, “human errors” occurred, like misplacing commas, or typos, etc. The FSC Monitoring and Evaluation team cleaned the information when building the data set but it is possible that there may be errors of interpretation even though the building of the data set was supervised by the FSC experts.

**THE VIA METHODOLOGY**

**Selection of parameters**

The FSC data set includes data points for various criteria of the FSC forest management standard, across 81 countries. The first priority of the VIA group of experts was therefore to select a sub-set of data points and countries to analyse. The selection was based on the communication needs and sourcing areas of the organisations funding the work of the VIA initiative. Prioritised data point and countries were as follows:

<table>
<thead>
<tr>
<th>Data point priorities</th>
<th>Country priorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of certificates</td>
<td>Tier 1: Russian Federation, Belarus, Poland, Latvia, Lithuania, Estonia, Denmark</td>
</tr>
<tr>
<td>Total hectares (ha)</td>
<td>Tier 2: Bulgaria, Czech Republic, Indonesia, Portugal, Slovakia, Spain, Ukraine.</td>
</tr>
<tr>
<td>Set-aside area (ha)</td>
<td></td>
</tr>
<tr>
<td>HCV total and HCV 1/2/3/4/5/6 (ha)</td>
<td></td>
</tr>
<tr>
<td>Area managed for Non Timber Forest Products (NTFPs) (ha)</td>
<td></td>
</tr>
<tr>
<td>Total number of workers</td>
<td></td>
</tr>
<tr>
<td>Total number of male vs. female workers</td>
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<tr>
<td>Number of accidents</td>
<td></td>
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<tr>
<td>Number of fatalities</td>
<td></td>
</tr>
<tr>
<td>Area of forest regenerated by natural regeneration (ha)</td>
<td></td>
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</tbody>
</table>

The ‘set aside area’ refers to the following FSC P&C (FSC-STD-01-001 V4-0):

- Principle #6 Environmental impact. ‘Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest’.
  - Criterion 6.4. ‘Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources’.
The selection included all six types of High Conservation Areas:

- **HCV 1 - Species diversity.** Concentrations of biological diversity including endemic species, and rare, threatened or endangered species that are significant at global, regional or national levels.

- **HCV 2 - Landscape-level ecosystems and mosaics.** Intact forest landscapes and large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.

- **HCV 3 - Ecosystems and habitats.** Rare, threatened, or endangered ecosystems, habitats or refugia.

- **HCV 4 - Critical ecosystem services.** Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.

- **HCV 5 - Community needs.** Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (e.g., for livelihoods, health, nutrition, water, etc.), identified through engagement with these communities or indigenous peoples.

- **HCV 6 - Cultural values.** Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or indigenous peoples.

### Selection of parameters and scope of final analysis

Having defined the parameters for the analysis, the VIA group of experts run a data analysis on Excel to determine which calculations would actually be possible given the data limitations explained above. Possible calculations are marked with an X in the table below.

As shown, data gaps impeded the calculation of total number of hectares by type of tenure ownership (government, private, and public). It is possible, however, to calculate the total number of hectares globally, and by forest biome and forest type, and in every one of the prioritised countries.

With regard to HCV areas, it became clear that it would not be possible to calculate the total HCV area across FSC certificates globally, or in particular forest biomes or forest types, or in the countries selected. This is because it is sometimes not clear if the sum of the area of each of the 6 HCV classes sums up to the total of the HCV area, or whether some HCV areas are overlapping (e.g. are the orchids growing where the tiger is roaming, or are these two different areas within the forest management operation?). It would be possible to calculate areas for HCV 1 to HCV 6 by forest biome, globally, and for the selection of countries.

Whilst it would have been possible to do all the calculations marked with an X below, only those marked in green were ultimately prioritised given the scope and time constraints of the project. Note that the list of
priority countries was also narrowed down and a few new countries added (Brazil, Canada and United States) by decision of the companies participating in the VIA initiative:

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Hectares</th>
<th>Set aside area (ha)</th>
<th>HCV total (ha)</th>
<th>HCV 3/2/3/4/9 (ha)</th>
<th>Area managed for HFTPs (ha)</th>
<th>Total number of workers</th>
<th>Workers (male : female)</th>
<th>Number of accidents</th>
<th>Number of facilities</th>
<th>Area of forest regenerated primarily by natural regeneration (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Globally</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Temperate</td>
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<td>X</td>
<td>X</td>
<td>HCVI-6</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
</tr>
<tr>
<td>Tropical</td>
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<td>HCVI-6</td>
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<td>X</td>
<td>HCVI-6</td>
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</table>

Conclusions

The VIA group of experts had identified a set of parameters to generate calculations from the FSC data set that could then be used as evidence base for business ready messages. As explained above, some of these calculations were not possible, mostly due to information gaps. Even with calculations that were possible, the communications potential was constrained by the limitations of the FSC data set that are explained at the beginning of this section.

The limitations of the FSC data set defined the content and strength of these messages in various ways. For instance, the VIA group of experts noted that whilst there is data for number of accidents and fatalities, these data points were only collected as of 2014. It was therefore not possible to conduct a longitudinal calculation and develop messages on FSC’s contribution to safe work conditions over time. An option would have been to compare this date with industry averages for the forestry sector in 2014. This idea was briefly considered but ultimately voted against due to the additional research that would be necessary to conduct that analysis.

Similarly, the number of workers and number of female workers vs. male workers were also data points collected only from 2014. Without it being possible to do a comparison over time, or a comparison with industry averages, there is little communications value in these calculations.
All the communications products developed within the VIA initiative have a corresponding ‘document of record’ which explains the limitations of the evidence base and the language guidelines that are relevant in each case.

4. Contextual information

Variability in FSC audit summary reports:

The following are some of the issues that emerged through reviewing certification body audit reports (public summaries).

- Language - Audit reports are submitted in multiple languages. Requiring all reports to be written in the same language also brings with it financial constraints, particularly for SLIMF operations.
- Units - There is no standardized and consistently applied unit of measurement, making it challenging to understand quantitative results and trends across Forest Management Units (FMUs).
- Size, country, geographic location, forest zone, ownership/management – this data is generally recorded consistently.
- Forest type (natural or plantation) – guidance is needed on how to properly record data when there is a mix of both forest types in the scope of a certificate.
- List of commercial species – Scientific names are not always used.
- AAC – This data is not consistently recorded.
- Reporting on area designated for production versus for protection is not consistent. Some reports further categorize ‘protection’ while others do not, although this is not a requirement.
- NTFP areas – guidance is needed on how to properly record data when there is not a discrete delineation of this area.
- Area of FMU regenerated, categorized by natural regeneration, planting/coppicing – there is often overlap and a mixture of these. Need guidance on how to determine.
- High Conservation Values – The area associated with each of the HCVs is not consistently recorded, and some public summaries are also not recording which HCVs are found on the FMU. Guidance will also be needed for HCVs that do not have associated areas (animals).
- Pesticides – Name, quantity and area treated is generally recorded correctly. However, chemical name is not consistently used (instead brand or local name is recorded).
- Number of workers, differentiated by gender - This information is not consistently recorded. Further, some reports categorize worker by worker types while others do not.

5. References

Public summary reports are available at: [www.info.fsc.org](http://www.info.fsc.org).

8. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of M-1a.

- In the table change “protected area” to “set aside area”
- Clarify that there was a mix of surveillance and main audits - resulting in a chronological mix of audit data in the analysis
- Clarify what certain geographies were selected – countries represented
• Develop a section that clearly describes the types of conclusions that can be drawn from the data - characterize sourcing regions, but not attribution of FSC to observable outcomes or impacts or verification that set aside areas protect RTE species or provide ecosystem services.
• Provide definitions for the different HCV categories
• Provide a definition of protection as described in the FSC P&C versus effectiveness of protection.
• (Include the results tables in each of the statement documents of records).

9. Summary of comments received and voting results from the Technical Advisory Group for current revision (M-1b).

| 10. Overall period of endorsement: | Start date: 10 August 2017  
End date: 17 August 2017 |
<table>
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<tr>
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For information on how this document was completed, please consult the VIA Endorsement Procedure.

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<td><strong>GUIDELINES FOR THE STUDY OF CORRECTIVE ACTION REQUESTS (CARS)</strong></td>
<td>M-2b</td>
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</table>

<table>
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<th>7. Survey Monkey link:</th>
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### Introduction

For every forestry operation that achieves Forest Stewardship Council (FSC) certification for forest management, there exists a series of annual audit reports that document the strengths and weaknesses of that operation relative to the criteria of the FSC forest management standard. The specific instances of non-compliance with the standard are documented as Corrective Action Requests (CARs) or Non-Conformity Reports (NCRs), depending on the terminology used by the certification body conducting the audit.

In the past, academic researchers and certification bodies have tabulated the frequency and characteristics of CARs/NCRs and drawn important conclusions about the types of improvements that forestry operations have made to achieve (and maintain) compliance with the FSC standard, and how those improvements vary by region, forest type or operation size.

The appeal of such analyses is obvious: CAR/NCR data exist for all FSC-certified operations and require no additional field work to analyse. However, research on CARs/NCRs is also subject to significant constraints and limitations, sometimes due to the quality of the data (variability in format, interpretation, reporting) but also sometimes due to the methodology used to analyse this data. More information on these limitations in section 4.

In 2016, the Value and Impact Analysis (VIA) initiative investigated the potential of CARs/NCRs analysis to help furnish evidence for business communications on the sustainability outcomes and impacts of FSC certification. The exercise revealed that traditional CARs/NCR analysis is not ideally suited to meet this goal primarily because the CARs/NCRs classification systems that are often used are too general to allow detailed statements about results.

This document lays out an alternative methodology developed under the VIA initiative to conduct a CARs/NCRs study in a way that can generate business-relevant information on certification outcomes by characterizing the specific actions taken in response to CARs/NCRs. Observations from a test conducted are also included.

The proposed methodology is based on good practices and lessons learned from the many CARs/NCRs analyses already conducted. Experts in the VIA initiative also produced an updated literature review of studies on FSC certification based on CARs/NCRs (see Annex 2 in section 5).
### 3. Description of method

#### Methodological considerations

When planning and testing a modified CAR/NCR analysis framework, the following methodological challenges should be taken into consideration:

- **Evolution in how auditors record CARs/NCRs**
  
  Prior to 2010, auditors at Rainforest Alliance, NEPCon and other FSC certification bodies (CBs) wrote CARs, which typically contained information not only on the candidate operation’s shortfall vis-a-vis the FSC indicator in question, but also contained a concise description of the changes that would be required for the operation to come into compliance. Assuming that the operation in question remained certified in subsequent years, it was therefore possible to infer from a single audit report a description of both the weakness and the corrective actions that the operation carried out in response. In recent years, the approach changed at Rainforest Alliance, NEPCon and some other certification bodies (CBs), due to the concern that the CARs were too prescriptive and did not provide enough flexibility for audited operations to develop their own solutions to the documented weaknesses. Thus, at these organizations the “NCR approach” was developed, whereby the operation’s shortcomings were described in the audit report but specific required corrective actions were not indicated. Under this approach, all the actions taken by an operation to resolve the NCR and remain in compliance with the standard are documented in the following year’s audit report. This new report section is often quite extensive, which furnishes rich detail but often makes a quick, straightforward categorization more difficult than under the previous CAR approach. This change argues in favour of conducting in-depth analysis of fewer thematic areas rather than attempting to address the full scope of the FSC standard.

- **Procedural versus substantive change**
  
  CAR/NCRs can vary widely in the degree of “on the ground” change or action they require. Some CAR/NCRs describe substantive activities that clearly demonstrate that things are being done differently in the forest or nearby communities. Others address the procedural changes that are critical for sustainable forest management, such as safety plans, training schedules and High Conservation Value Forest (HCVF) categorization guidelines, but may or may not lead to on the ground change.
  
  Past researchers have found it useful to distinguish between procedural and substantive activities when analysing CAR/NCRs. Drawing a firm line between these two categories can be difficult and the analysis team should discuss many examples as a group to ensure that everyone is using the same definitions and that the work of all team members is well calibrated to a common method. There may be grey areas where a procedural action is taken that will definitely lead to a substantive change. We suggest including such cases in the substantive category; however, creating a third category that covers this scenario is also a valid option. Providing the reader examples of what was considered substantive versus procedural in an annex to the final report is a good way to ensure transparency.

- **Creating subcategories for priority criteria**
  
  Because the FSC criteria are by nature quite broad, the type of statements that can be derived from a simple criterion-level tabulation of CAR/NCRs will also be quite broad (e.g. “X percent of certificates in South America were required to make substantive changes to comply with criterion 10.7, which addresses the prevention of pests, diseases, fire and invasive plants”). An alternative – conducting the analysis at the level of FSC indicators
would not be suitable because indicators vary from region to region, which means that a simple tabulation of CAR/NCRs related to a given indicator in multiple regions will potentially conflate different topics.

Most researchers who have analysed FSC CAR/NCRs in the past have dealt with this situation by creating economic, social, environmental and ecological themed categories into which the relevant CAR/NCRs are placed, regardless of the indicator with which they are associated. For example, the categories that were used in the Blackman et al. 2014 analysis (adapted from Newsom and Hewitt 2005) include:

<table>
<thead>
<tr>
<th>Environmental issues</th>
<th>1. Aquatic and riparian areas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Sensitive sites and high conservation value (HCV) forests</td>
</tr>
<tr>
<td></td>
<td>3. Threatened and endangered species</td>
</tr>
<tr>
<td></td>
<td>4. Landscape-level considerations</td>
</tr>
<tr>
<td></td>
<td>5. Woody debris, snags, legacy trees</td>
</tr>
<tr>
<td></td>
<td>6. Soil and erosion</td>
</tr>
<tr>
<td>Social issues</td>
<td>7. Communication and conflict resolution with stakeholders, neighbours, and communities</td>
</tr>
<tr>
<td></td>
<td>8. Training</td>
</tr>
<tr>
<td></td>
<td>9. Worker safety</td>
</tr>
<tr>
<td></td>
<td>10. Non-timber forest products</td>
</tr>
<tr>
<td></td>
<td>11. Worker wages and living conditions</td>
</tr>
<tr>
<td></td>
<td>12. Special cultural sites</td>
</tr>
<tr>
<td>Economic and legal issues</td>
<td>13. Profitability of operation</td>
</tr>
<tr>
<td></td>
<td>14. Compliance with state, federal, and international laws</td>
</tr>
<tr>
<td></td>
<td>15. Illegal activities and trespassing</td>
</tr>
<tr>
<td></td>
<td>16. Long-term tenure</td>
</tr>
<tr>
<td>Forest management issues</td>
<td>17. Roads and skid trails</td>
</tr>
<tr>
<td></td>
<td>18. Regeneration and reforestation</td>
</tr>
<tr>
<td></td>
<td>19. Chemical use and inorganic waste management</td>
</tr>
<tr>
<td></td>
<td>20. Exotic species and pests</td>
</tr>
<tr>
<td></td>
<td>21. Conversion to non-forest uses</td>
</tr>
</tbody>
</table>

In the case of the VIA initiative, the corporate partners prioritised the list of FSC criteria below because these criteria relate to the potential legal, ecological and social results from FSC certification that are of most interest to them:

1.3 Respect for provisions of international agreements
1.5 Protection of forests from illegal activities
2.2 Local communities’ legal or customary tenure or use rights
3.1 Indigenous peoples’ control of forest management
3.3 Protection of sites of special cultural, ecological, economic or religious significance to indigenous peoples
4.1 Employment, training, and other services for local communities
4.4 Social impact evaluations and consultation
6.2 Protection of rare, threatened and endangered species
6.3 Maintenance of ecological functions and values
6.4 Protection of representative samples of existing ecosystems
6.5 Protection against damage to soils, residual forest and water resources during operations
6.10 Forest conversion to plantations or non-forest land uses
8.5 Publicly available summary of monitoring
9.2 Consultation process
9.3 Measures to maintain and enhance high conservation value attributes
9.4 Monitoring to assess effectiveness
10.5 Restoration of natural forest
10.6 Impacts on soil and water
10.7 Pests and diseases
10.8 Monitoring of impacts, species testing and tenure rights
10.9 Plantations established in areas converted from natural forests after November 1994

The approach described below aims to produce information with a high communication potential for the areas prioritised by the VIA partners, whilst addressing the broad nature of many FSC criteria and the regional variability in indicators.

The approach recommends creating specific thematic subcategories for each FSC criterion to help organise the CARs/NCRs found in the audit reports. The content of the CARs/NCRs can then be looked at in each subcategory as a group. Such a framework of analysis has a high communication value due to the specificity of the subcategories, which can be further enhanced through examples that illustrate the changes that forest management units (FMUs) make to address CARs/NCRs within each subcategory.

**Recommended methodology**

Given the above challenges, we recommend the following steps to develop and test a CAR/NCR analysis approach that will meet the needs of businesses and other stakeholders interested in the actual, on-the-ground results of FSC certification:

- Define the scope of the analysis, including the region(s) and thematic area(s) of interest.

  To ensure that the research is relevant for FSC suppliers and buyers seeking to make statements about program impacts, when choosing the scope of the analysis we also suggest considering the degree to which status quo forestry in a particular region differs from the requirements of the FSC standard.

  The thematic focus of the companies providing input into the VIA Initiative is described in the previous section. They also identified the following three regional priorities:

  1) Russia, Belarus, Poland, Denmark and the Baltics;
  2) Canada and the U.S.; and
  3) Brazil.

  The searchable FSC certificate database provides up-to-date information on the numbers of certified operations around the world ([http://info.fsc.org/](http://info.fsc.org/)). FSC certificates are awarded for 5 years, beginning with an initial assessment followed by 5 annual audits. For certificates using the NCR approach, the initial assessment includes a description of the operation’s weaknesses, but not a description of the actions taken to address those weaknesses; those will be described in the subsequent annual audits. For certificates using the CAR approach, descriptions of actions required to address weaknesses will be evident from the initial assessment onward. If possible, consider the CARs/NCRs over the lifetime of a certificate, not just at one point in time.
• **Transfer selected CARs/NCRs and other related information into a database.**
  Once the region(s) and theme(s) of interest are chosen and the relevant audit reports accessed, CARs/NCRs related to the selected criteria can be transferred into a database.
  In the Rainforest Alliance system, the audit report fields of interest will be “Description of Non-conformance and Related Evidence,” which outlines the operation’s weaknesses related to the criterion in question, and the “Findings for Evaluation of Evidence,” which describes the actions, changes, or documentation enacted or provided to ameliorate those weaknesses, as observed by the auditors. Other CBs use similar language. Any relevant contextual information, such as operation size or forest type, can also be entered at this stage.

• **Create a custom set of thematic subcategories**
  Once the CARs/NCRs for a given criterion has been transferred to the database, we suggest creating a custom set of thematic subcategories that characterize the range of activities covered by the CARs/NCRs. The number and character of these subcategories will be dependent on the specific content of the CARs/NCRs, and creating them will be an iterative process. Note that many CARs/NCRs will require multiple actions which will fit into separate subcategories. That is fine; each separate “action” within the NCR should be considered separately.

• **Identify procedural vs. substantive actions and find illustrative examples**
  For each thematic subcategory, we suggest tabulating the number of procedural and substantive actions (keeping in mind that a single NCR requiring multiple actions might appear in multiple subcategories), and, when possible, providing at least one illustrative example to give communication value beyond the numbers. The purpose of the illustrative example is to contextualise any statements linked to the results. Illustrative examples should be compelling and easily understood by a non-technical audience. We suggest deciding early on whether the illustrative examples must be copied verbatim or can be edited for clarity.

We suggest organising the data in a table such as the following:

<table>
<thead>
<tr>
<th>FSC Criterion</th>
<th>Thematic subcategories</th>
<th>Number of actions required in CARs/NCRs</th>
<th>Illustrative example</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Procedural</td>
<td>Substantive</td>
</tr>
<tr>
<td>X.X</td>
<td>Subcategory 1</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td></td>
<td>Subcategory 2</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td></td>
<td>Etcetera</td>
<td>Etcetera</td>
<td>Etcetera</td>
</tr>
</tbody>
</table>

**Testing the methodology**

The methodology proposed above was tested by the experts in the VIA initiative to determine whether similar subcategories and procedural/substantive designations should be created, or if the NCRs were simply too variable for consistent designations. A total of 15 NCRs for each one of the following FSC criteria were selected at random to be included in the test.

- **FSC Criterion 6.4.** Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.
- **FSC Criterion 4.1.** The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.

- **FSC Criterion 1.3.** In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and Convention on Biological Diversity, shall be respected.

The NCRs came from audit reports for forestry operations in Poland, Russia, Bulgaria, Belarus, Spain, Indonesia, Lithuania, Latvia and Denmark. (Due to a technical issue with the extraction of some NCRs, the final counts of NCRs examined were 15 for criterion 6.4, 11 for 4.1 and 14 for 1.3).

As per the proposed methodology, the NCRs were independently examined and categorised as either procedural or substantive. Subcategories were created for each criterion.

Observations from the test:

1. **Sampling.** 15 NCRs felt like a very manageable number from which to create subcategories, and due to the degree of repetition that emerged in some subcategories, it seems feasible to analyse a much higher number of NCRs together. If the decision is made to cap the number of NCRs in a sample, researchers should ensure that the sample selection is random.

2. **Consistency.** A comparison of the outcomes of the three separate analyses shows a high level of consistency among both the subcategories and the designations as either substantive or procedural. Discrepancies were rare and were easily resolved in a brief conversation.

3. **Procedural vs. substantive.** It was easier to distinguish between procedural/substantive for the environmental criterion examined than for the social and process based ones. It is important to discuss ahead of time what “on the ground” (i.e. substantive) change would look like for social and process criteria. For example, the group of experts decided that the following should be classified as procedural: “A list of representative ecosystems selected to be set-aside for protection in a FME were placed on the company’s website for public access and for stakeholder feedback.” In contrast, the following would be substantive: “The FME identified and set-aside additional rare or important forest communities for protection” and “the FME provided evidence that they had actively recruited and hired local community employees.”

4. **Subcategories.** Different approaches to categorization led to the nearly identical results. In our mini-test, one tester read through all NCRs first for orientation, and then went back to create subcategories, while the other two testers created draft theme(s) for each NCR as they read them, and then identified places with thematic overlap to create the final list of subcategories. Both methods produced very similar results.

5. **Data availability and confidentiality.** While the CARs/NCRs used in this test were derived from a CB’s own data management system, FSC audit public summary reports provide sufficient detail to conduct such an analysis. Despite this information being publicly available, the group recommends ensuring confidentiality when pulling out illustrative examples. In this test, all identifying information from examples was removed.
The table below shows the final set of subcategories and counts of procedural/substantive actions taken for FSC Criterion 6.4. Note that the sum of procedural and substantive actions is higher than 14 because some NCRs described multiple actions.

<table>
<thead>
<tr>
<th>FSC Criterion</th>
<th>Thematic subcategories</th>
<th>Number of actions required in NCRs</th>
<th>Illustrative example</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.4 Representative samples of existing ecosystems within the landscape shall</td>
<td>Increased transparency about how representative ecosystems are chosen</td>
<td>2</td>
<td>Procedural: A list of representative ecosystems to be set-aside for protection were placed on the company’s website for public access and stakeholder feedback.</td>
</tr>
<tr>
<td>be protected in their natural state and recorded on maps, appropriate to the</td>
<td>Created maps showing the location of representative ecosystems</td>
<td>2</td>
<td>Procedural: Although FME staff were familiar with the set-aside protected area locations, they were demarcated on maps to further ensure their protection.</td>
</tr>
<tr>
<td>scale and intensity of operations and the uniqueness of the affected resources.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved process to assess completeness and effectiveness of representative</td>
<td></td>
<td>0</td>
<td>Substantive: The FME, in association with independent experts, conducted a gap analysis to identify to what extent the present network of representative sites was securing preservation of biodiversity at different levels. This analysis showed that the present network of representative sites wasn’t providing preservation of rare, threatened and endangered types of ecosystems and landscapes as well as connectivity and migration of species and must be improved.</td>
</tr>
<tr>
<td>ecosystems</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Increased the area designated as representative ecosystems</td>
<td></td>
<td>1</td>
<td>Procedural: As a result of a gap analysis, external experts and the FME’s specialists identified and marked on maps the missed elements of the protected area network in each leased forest area (not less than 5% of a forest type).</td>
</tr>
<tr>
<td>Improved rules to protect the edges of representative ecosystems</td>
<td></td>
<td>0</td>
<td>Substantive: FME issued guidance that tree felling in set-aside areas must only be done under exceptional circumstances, i.e., when human health and safety may be endangered. Under such circumstances the felled tree(s) must be left on site, in the location where they were cut.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
Using the test results for communications

The information found in CARs/NCRs can illuminate the many ways in which certification requires forestry operations to address forest management pitfalls and challenges and achieve responsible forest management. An analysis of CAR/NCR data can characterize trends for how forest management is changing for FSC certified FMUs, and this information can be supplemented with concrete examples for improved communication of specific management changes. Trends could be compared to contextualized industry norms to describe indicative differences. These analyses would also be useful to effectively target technical assistance towards highest value to address particular types of CARs/NCRs (e.g. those that are often present at onset of certification, those that are most persistent, those that are specific to community managed FMUs, etc.). A randomized portfolio-wide examination of CARs/NCRs could allow classification of the CAR/NCR thematic areas and types (substantive or procedural), by geography, sourcing area, FMU size, etc. This information is valuable input into profiling and managing for risks.

Results of CARs/NCRs analyses can be presented quantitatively or focus solely on broader thematic trends of FSC results as identified by the subcategories and the illustrative examples.

Focus on quantitative results

- As a hypothetical example, if 60 certificates in a target region were examined and it was discovered that 15 had NCRs for criterion 6.4, it could be said that 25% of the certified operations in that region improved the way they protected representative samples of ecosystems across the landscape during the certification process, with the remaining 75% already protecting ecosystems adequately.
- Based on the test results, it could be said that 10% (6 out of 60) of the operations specifically increased the amount of area that was designated as representative ecosystems and is now off limits to harvesting. It would also be possible to say that 5 out of 6 NCRs addressing this topic required substantive, on-the-ground change.
- CAUTION: As mentioned above, the fact that a single NCR can be assigned to multiple subcategories means that one must be mindful of how the data are rolled up to avoid double counting. In addition, if multiple years’ audit reports are examined for a single operation, it will be possible to report on changes “over the life of the certificate” rather than at a single point in time (e.g. “the most recent audit”); however, if the operation receives CARs/NCRs that fit into the same thematic subcategory for more than one year, again, care must be taken to avoid double counting.

Focus on thematic trends

- Aspects of forest management where FSC certification is making a difference, such as reduced impact logging, biodiversity conservation, supporting local community employment, could be coupled with illustrative examples to contextualise the results and enrich its business ready communications. The most powerful messages in a region will depend on the issues that are most pertinent there. We recommend working with a communications specialist when translating illustrative examples into appropriate business-ready messages.

The level of effort required for an analysis such as described in these guidelines will depend on some obvious factors:

- The number of criteria examined
4. Contextual information

General constraints and data limitations for CARs/NCRs research

- Different contexts – although criteria data (less applicable for quantitative related data) is based on the FSC-STD-01-001 V4, for each country FSC FM criteria and indicators are adapted nationally (either through national FM standards or CB adapted standards).
- Data variability:
  - Differing formats, different auditors – the data assumes that every audit is recording and entering data in a consistent manner. E.g., HCV area will be variable – as sometimes the full HCV area range has not been captured. For example, for a RTE species that has a large home range the HCV 1 may equate to the whole FM area and it is possible these figures are not always accurate.
- Modified standard and reporting requirements for Small Low Intensity Managed Forest (SLIMF) operations.
- The sampling rate and possible margins of error like to FSC FM audits. FSC using the square root rule to determine sampling size which is not statistically valid. Additionally, sampling rates are usually driven by available time rather than by a sampling plan which can lead to greater margins of error.
- Bias introduced by a client. Given FSC clients want to ‘pass’ an audit it is possible some clients may ‘game’ the audit system through a variety of techniques such as giving staff the day off when an auditor is due, hiding records, etc. This may result in auditors assuming conformity when non-conformity exists – a ‘false positive’.
- Limitations of a CAR analysis:
  - Companies may undertake improvements in management as preparation for upcoming certification. This will not be captured through a CAR analysis as pre-assessments do not formally record CARs. (Note: this can be considered a good limitation, because the risk here is that the impact of certification is understated based on NCRs, rather than opposite). Nevertheless, the analysis assumes the highest level of CARs will be detected at the beginning of a FSC certificate holder’s certification and thus will review the CAR trends from the 1st main assessment audit to detect the areas where the greatest improvements to forest management have been made due to FSC certification requirements.
  - Differences may be partly due to differences in the national standard indicators. E.g. if one standard regulates drainage and other does not, then there is much less likely to be CARs in regions where it does not.

5. References

Annex 1. Update literature review on studies based on CARs/NCRs.

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1 Some research indicates that operations take significant steps to improve their performance prior to certification. For example Cubbage et al. (2010) found that in certified forestry operations in Argentina and Chile, the raised non-conformities were the cause of only about 36% of the changes, which were undertaken due to the certification process. This indicates that the positive impact of certification is in fact larger than can be evaluated based on non-conformities.


<table>
<thead>
<tr>
<th>8. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of M-2a.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M-2a</strong></td>
</tr>
<tr>
<td>• In the introduction, elaborate the limitations of CARs and the inherent biases (e.g. recording of evidence by auditors). Clarify that this is a framing of an analytical approach and that how the analysis is conducted determines the types of messages that may be developed from the analysis (e.g. not impacts, etc.).</td>
</tr>
<tr>
<td>• Reorganize the remainder of the text into four sections as follows:</td>
</tr>
<tr>
<td>1. What types of conclusions can be drawn from CAR analysis (e.g. how management is changing, were certificate holders have problems or challenges – can use to target technical assistance and detailed characterization of sourcing areas or certification portfolio - inform risk profile, etc.)</td>
</tr>
<tr>
<td>2. Links to FSC – talk about how this approach has a bias toward good performers. What about those that fail and drop out? Note, upon review of this comment it was determined that it was not relevant for CAR/NCR analysis. A prior assumption for CAR/NCR analysis is that it examines the operations within the FSC system. It can examine both good and poor performers as those that receive CARs/NCRs could be viewed as the lower performers. Additionally, this type of analysis could be used to examine correlation of type of CAR/NCR with dropout rates, etc.</td>
</tr>
<tr>
<td>3. Review of the subcategories and type (substantial / Procedural)</td>
</tr>
<tr>
<td>4. How selected the FMUs and the mini-test</td>
</tr>
</tbody>
</table>

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<td>11. Number of revisions:</td>
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Annex 1. Literature review of studies based on CARs

Introduction
In 2016, the Value and Impact Analysis (VIA) initiative considered Corrective Action Requests (CARs) as one of the sources of evidence to produce for communications on the performance and impact of FSC forest management certification. CARs are issued after certifying body inspections of forest management units (FMUs) detail the changes in procedures and on-the-ground conditions required in order to obtain a new FSC certification or retain an existing one.

There is a number of published and grey literature that looks at CARs to shed light on the on-the-ground effects of FSC certification. This literature review builds on the review published by Blackman et al. in 2014 to incorporate new studies in this area, and it was used to inform the development of Guidelines for the study of Corrective Action Requests (CARs) and Non-Conformity Reports (NCRs).

Methodology
The update literature review provides a brief overview of 13 studies that analyse CARs. The studies were published between 1999 and 2016 and constitute virtually all of the CARs studies that are easily available to date, with the exception of one study (Rusli and Nabilah 2009) that could not be obtained in full.

The thirteen studies identified were categorised as (A) reach somewhat equivocal conclusions about the environmental effects of FSC certification, (B) reach more optimistic conclusions, and (C) are neutral.

Overview of studies included
The table below shows the number of CARs analysis in each case, the number of FMUs included, where these FMUs are located, and when these CARs were generated. The table also indicates which are the eight studies included in the literature review by Blackman et al. (2014). The remaining five studies were identified after 2014, mostly via internet searches in March 2017.

<table>
<thead>
<tr>
<th>Study lead author</th>
<th>Published</th>
<th>Countries</th>
<th>No. FMUs</th>
<th>No. CARs</th>
<th>Period</th>
</tr>
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<tbody>
<tr>
<td>Included in Blackman et al. (2014)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Gullison</td>
<td>2003</td>
<td>n.s.</td>
<td>27</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>2 Rametsteiner and Simula</td>
<td>2003</td>
<td>Europe (countries n.s.)</td>
<td>32</td>
<td>130</td>
<td>1999</td>
</tr>
<tr>
<td>3 Paulsen</td>
<td>2004</td>
<td>n.s.</td>
<td>114</td>
<td>1,238</td>
<td>2004</td>
</tr>
<tr>
<td>4 Newsome and Hewitt</td>
<td>2005</td>
<td>21 countries in 5 regions</td>
<td>129</td>
<td>2,099</td>
<td>n.s.</td>
</tr>
<tr>
<td>5 Nebel et al.</td>
<td>2005</td>
<td>Bolivia</td>
<td>10</td>
<td>255</td>
<td>2002</td>
</tr>
<tr>
<td>6 WWF-EFP</td>
<td>2005</td>
<td>Estonia, Germany, Latvia, Russia, Sweden, UK</td>
<td>n.s.</td>
<td>2,817</td>
<td>various</td>
</tr>
<tr>
<td>7 Newsome et al.</td>
<td>2006</td>
<td>United States</td>
<td>80</td>
<td>1,120</td>
<td>2003</td>
</tr>
<tr>
<td>8 Peña-Claros et al.</td>
<td>2009</td>
<td>10 Latin American countries</td>
<td>12</td>
<td>3,211</td>
<td>2008</td>
</tr>
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</tr>
<tr>
<td>1 Thornber</td>
<td>1999</td>
<td>n.s.</td>
<td>156</td>
<td>n.s.</td>
<td>1999</td>
</tr>
<tr>
<td>2 Sequeira and Louman</td>
<td>2004</td>
<td>11 countries in Latin America</td>
<td>24</td>
<td>545</td>
<td>n.s.</td>
</tr>
<tr>
<td>3 Schulze et al.</td>
<td>2008</td>
<td>Brazil</td>
<td>17</td>
<td>n.s.</td>
<td>2005</td>
</tr>
<tr>
<td>4 Blackman et al.</td>
<td>2014</td>
<td>Mexico</td>
<td>35</td>
<td>1,162</td>
<td>2012</td>
</tr>
<tr>
<td>5 Halalisan et al.</td>
<td>2016</td>
<td>Bosnia and Herzegovina, Estonia, Romania, Slovenia, UK</td>
<td>31</td>
<td>235</td>
<td>2014</td>
</tr>
</tbody>
</table>
APPENDIX BREAKING THROUGH BARRIERS IN COMMUNICATING THE IMPACT OF SUSTAINABILITY STANDARDS

Findings

Category A. Studies that reach equivocal conclusions about FSC effects

Blackman et al. (2014) analyse 1,162 CARs issued to 35 FMUs in Mexico from 1996-2012. The finds with regard to environmental effects of certification are mixed. On one hand, most FMUs quickly complied with CARs and received fewer and fewer over time—results suggesting that certification generated environmental benefits. But on the other hand, most CARs addressed minor procedural issues and focused on social, economic, and legal issues rather than on-the-ground environmental changes—results indicating the opposite.

Gullison (2003) contains a single paragraph reporting on an analysis of an unspecified number of CARs issued to 27 ‘randomly selected’ FMUs in unspecified countries. According to the author, the analysis shows that FSC certification “requires companies to make a wide variety of significant changes to management that would benefit biodiversity” (158).

Nebel et al. (2005) analyses 255 CARs issued to 10 certified FMUs in Bolivia from 1996 to 2002. The authors find that the plurality of these CARs focused on issues concerning environmental impacts (33%) and forest management (18%). However, they conclude that because most of these issues were easily corrected—likely because certified FMUs were already top performers—certification probably generated “only small direct improvements in management” (183). Moreover, deforestation and degradation in Bolivia persisted despite the growth in FSC certification.

Rametsteiner and Simula (2003) review more than 130 CARs included in 32 FSC certification reports on an unspecified number of FMUs in Europe through 1999. Like Nebel et al. (2005), they find that although the plurality of CARs focused on environmental and forest management issues, certification likely has only minor environmental benefits. They write, “few facts would support a conclusion that forest certification is a particularly effective instrument for biodiversity maintenance” (96). It is worth noting that both Nebel et al. (2005) and Rametsteiner and Simula (2003) focus on a period just after FSC certification was introduced, when self-selection effects were probably most prominent.

Finally, Schulze et al. (2008) examine CARs issued to 17 privately owned FMUs in the Brazilian Amazon through 2005 to determine whether these FMUs were actually meeting FSC standards. They conclude that “if strict compliance with FSC criteria and indicators were necessary for certification of Amazonian forest management sites, no companies would currently qualify” (236).

Category B. Studies that reach more optimistic conclusions about FSC effects

Newsom and Hewitt (2005) examine 2,099 CARs from 129 randomly selected FSC-certified FMUs in 21 countries in five regions (stratified by region). In the entire sample, CARs focused on a broad range of issues, including social, environmental, and forest management issues. However, in tropical countries, a significantly higher fraction focused on social issues. The authors find that the majority of the CARs in their sample required substantive on-the-ground changes. As a result, they conclude that certification does change behaviour and is not simply a rubber stamp for already-green FMUs.

Newsom et al. (2006) analyse 1,120 CARS issued to 80 FSC-certified FMUs in the United States through 2003. Most focused on procedural issues, such as management planning and monitoring, and on environmental issues, such as threatened species and high conservation value (HCV) sites. The focus of CARs varied significantly across regions. The authors conclude that FSC certification has spurred important forest management improvements in the United States.
Researchers with the World Wildlife Federation–European Forest Programme (2005) examine 2,817 CARS issued to an unspecified number of FMUs in six European countries—Estonia, Germany, Latvia, Russia, Sweden, and the United Kingdom. More than half of the CARs focused on ecological issues, with the balance split equally between social and economic issues. The authors conclude that FSC certification had significant ecological, economic, and social benefits.

Sequeira and Louman (2004) analyse 545 CARs from 24 FMUs in 11 Latin American countries. They find that 89% focused on forest management problems alone or forest management in combination with other problems, that FMUs with natural forests received more CARs than those with plantation forests, and that lack of clarity of FSC standards and misinterpretation of those standards by auditors were not uncommon. They recommend, among other things, improving both local forest management capacity and procedures for applying and interpreting FSC standards.

Finally, Peña-Claros et al. (2009) examine 3,211 CARs issued to 123 FMUs in 10 tropical Latin American and Caribbean countries through 2008. Among these CARs, no one category of issues (social, economic, environmental) dominated. The authors find that the number of times a given issue was mentioned was lower in recertification reports than in certification reports, indicating an improvement in forest management over time. They conclude that certification boosts environmental performance in the tropics. They also find, however, that CARs generally were not addressed quickly: on average FMUs exceeded by a factor of two the original deadlines for rectifying problems set by certification bodies.

**Category C. Studies that reach more or less neutral conclusions about FSC effects**

Halaisan et al. (2016) examine 235 CARs issued to 31 FMUs in five European countries—Bosnia and Herzegovina, Estonia, Romania, Slovenia, and the United Kingdom—through 2014. Their relatively modest aim is to simply identify the issues on which CARs focused most frequently and to test for correlations between FMU and country characteristics on one hand, and the issues on which CARs focus on the other. They find that CARs in their sample most frequently focused on environmental impacts (FSC Principle 6, 34%), community relations and workers' rights (FSC Principle 4, 17%), and monitoring and Assessment (FSC Principle 8, 13%). Furthermore, they find a positive correlation between FMU size and the total number of CARs issued, and a negative correlation between level of economic development and number of CARs related to FSC principles 4, 6, and 9.

Paulsen (2004) examines 1,238 CARs issued to 114 FMUs with forest plantations through 2004. The FMUs were in unspecified countries. The main aim is limited—simply identifying the issues on which the CARS focused. The author finds that the greatest percentage of CARs concerned environmental impact (FSC Principle 6, 35%), community relations and workers' rights (FSC Principle 4, 16%), monitoring and assessment (FSC Principle 8, 11%), and management plans (FSC Principle 8 10%).

Finally, Thornber (1999) contains a brief discussion of an analysis of an unspecified number of CARs issued to 156 FMU through 1999. She finds that CARs tended to focus on management plan issues (FSC principle/criteria 7.1, 48% of all FMUs), monitoring and assessment issues (FSC &C 8.2, 44%), environmental impact preparation of written guidelines (FSC P&C 6.5, 48%), environmental impact issues related to set asides (FSC P&C 6.5, 48%), and environmental impact issues related to safeguards (FSC P&C 6.2, 48%).
APPENDIX BREAKING THROUGH BARRIERS IN COMMUNICATING THE IMPACT OF SUSTAINABILITY STANDARDS

References

* = not included in literature review in Blackman et al. (2014)
† = unable to obtain PDF.


**THE VIA INITIATIVE**
VALUE & IMPACTS ANALYSIS FOR CERTIFICATION

**DOCUMENT OF RECORD FOR METHOD**

For information on how this document was completed, please consult the VIA Endorsement Procedure.

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<th>6. Method number:</th>
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<tr>
<td>EVIDENCE TYPOLOGY AND LANGUAGE GUIDELINES</td>
<td>M-4b</td>
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<table>
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<tr>
<th>2. Introduction</th>
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<tr>
<td>Different research methodologies are used to assess the effect of FSC certification. These methodologies determine the strength of the results presented in the study, which in turn defines how the results should be communicated. Some studies are designed to measure whether there is a causal relationship between FSC certification and the variable under observation. Others follow less rigorous techniques to control external variables and can therefore not show causation.</td>
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The language guidelines proposed here also refer to the advantages of using context to strengthen communications on the performance and impacts of FSC.

<table>
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<th>3. Description of method</th>
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<tr>
<td>An evidence typology for existing evidence on voluntary sustainability standards is first proposed to frame language guidelines for communicating results. Below is a description of nine types of evidence that can inform communicating performance and impacts of voluntary sustainability standards.</td>
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</table>

1. **Systematic review.** A study that collates, critically appraises, and synthesizes all available studies relevant to a question. Reviewers use pre-defined methods to minimize bias in the literature review and thus provide reliable findings that could inform decision-making. A systematic review is highly structured and uses an a priori specified standardized protocol-driven process for synthesising evidence; always includes an extensive search for all relevant evidence and critical appraisal of the included evidence; may quantitatively combine evidence to improve precision; can also present qualitative findings in a systematic review narrative. Systematic reviews can suffer from publication bias stemming from the fact that typically significant (either positive or negative) effects are more likely to be published or provided as working papers than studies that find no effect. The goal is to provide findings that are generalizable across locations and time periods. The following wording can be used: “as a result”, “caused”, “lead to”, “reduced”, “increased”. Currently, there are only a handful of studies that can show causation. Additionally, wording of statements can be used to represent the geographic/temporal/thematic scope of a meta-analysis: “in the South Amazon region”, “across the tropics”, “in Malaysia”, “animal species” rather than “in an FSC-certified forest in Malaysia”, or “invertebrate species” which would be the appropriate wording for a case
study. Language guidelines have to be based also on the type of evidence was in individual studies (i.e., if only Study I were included, language implying causality cannot be used).

2. Meta-analysis. A study that synthesizes findings of individual papers, reports, etc., in order to draw conclusions that hold for broader geographic regions or time periods, or test emerging hypotheses based on the syntheses. In contrast to systematic reviews, a meta-analysis tends to be more quantitative by summarizing previous work by in tabular form, creating variables that may explain the observed patterns, and using statistical techniques to test hypotheses that are based on the syntheses or data of previous studies. For hypothesis tests, it requires a relatively large number of studies. The type of evidence that a meta-analysis can provide depends ultimately on the quality of information used and reported in the individual studies. In performing a meta-analysis, an investigator must make choices which can affect the results, including deciding how (e.g., key words) and where to search for studies, determining the criteria to include or drop a study in the analysis, dealing with incomplete data, and analysing the data. Meta analyses can suffer from publication bias stemming from the fact that typically significant (either positive or negative) effects are more likely to be published or provided as working papers than studies that find no effect. The wording used should reflect the type of studies that were used in the meta-analysis (see below). Additionally, wording of statements can be used to represent the geographic/temporal/thematic scope of a meta-analysis: "in the South American region", "across the tropics", "in Malaysia", "animal species" rather than "in an FSC-certified forest in Malaysia", or "invertebrate species" which would be the appropriate wording for a case study. Language guidelines have to be based also on the type of evidence was in individual studies (i.e., if only Study I were included, language implying causality cannot be used).

3. Randomized controlled trial (RCT). A study that evaluates the impacts of an intervention by comparing outcomes for a sample unit (e.g. household, forest concession, individual) where the intervention had been implemented (treatment observations) with outcomes in units where the intervention had not been implemented (control observations). The observations are assigned into treatment and control categories randomly, in order to balance the covariate distributions of observed and unobserved factors and eliminate potential biases. RCTs are rare and often of limited use in conservation (expect, perhaps, emerging studies of payments for ecosystem services) because many conservation strategies aim to protect an area with specific features and at large scales (e.g. areas that are important for biodiversity conservation), thus randomization often is not possible or does not make sense. The following wording can be used: "as a result", "caused", "lead to", "reduced", "increased". Currently, there are only a handful of studies that can show causation.

4. Study III (quasi-experimental research designs). A study that evaluates the impacts of an intervention by comparing outcomes for a sample unit (e.g. household, forest concession, individual) where the intervention had been implemented (treatment observations) with outcomes in units where the intervention had not been implemented (control observations). The selection of appropriate controls is embedded into the study design, so that the units of comparison (e.g. forest concession) that are chosen to be similar in most important aspects as possible to the treatment observations and ideally differ only in terms of the presence of the treatment (e.g. FSC certification or conservation strategy). For example, we could up front select our control forest concession that are not FSC-certified so that they would be similar in terms of the logging intensity, type of forest, altitude, deforestation
pressures, etc. Statistical approaches in this class of study design are referred to as quasi-experimental, as they mimic experimental processes (because certification most often cannot be randomly placed across a landscape) and generate balanced observed covariate distributions across the treatment and control groups. The quasi-experimental statistical techniques include matching, regression discontinuities, instrumental variables, panel data regression techniques and combinations thereof. The goal of these techniques is to establish the causal impact of an intervention, and the process of selecting appropriate controls so that they are as similar in their observed characteristics as possible to the treatment observations. The choice of which characteristics to include in the model is driven by the factors that determine the placement of the conservation intervention and the outcome (e.g. deforestation). Some modelling studies, if accounting for the counterfactual scenario (e.g., in case when a policy is to be implemented), can also generate results that have a causal interpretation. The following wording can be used: “as a result”, “caused”, “lead to”, “reduced”, “increased”. Currently, there are only a handful of studies that can show causation.

5. **Study II (Takes some confounders into account).** A study that evaluates the impacts of an intervention by comparing outcomes in an area where the intervention had been implemented (treatment) with outcomes in an area where the intervention had not been implemented (control). Alternatively, the study can compare a variable before and after implementation. In contrast with Study I, this type of study takes some (typically not all) confounding variables into account. However, in contrast with Study III, it does not select controls *a priori*, it only takes the confounding variables into account after the fact and assumes there is sufficient overlap in the distributions of these variable between the treatment and control groups. For example, it could take into account the logging intensity in certified and conventional concessions, and calculate the canopy loss *per tree extracted*. It can show correlation between implementation and outcome relatively reliably, especially in cases where the system is well-understood and most of the potentially biases are measurable (such as in the case of structural changes to the forest due to different types of logging). The following wording can be used: “is associated with”, “was found to have”, “is correlated with”, “even when [logging intensity, distance to cities, population size, ...] are taken into account, certification is correlated with”.

6. **Study I (case-control).** A study that evaluates the impacts of an intervention by comparing outcomes for a sample unit (e.g. household, forest concession, individual) where the intervention had been implemented (treatment observations) with outcomes in units where the intervention had not been implemented (control observations). Alternatively, the study can compare a variable before and after implementation. The study design does not take confounding variables into account. This means that we cannot establish whether the potential difference in outcomes between the treatment and control is due to the intervention itself, or whether it is due to another, independent factor. For example, a forest concession that is FSC-certified could have a lower canopy loss due to logging, when compared to a neighbouring concession which is not certified. This difference could be due to improved logging brought about with certification, but also for example because the FSC-certified concession had a lower abundance of commercially desirable trees to begin with, and so it was logged less intensively. This type of study can potentially show a true correlation between implementation of a conservation strategy (e.g. certification) and an outcome (e.g. lower canopy loss), however, it is possible that unknown mechanisms in fact drive the correlation, such as self-selection or another type of systematic
bias. Wording that implies any type of causation cannot be used. Instead, wording such as “is associated with”, “was found to have”, “is correlated with” can be used. Note that this is still valuable evidence and can be often reliable used in meta-analyses.

7. **Case report.** A study that evaluates the impacts of an intervention by critically assessing outcomes in areas where the intervention had been implemented. A case study does not formally compare outcomes in the treatment instance (where intervention had been implemented) with an instance where the intervention had not been implemented (control). As a result, it is difficult to assign any outcomes to the actual implementation of the intervention. However, case studies can be very useful in providing an understanding of the potential mechanisms that could link an intervention and an impact. Case studies often use interviews with project participants, asking questions about satisfaction, perceived outcomes, or fairness of an intervention. In many instances, case studies are retrospective. Wording that implies any type of causation cannot be used. Instead, wording such as “was found to have” can be used.

8. **Expert opinion.** A study that compiles knowledge and/or opinions of a range of independent experts for a specific issue or question. This can be done in group meetings or individual interviews. The approach is used when there is no prior information (e.g., about a key parameter, driver of forest loss etc.) in the published literature. Wording that implies any type of causation cannot be used. Instead, wording such as “findings suggest, or findings indicate” are appropriate. Guidelines on selecting experts and the data elicitation process should be clear.

9. **Other types of evidence.** This may include raw data and descriptive statistics, internal reports, conference proceedings and other grey literature. Wording that implies any type of causation cannot be used. Instead, wording such as “findings suggests, or findings indicates” are appropriate.

**Language guidelines based on type of concession**

The wording has to be accurate about what exactly is meant to be having the observable effect. Is it an FSC-certified concession (compared to not certified), or a concession that is certified by a different certification body, or on a concession that implements a forestry practice typically required by the FSC (such as Reduced Impact Logging)?

- If the study was not directly about an FSC-certified study, this has to be expressed explicitly by naming the intervention that was assessed, using wording such as “forests where Reduced Impact Logging was implemented” rather than “FSC-certified forests”. In order to put into context such statements that are not made directly about the FSC, a background sentence is recommended, which explains how the particular practice relates to FSC certification.

**4. Contextual information**

Rather than wording a statement in a way that is not entirely supportable by the scientific study in order to make it understandable by the non-scientific audience, the relevance of each statement can be put into context by using a general statement about what the FSC strives for, its goals, and how it is trying to achieve them. Such general statements are provided for each statement.
Additionally, the sample size, geographic location, taxonomic groups, and timing of the study should be taken into account when wording of the statements as relevant.

5. References

NA

8. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of M-4.

<table>
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<th>M-4a</th>
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<tr>
<td>- Mention the possibility of publication bias in the descriptions for systematic reviews and meta analysis.</td>
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<tr>
<td>- Amend the descriptions for systematic analysis and meta analysis to clarify distinction between these two types of evidence.</td>
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<tr>
<td>- Mention that RCTs are rare but might be used in emerging studies of payments for ecosystem services.</td>
</tr>
<tr>
<td>- Further elaborate on how the characteristics are chosen to create a model in Study III.</td>
</tr>
<tr>
<td>- Mention that Study II assumes that there is sufficient overlap in the distributions of the variables between the treatment and control groups.</td>
</tr>
<tr>
<td>- Explain that expert opinion is mostly used when there is no prior information in the published literature, and that guidelines on selecting experts and the data elicitation process should be clear.</td>
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<tr>
<td>- Clarify that other types of evidence includes descriptive statistics.</td>
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9. Summary of comments received and voting results from the Technical Advisory Group for current revision (M-4a).

n/a

10. Overall period of endorsement:

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<td>End date: 17 August 2017</td>
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11. Number of revisions:

1

12. Endorsement results:

Endorsed.
THE VIA INITIATIVE
VALUE & IMPACTS ANALYSIS FOR CERTIFICATION

DOCUMENT OF RECORD FOR METHOD

For information on how this document was completed, please consult the VIA Endorsement Procedure.

1. Title of method
SUPPORTING EVIDENCE FRAMEWORK

2. Introduction
To date, it has been challenging to monitor, evaluate, and create messages about the benefits of Forest Stewardship Council (FSC) certification because of limited evidence to substantiate those messages. Research and case studies have been conducted on some FSC certified forests; however, data gathering across all FSC-certified forests has not been practicable. While the audit process is well-positioned to provide this type of data, currently, reporting formats are not consistent and very little information is captured in a standardized, useable manner for demonstrating the results of certification. Reasons for this are varied and include:

- Audit data required is often recorded in different languages, using different measurement units and different categorizations. All required data fields are sometimes not completed.
- Much of the audit information is recorded as a narrative and therefore challenging to analyze across multiple audit reports.
- Required audit data does not always align with the type of evidence needed for demonstrating desired results, and lacks useable geospatial locations.

This document presents the draft Supporting Evidence Framework (SEF) that was developed under the VIA Initiative to generate evidence on the benefits of FSC certification through the audit process of FSC certified management units. It should be noted that this framework is meant to improve the assurance system for the FSC Principles & Criteria and not as a research framework. The supporting evidence might include information that is already recorded during the audits but not in a standardized manner, or that is examined during the audit but not actually recorded, such as number and types of worker trainings, size of watercourse buffers on the certified forest, and type of species being protected. In the context of this project, supporting evidence is defined as “information about conditions on a production unit that substantiates compliance determinations.”

By building a framework to collect and manage selected pieces of evidence consistently as part of the audit process, FSC will be able to capture this key information to improve both the business case for certification as well as its own ability to monitor and evaluate results, such as avoided forest degradation, watershed protection, worker well-being, respect for indigenous peoples’ rights, and protection of endangered species.
Over time, this information can also be used to understand trends and changes in performance due to FSC certification and to streamline the certification process and FSC normative framework to better focus on key values and areas of risk.

While broader stakeholder consultation is necessary to develop a final draft of the SEF, this first draft has been shared with the FSC Secretariat at this point to feed into FSC activities with similar objectives such as the revision of its audit reporting requirements and guidance documents for auditors over the next couple of years. Further information on FSC’s current initiatives in this area is provided in section 4 of this document as contextual information.

In terms of the further development and implementation of the SEF, this project encourages FSC to consider the following phased efforts that take advantage of ‘low hanging fruit’ in the short term and tackle more complex and formal processes in the long term.

Over the short term, and possibly a first phase to putting SEF into practice, actions can be taken to improve data gathering that is already required under FSC’s public audit reporting requirements (FSC-STD-20-007b):

- A list of general observations and recommendations on improving the implementation of the current audit requirements are included in section 4.
- The list could be further refined through a short and targeted consultation with certification bodies, FSC and ASI.
- Improving guidance for auditors could take the form of an ‘advice note’ to FSC-STD-20-007b.

Over the medium term, FSC could identify the data points that are most readily added to FSC-STD-20-007b, as ‘high potential and low burden’ indicators that could be gathered on a voluntary basis:

- Some of these data points are identified in the draft SEF document as either already being required through the audit process, or having a favourable ‘Effort: Reward’ ratio.
- A short and targeted consultation with certification bodies, FSC certified management units, FSC and ASI could help to further refine this list. Questions might include:
  - Perceived values associated with SEF
  - Knowledge, experience and any lessons learned from other certification systems/corporate practices relevant to SEF
  - The top 5-10 performance results of interest (preferably at the criterion level, or cross referenced with specific criteria), and therefore needing data/evidence to substantiate.
  - The top 5-10 ‘high potential and low burden’ data points that should be added to FSC-STD-20-007b. Also, any data points that could be eliminated to compensate for the addition.
- Recommended changes could then be integrated into ASI’s current initiative related to auditing templates.

Over the longer term, FSC could use the SEF as a resource in the revision of FSC-STD-20-007. This revision will include a chamber-balanced working group and likely multiple phases of stakeholder consultation, including consultation with researchers and others with specialized knowledge that could assist with indicator development. The consultations will provide the valuable opportunity to further consider:

- What from the comprehensive list of data proposed in SEF should be prioritized and what is less important; what is missing that needs to be added.
3. Description of method

Guiding Principles for developing the Supporting Evidence Framework

1. The primary purpose of this work stream within the VIA Initiative was to define the data (i.e., supporting evidence) that the FSC certification audit process can generate to substantiate messaging on key results of FSC certification.
   - While, as a first step, this requires identifying a core set of messages and results to align with the supporting evidence, this project should not concentrate on crafting messages – this is a technical project and not a communications one, which is covered under a separate VIA work-stream.
   - While Corrective Action Requests (CARs) provide valuable information regarding the performance of certificate holders, use of CAR data is beyond the scope of this project and is part of a separate VIA work-stream.
   - While other pathways exist for evaluating results of the FSC system (e.g., the FSC Policy for Association roadmap for ending a disassociation; key account commitments monitoring; business and stakeholder perception surveys), this project specifically concentrates on opportunities available through the certification audit process.

2. There are multiple audiences (‘users’) for SEF: FSC consumer-facing FSC license holders, and FSC certified producers wanting to make substantiated messages on the benefits of FSC certification; NGOs, M&E practitioners and other stakeholders wanting to better understand the results of specific criteria; standards setting entities wanting to use this information to simplify the standard and audit process in the future, among others. Therefore, SEF needs to generate the data that can be further analyzed and used for these multiple purposes.

3. SEF ‘providers’ are threefold: 1) is the Certification Body and 2) is the Certificate Hold, both of whom provide supporting evidence as part of the certification audit; and 3) FSC, Network Partners, and others provide data so that the supporting evidence can be compared with other information (for example, national laws or norms) in order to generate compelling messages.

4. In general, this supporting evidence is already being examined as part of the certification audit. It is, however, not being recorded or not being recorded in a consistent or systematic way. This significantly inhibits the use existing audit information for M&E or communications purposes.

5. A core assumption of this project is that the certification process will evolve to use standardized, automated reporting forms. This is already being planned by the FSC Secretariat and therefore this project is well-timed to inform that effort. It would further be challenging to meet the method proposed in SEF if a standardized and automated audit form did not exist.
6. **Cost/Benefit and feasibility needs to be highly considered for each proposed supporting evidence so that additional time or cost burden is not placed on certification bodies or certificate holders.** This will be possible through streamlining the certification audit process (including but not limited to standardized/automated reporting forms) and by prioritizing SEF data that is already required to be considered as part of the audit. Further, FSC may need to reconsider what data certification bodies are currently required to record with the goal of eliminating data collection that is less meaningful.

7. **In order to integrate the supporting evidence into the certification audit process, each supporting evidence data point will need to correspond to a specific criterion.** The supporting evidence is also defined at the criterion level because there is no consistency across national standards at the indicator level.

8. **Different messages will resonate with different contexts.** For example, accountability/corruption-related evidence will be more meaningful to demonstrate for countries that have high cultures of corruption. Therefore, at the most basic level, **SEF needs to generate general statistics recorded on each FSC-certified forest** (e.g., tropical/temperate/boreal; community/private/public; total hectares; etc.) so that localized messages can be made.

9. **SEF can expand over time, and the most readily available information (and with the highest reward) should be prioritized as a first stage in SEF data collection.** For example, supporting evidence that is already required under FSC-20-007b or only requires a ‘conformance/non-conformance’ response is considered easier to generate than multi-select checklists and quantitative information.
   - This guiding principle is particularly relevant given the other, multiple work-streams within FSC and ASI aimed at developing standardized templates and revising FSC-STD-20-007 that will only be finalized around 2020.
   - The move to standardize and automate certification audit reporting forms (which may occur before 2020) will in itself result in the ability to analyse conformance/non-conformance data across all certificate holders and therefore generate a valuable set of supporting evidence for use in messaging.

10. **The supporting evidence intends to demonstrate outputs and results of FSC certification and cannot be used to support causation or attribution of the impacts of FSC.** In this sense, the proposed evidence is synonymous with ‘data points’ to be recorded during the certification audit.

**Logic of the Supporting Evidence Framework**

By building a framework to collect and manage selected pieces of evidence consistently as part of the audit process, FSC will be able to capture this key information to improve both the business case for certification as well as its own ability to monitor and evaluate results, such as avoided forest degradation, watershed protection, worker well-being, respect for indigenous peoples’ rights, and protection of endangered species.

The following is an example of supporting evidence for FSC Criterion 2.4, on worker wages: “... pay wages that meet or exceed minimum forest industry standards...”
**Current practice:** Certification Body indicates conformance or non-conformance with this requirement by reviewing the process used by the certificate holder to determine wages and by reviewing a sample of wage data.

**Supporting evidence:** Certification Body records numerical data on actual wage levels and categorized by type of worker.

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**System changes needed to implement this approach**

- Auditors document specific supporting evidence for selected C&I
- These requirements are reflected in updated versions of STD 20-007a & 20-007b

Data collection and reporting

Data verification

Data entry and management

Data analysis

CBs enter data into a new FSC database via a CB online reporting, streamlining data entry

Audit data can be readily analyzed to support outcome reporting and improved scheme management.

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**Definition of the supporting evidence for key results of interest**

The first phase in building a SEF was to cross-reference FSC criteria that relate to key results of interest to the various FSC stakeholders, and identify the type of supporting evidence that can be recorded through the audit process. Two different approaches were used to create this list:

1. “Begin with the end in mind”: Existing information on key results of interest to SEF users was first collected, including from the FSC Theory of Change, ISEAL M&E pyramid and proposed common core indicators, thematic priorities of companies funding the VIA initiative, and interviews with FSC communications staff and other stakeholders. The criteria with the FSC P&C (v5) corresponding with the above results were identified.

2. “Begin with the potential of the standard”: Each criterion in the FSC P&C was reviewed to identify priority criteria for demonstrating and communicating the value of FSC certification, and those criteria of most interest to SEF users were highlighted.

Note: The proposed supporting evidence is meant as a starting point for further deliberations and analysis as to what evidence is most feasible and practical to record during the certification audit.
Characteristics of the supporting evidence

The second phase was to qualify the supporting evidence according to the type of supporting evidence it is, how it can be gathered, and how feasible it is to collect that information through an FSC audit.

- **Type of supporting evidence.** The SEF concentrates on results on-the-ground and results related to process. While results of FSC certification often focus on performance on-the-ground, there seems to be merit to also including procedural results, as one of the benefits of FSC certification is having processes in place to address environmental and social issues. The supporting evidence for these process-related results normally require only a ‘yes/no’ or ‘conformance/non-conformance’ responses (i.e., the procedure exists or it does not exist). Therefore, the SEF distinguishes between the following types of supporting evidence:
  
i. Conformance/non-conformance with the criterion, without any additional data needed.  
  *For example: Use of GMOs*

  ii. Yes/No response to the defined supporting evidence.  
  *For example: Presence of illegal activities.*

  iii. Statistical, quantitative data.  
  *For example: numbers of workers trained; area under protection.*

  iv. Multi-select checklists (generally qualitative) for finer-grained information-gathering.  
  *For example: type of training offered; benefits provided to the community.*

- **Tools for reporting the supporting evidence.** The SEF indicates whether the supporting evidence could be recorded as part of the client self-assessment or by the certification during the audit.
  
i. Tool 1: Standardized and automated self-reporting form by applicant/certificate holder prior to the assessment and then updated as necessary prior to audit. This information would still be verified during audit. The self-reporting form may evolve into being two forms: one document completed by the client during the application process that contains more general information; one document completed as part of the assessment/audit process that contains more detailed information. If this approach is adopted, FSC would need to expand FSC-STD-20-007 to also include standardized self-reporting requirements.

  ii. Tool 2: Standardized and automated certification body audit reporting form.

- **Feasibility of gathering the supporting evidence.** An assessment of the feasibility of collecting the proposed evidence and the potential associated messaging was conducted. This information is useful to support prioritisation of supporting evidence, especially as the implementation of the SEF might take a stepwise approach. The options are:
  
i. Tier 1: In general, evidence that is readily available as basic quantitative information required in the FSC STD 20-007b and/or that only requires a ‘conformance/non-conformance’ response.

  ii. Tier 2: New kinds of data, not currently asked for in audits. Gathering this evidence depends on the revision of the FSC STD 20-007 and introduction of self-reporting templates and standardised audit templates.
• **Effort to Reward (ER) ratio of gathering the supporting evidence.** This ratio defines the ‘effort’ to ‘reward’ balance, with each variable ranked from 1 to 5. 1 indicates the lowest effort and lowest reward. 5 indicates the highest effort and highest reward. Thus, an ER ratio of 1:5 indicates the lowest effort for the highest reward. Note that while the ER rating provides some indication of priority, including what evidence is most readily available through existing audit reporting requirements, expert consultation with SEF content users, content providers, and in some cases outside academics or other experts, will be necessary to take the prioritization process to the next level.

Annex 1 (see section 6 ‘References’) shows the supporting evidence proposed and information on the characteristics described above.

**Communications based on supporting evidence**

The primary purpose of this building this SEF under the VIA initiative is to define supporting evidence to substantiate messaging on key results of FSC certification. Therefore, a final phase in the development of the SEF was the formulation, for illustrative purposes only, of sample messages that could potentially be made based on the supporting evidence proposed. The last column on Annex 1 indicates the corresponding sample message number.

Some of these messages might need the supporting evidence to be analysed in a certain way. In those cases, some suggestions are offered in Annex 1. For example, the notes might suggest a ‘control’ (referring to national/regional laws and norms that can be compared with the supporting evidence) or a ‘baseline’ (referring to changes on the forest management unit (FMU) over time). Note that messages based on controls may be challenging because there are multiple levels of laws per country and enforcement is not consistent; messages based on baseline information may be challenging because it will require data mining audits from years past and where data was not collected consistently.

In addition, in order to generate some of these potential messages, the SEF considered a list of general quantitative information (not attributed to a specific criteria) that is already collected as part of the certification audit. The data can be used to develop messages related to attributes of certification in general (for example, growth of certification globally or in X region; number of community forest operations in X country), as well as to articulate messages for specific geographies and audiences as they correspond with the other supporting evidence gathered (for example, x number of workers were trained in health/safety in x region; x ha HCVs under certification in tropical countries; x ha protected areas managed for conservation purposes in x country). Annex 2 (see section 6 ‘References’) shows a full list of these data points and relevant challenges.

The set of sample messages regarding the possible benefits of FSC certification based on supporting evidence is in Annex 3 (see section 6 ‘References’). Please note that these messages are meant for illustrative purposes only and are meant to inform FSC’s ongoing system revision. They should be considered neither “business ready” nor drafts of possible messages. Rather, the purpose of elaborating them is threefold:

1. **To guide the development of the Supporting Evidence Framework (SEF) by identifying which messages and results may be of interest to SEF ‘users’**. The messages and results listed in this table are therefore
cross-referenced with criteria in the SEF document, which then defines the specific evidence that would be recorded during the audit to substantiate the result and message.

2. **To define the different types of evidence, or data, that can be used to create messages:**
   - Data recorded as part of the certification audit, based on the P&C
   - General forest statistics data (size, country, forest zone, forest type, forest management), recorded for each certificate and required under FSC-STD-20-007b
   - ‘Control’ and ‘Baseline’ data which can be used for comparing the above data with national/regional norms and/or changes in the FMU over time.

3. **To illustrate the types of messages that can be developed, depending on the purpose and audience:**
   - General benefits associated with FSC certification
   - Quantitative and data-driven messages, based on specific evidence recorded during the audit
   - A combination of both of the above.

It is envisioned that the supporting evidence will generate data that can then be manipulated in multiple ways to create various messages, and that general messaging about the benefits of FSC certification can also be augmented by including more detailed ones. Annex 4 (see section 6 ‘References’) offers a general example of how this might work – for illustrative purposes only.

### 4. Contextual information

#### Relevant current initiatives in the FSC system

The goals, scope of work, and deliverables of the SEF project overlap with multiple current initiatives in the FSC system: Revision of FSC-STD-20-007; the FSC Implementation Plan to streamline the FSC Normative Framework towards more ‘risk and result-based’ standards; ASI revisions to the certification body audit template; proposed General Assembly motions related to standardized audit reports for improved M/E; and likely many others. Coordination of all these efforts is critically important in order to reduce redundancies, capitalize on synergies, and achieve the collectively desired impact.

#### Observations and recommendations on improving the implementation of the current FSC-STD-20-007b

In general, there is a very limited set of available data for demonstrating the results of FSC certification or for substantiating messages. This is the case both for general statistical information related to the forest operation as well as for information gathered on compliance with the FSC P&C. Audit reports are highly variable.

For the purposes of advancing the objectives of SEF, adjustments to certification body audit requirements should concentrate on FSC-20-007b because it lists the information that is currently required to be recorded in the public version of the certification audit. Although a certification body is required to record other data as part of FSC-20-007 and FSC-20-007a (e.g., number of accidents), such information is not publicly available and therefore not accessible to FSC or other ‘SEF users’. The following are some issues that emerged through reviewing certification body audit reports (public summaries).
• **Language** - Audit reports are submitted in multiple languages. While this presents challenges for monitoring/evaluating on-the-ground performance, it may not be so relevant to SEF, which relies more heavily on quantitative data. Requiring all reports to be written in the same language also brings with it financial constraints, particularly for SLIMF operations.

• **Units** - There is no standardized and consistently applied unit of measurement, making it challenging to understand quantitative results and trends across FMUs. It is not clear why this has to be the case.

• **Heavy use of qualitative/narrative information** - Much of the data required in the audit report takes the form of ‘descriptions: description of the forest; description of the management system and management objectives; description of forest resources and management structure; description of management of RTE species; summary of ownership and use rights; summary of the management plan. While there are benefits to this, such recording makes this valuable data largely unusable within the context of SEF. There may be opportunities to standardize some of the recording of this data.

• **Size, country, geographic location, forest zone, ownership/management** – this data is generally recorded consistently. However, it is not clear if all this data is actually required under FSC-STD-20-007b or is just generally included in the summary audit reports because they are required anyways under FSC-STD-20-007a.

• **Forest type (natural or plantation)** – guidance is needed on how to properly record data when there is a mix of both forest types in the area. There might currently be double reporting on areas.

• **List of commercial species** – Scientific names are not always used.

• **AAC** – This data is not consistently recorded, although it is not clear whether it is required.

• **Area designated for production versus for protection** – guidance is needed on how to record data where there are no discrete delineations. Guidance is also needed on what is considered ‘protection’. Some reports further categorize ‘protection’ while others do not, although this is not a requirement.

• **NTFP areas** – guidance is needed on how to properly record data when there is not a discrete delineation of this area.

• **Area of FMU regenerated, categorized by natural regeneration, planting/coppicing** – there is often overlap and a mixture of these. Need guidance on how to determine. Also not clear if this is a priority.

• **High Conservation Values** – The area associated with each of the HCVs is not consistently recorded, and some public summaries are also not recording which HCVs are found on the FMU. Guidance will also be needed for HCVs that do not have associated areas (animals).

• **Pesticides** – Name, quantity and area treated is generally recorded correctly. However, chemical name is not consistently used (instead brand or local name is recorded).

• **Number of workers, differentiated by gender** - This information is not consistently recorded. Further, some reports categorize worker by worker types while others do not.

### 5. References

- Annex 1. Proposed data to be collected as part of verifying conformance with FSC P&C – draft 1
- Annex 2. Basic quantitative information collected during the certification audit
- Annex 3. Sample messages, associated results, and corresponding criteria
- Annex 4. How the Supporting Evidence can be Used

### 8. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of M-5a

1. Move goals of the document, next steps and envisioned uptake pathways for recommendations to the introduction. Clarify the endorsed purposes of the document: a method for determining...
5. what information can be collected through audit processes and intended to be used for improving FSC practices and policies. The document is not to be used to derive or extract business ready messages, etc. Clarify that this document of record is a compilation of recommendations for how to better capture standardized data and evidence through the audit activities, thus improving consistency, credibility and integrity for the assessment process conducted through assurance activities.

2. Clarify what is meant by supporting evidence.

3. Clarify that version 5 of FSC P&C was used to develop the framework table.

4. Make clear that these recommendations are for an assurance framework for the FSC P&C, and not a research framework.

5. Clarify that examples of messages are illustrative only for the types of stories that end users may want to communicate, and that the document is designed to inform FSC’s ongoing system revision. The goal is that evidence collected would satisfy the evidence required to demonstrate a specific criteria.

6. Further emphasize the low hanging fruit, where changes in audit can occur quickly and clearly differentiate where additional process is required to further develop the framework.

7. Clarify definition of effort and reward – and how used to rank prioritized recommendations.

8. Specify where need specialized groups may be beneficial for defining types of evidence required (e.g. ecologists, or make links to the FSC Ecosystem Services protocol).

9. Standardize language – globally refer to results versus outcomes / impacts except where specifically referencing a particular level of a results chain (e.g. outputs, outcomes, impacts).

10. Have the guiding principle “end driving the process” also list other audiences that could learn from and use the SEF (e.g. indigenous people).

11. Clarify the difference between status and change in the P&C in the results column of the framework table. (Note: It was decided not to address this issue within the VIA initiative as it requires a more detailed description of indicators, which should be part of the next round of consultations if the SEF is taken forward by FSC).

12. In the sample message, take out specifics (e.g. proboscis monkey or 20%) and use XX or YY.

9. Summary of comments received and voting results from the Technical Advisory Group for current revision (M-5b).

n/a

10. Overall period of endorsement:

Start date: 10 August 2017
End date: 17 August 2017

11. Number of revisions: 1

**Annex 1. Proposed data to be collected as part of verifying conformance with FSC P&C – draft 1**

This table defines the possible data (supporting evidence) that could be recorded as part of the certification audit, categorized according to the FSC P&C. The columns provide the following information:

- **Column 1 (Result/Criteria):** Cross-reference to criteria in the FSC P&C (Version 5) where the evidence would be recorded during the certification audit.
- **Column 2 (Supporting Evidence):** The supporting evidence being proposed for each criterion. These generally fall under four categories:
  - Conformance/Non-conformance
  - Yes/No
  - Statistical, quantitative data
  - Multi-select checklists
- **Column 3 (Notes):** Points to consider related to:
  - Rationale for proposing the selected criterion over others
  - Whether the supporting evidence could be recorded as part of the client self-assessment or by the CB during the audit
  - Questions, reflections and other points to consider in working towards a final draft SEF
  - Type of analysis that can be done to produce a message: a) ‘control’ refers to national/regional laws and norms that can be compared with the supporting evidence; b) ‘baseline’ refers to changes on the FMU over time
- **Column 4 (Feasibility):** Information to support prioritization of supporting evidence, with assumption that implementation of SEF may take a step-wise approach.
  - Already required in FSC-STD-20-007b, meaning the supporting evidence already needs to be recorded
  - Already recorded in audit report, mostly because the evidence is ‘conformance/non-conformance’
  - ‘ER’ ratios define the ‘effort’ to ‘reward’ balance, with each variable ranked from 1 to 5. 1 indicates the lowest effort and lowest reward; 5 indicates the highest effort and highest reward. Thus an ER ratio of 1:5 indicates the lowest effort for the highest reward.
  - Other challenges to consider
- **Column 5 (Sample Message):** Cross-reference to sample messages/results that can be substantiated by the supporting evidence. See Possible VIA Messages and Results table.

In general, evidence that is already required in FSC-STD-20-007b and/or that only requires a ‘conformance/non-conformance’ response, is considered ‘Tier 1’ and can be more readily adopted without having to wait for changes to FSC-STD-20-007 that would allow for additional evidence to be recorded.

NOTE: The proposed evidence is meant as a starting point for further deliberations and analysis as to what evidence is most feasible and practical to record during the certification audit. While a feasibility analysis of these was initiated, there is much more work needed to be done to refine the list of evidence.

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1 FSC-STD-20-007b lists the information that is currently required to be recorded in the public version of the certification audit. Although the certification body is required to record other data as part of FSC-20-007 and FSC-20-007a (e.g., number of accidents), such information is not publicly available and therefore not accessible to FSC or other ‘SEF users’.
<table>
<thead>
<tr>
<th>Result (Criteria)</th>
<th>Supporting Evidence</th>
<th>Notes</th>
<th>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</th>
<th>Sample message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal right to operate (C1.3)</td>
<td>i. Conformance/Non-conformance</td>
<td>This criterion was prioritized over other related ones in the Principle. This is also a general statement that can be made about FSC certification since it ‘should’ always be a conformance. Can be compared with control data for messaging. At country level, would be interesting to know specifically where the challenges were (if a CAR is issued at indicator level) in order to try and resolve bottlenecks; however, this would require a multi-select checklist for standardizing the CARS, which is not seen as feasible at this point and beyond the scope of the SEF project.</td>
<td>Already recorded in audit report Effort:1 Reward: 5</td>
<td>Message 1</td>
</tr>
<tr>
<td>Measures to prevent illegal activities (C1.4)</td>
<td>i. Presence of illegal activities (Y/N) Type of substantiated, significant illegal activities (multi-select list: logging, harvesting of NTFPs, mining, recreation, trapping, hunting, drug trafficking)</td>
<td>Would need to provide guidance on when an illegal activity is considered significant. Could be interesting to compare with baseline for messaging on improvements over time.</td>
<td>i Currently described in audit findings, but not recorded in audit report; Effort:1 Reward:3 ii Not currently recorded in audit report; Effort:2 Reward:4</td>
<td>Message 1 Message 3</td>
</tr>
<tr>
<td>Measures to resolve disputes related to customary laws and tenure (C1.6)</td>
<td>i. Presence of disputes (y/n) Operations cease where disputes exist (Y/N)</td>
<td>i Can be gathered in self-reporting form. Could also be gathered in table-format, along with other dispute-related criteria (C2.6, C4.6) i could be interesting to compare with baseline for messaging on improvements over time.</td>
<td>i collected in 20-007 but not in 20-007b; Effort:1 Reward:5 ii collected in findings of audit report, but not in y/n format; Effort:1 Reward:4</td>
<td>Message 2</td>
</tr>
<tr>
<td>Result (Criteria)</td>
<td>Supporting Evidence</td>
<td>Notes</td>
<td>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</td>
<td>Sample message</td>
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</tr>
<tr>
<td>No forced or child labour, workers’ core rights are protected, and freedom of association and collective bargaining (C2.1)</td>
<td>i. Conformance/non-conformance</td>
<td>Multiple results and messages can be crafted here; however, since these are all in 2.1, the same data point can serve as supporting evidence for all.</td>
<td>i Already recorded in audit report; Effort:1 Reward:5+</td>
<td>Message 4, Message 5</td>
</tr>
<tr>
<td></td>
<td>i. All stats related to employment numbers and wages, training, grievances gathered in C2.3, C2.4, C2.6 broken down by m/f</td>
<td></td>
<td>i. Not currently recorded in audit report, only a sample and general statements related to wages, training and grievances is recorded; Effort:2 Reward:5</td>
<td>Message 6</td>
</tr>
<tr>
<td></td>
<td>i. Number of trainings</td>
<td>All could be gathered in self-reporting form.</td>
<td>i, ii, v Not currently recorded in audit report, only a sample and general statements related to wages, training and grievances is recorded; Effort:2 Reward:5 (5+ for v)</td>
<td>Message 4</td>
</tr>
<tr>
<td></td>
<td>ii. Number of workers trained (further categorized by m/f)</td>
<td></td>
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<td></td>
<td>iii. Type of trainings (multi-select list: H/S, improved silviculture, conflict resolution, community engagement, ecological management, HCVs, other)</td>
<td></td>
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<td></td>
<td>iv. Existence of H/S measures (y/n)</td>
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<td></td>
<td>v. Number of accidents (serious/fatal)</td>
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<tr>
<td></td>
<td>i, ii, v Not currently recorded in audit report, only a sample and general statements related to wages, training and grievances is recorded; Effort:2 Reward:5 (5+ for v)</td>
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<td></td>
<td>iii, iv not currently recorded in audit report; Effort:3 Reward:4</td>
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<tr>
<td>Result (Criteria)</td>
<td>Supporting Evidence</td>
<td>Notes</td>
<td>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</td>
<td>Sample message</td>
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<tr>
<td>Promote quality jobs; meet or exceed minimum wage requirements (C2.4)</td>
<td>i. Number of workers, categorized by worker type: employee/casual worker; full time/part time; local/non-local; m/f &lt;br&gt;ii. Average wage by worker type (multi-select list: managerial, supervisor, administrative, skilled worker, laborer)</td>
<td>i and ii can be collected through self-reporting form, in a table format. &lt;br&gt;ii could be compared with control (regional norm) for messaging &lt;br&gt;Data goes slightly beyond criterion and becomes place for overall data gathering on worker stats</td>
<td>i not currently recorded in audit report - just sample and general notes made; Effort:2 Reward:5 &lt;br&gt;ii actual wage is not recorded in audit report - auditor reviews how wages were determined and reviews a sample of records, but does not ask all details of ii. &lt;br&gt;Feasibility might be affected because of the many worker classifications and the time it would take to gather this information. Also not clear if it would be useful for the purpose of SEF, and perhaps other evidence should be considered that is easier to generate; Effort:4 Reward:3</td>
<td>Message 7</td>
</tr>
<tr>
<td>Mechanism implemented for resolving grievances (C2.6)</td>
<td>i. Mutually agreed process for resolving grievances (Y/N) &lt;br&gt;ii. Number of unresolved/resolved grievances</td>
<td>All can be gathered in self-reporting form &lt;br&gt;Could also be gathered in same table as other dispute-related criteria (C1.6, C4.6). &lt;br&gt;Could be interesting to compare with baseline</td>
<td>Not currently recorded in audit report – CB verifies whether systems are in place for resolving grievances and if they are functional; Effort:1 Reward:5</td>
<td>Message 8</td>
</tr>
<tr>
<td>Result (Criteria)</td>
<td>Supporting Evidence</td>
<td>Notes</td>
<td>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</td>
<td>Sample message</td>
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</tbody>
</table>
| Identify IP rights and sites (C3.1) | i. Process to identify and map IP rights, with presence of map (Y/N)  
ii. Presence of IP rights that could be affected (Y/N, number, contested/not contested) | Need guidance on what is a ‘grievance’ | Not currently recorded in audit report; Effort:1 Reward:5 | Message 9 |
| Control is maintained unless FPIC is agreed (C3.2) | i. Number of IP communities granting FPIC | This would be compared with ii above | Not currently recorded in audit report; Effort:1 Reward:5 | Message 10 |
| Protect areas of special significance (C3.5) | i. Presence of areas of special significance (Y/N)  
ii. Number/size of protected sites (that are effectively protected)  
iii. Values associated with sites (multi-select: spiritual, cultural, subsistence, economic, environmental) | i could be gathered in self-reporting form, in same table as information from above (3.1) | i,ii not consistently (though sometimes) recorded in audit report; Effort:2 Reward:5  
iii not currently recorded in audit report; Effort:3 Reward:3  
Feasibility is not clear since some IPs do not want these areas or their values to be made public, and sometimes don’t give the company specific information either. | Message 9 |
<table>
<thead>
<tr>
<th>Result (Criteria)</th>
<th>Supporting Evidence</th>
<th>Notes</th>
<th>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</th>
<th>Sample message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of IP intellectual knowledge (C3.6)</td>
<td>i. Existence of IP intellectual knowledge that is being used by company (Y/N)</td>
<td>Not a priority for a business message; however, for M&amp;E purposes would be interesting to see the prevalence of this for consideration in future standards revisions, and it is also already covered under FPIC and Ecosystem Services.</td>
<td>Currently recorded in audit report, Effort: 1 Reward: TBD</td>
<td>No message because this information would be collected for M&amp;E purposes and not messaging</td>
</tr>
<tr>
<td>Protection of community rights (C4.1)</td>
<td>i. Process to identify and address communities affected by management activities (Y/N) ii. Number of rights holders living in the FMU iii. Number of communities affected by management activities iv. Type of impacts associated with management activities (multi-select: food security, water, health, local economy, social instability, opposition to logging, human rights abuses, recreation)</td>
<td>All can be gathered through self-reporting form</td>
<td>i currently recorded in audit report, Effort: 1 Reward: 5 ii, iii, iv not currently recorded in audit report, Effort: 2 Reward: 4</td>
<td>Message 11</td>
</tr>
<tr>
<td>Result (Criteria)</td>
<td>Supporting Evidence</td>
<td>Notes</td>
<td>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</td>
<td>Sample message</td>
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<tr>
<td>Jobs and training (C4.3)</td>
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<tr>
<td>i. Number of jobs created in local communities</td>
<td></td>
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<tr>
<td>ii. Number of job-related trainings provided in local communities</td>
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<tr>
<td>Can be gathered in self-reporting form</td>
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<tr>
<td>Could be compared with both control and baseline data for messaging.</td>
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<tr>
<td>Currently not recorded in audit report; Effort:1 Reward:5</td>
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<tr>
<td>Message 12</td>
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<tr>
<td>Local development and benefits (C4.4)</td>
<td></td>
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</tr>
<tr>
<td>i. Number of community development initiatives</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>ii. Type of community development initiatives (multi-select: infrastructure, food security; culture/recreation, firewood, micro-finance)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>iii. Dollars invested in communities, and type of investment made (multi-select: processing, services, other)</td>
<td></td>
<td></td>
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<tr>
<td>All can be gathered in self-reporting form.</td>
<td></td>
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</tr>
<tr>
<td>iii More information needed to complete multi-select list</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently not recorded in audit report; Effort:1 Reward:5</td>
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<tr>
<td>Message 12</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Mechanism in place and implemented to address grievances from communities related to management practices (C4.6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Process for resolving grievances (Y/N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ii. Number of grievances (categorized by unresolved/resolved)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>All can be gathered in self-reporting form</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Could also be gathered in same table as other dispute-related criteria (C1.6, C2.6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interesting to compare ii with baseline</td>
<td></td>
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<tr>
<td>Not currently recorded in audit report, Effort:1 Reward:5</td>
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<tr>
<td>Message 8</td>
<td></td>
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</tr>
<tr>
<td>Result (Criteria)</td>
<td>Supporting Evidence</td>
<td>Notes</td>
<td>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</td>
<td>Sample message</td>
</tr>
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</tbody>
</table>
| Diversification of products and services from forests (C5.1) | i. Diversification of products and services (Y/N)  
ii. If diversification, by what percentage | Redundant with Species data collected in general stats table (I, above), with value here that it simplifies looking at change over time (ii). Interesting to compare with baseline for messaging. | Currently required in 20-007b (except for change over time which would be an analysis) | Message 13 |
| Maintenance of forest’s manifold ecosystem services for soil, water, biodiversity (C5.1) | [Placeholder for Ecosystem Service work] | | | Message 14 |
| Harvest activities based on the principles of sustained yield; sustainable harvest (C5.2) | i. Harvest levels do not exceed AAC over the long-term (Y/N) | Interesting to compare with control for messaging. | Already recorded in audit report (possibly required in 20-007) (actual harvest levels are consistent with AAC); Effort:1 Reward:5 | Message 3  
Message 15 |
<p>| Investment in local economy (C5.4) | i. Percentage of goods or services procured locally | Can be gathered in self-reporting form | Not currently recorded in audit report, Effort:2 Reward:5 | Message 12 |
| Process in place and implemented for identifying and assessing environmental | i. Process for doing this (Conformance/Non Conformance) | Result and SEF data recording of 6.1 and 6.2 could be combined (i.e., process in place and implemented for identifying and assessing values/risks and impacts on them) | Already recorded in audit report; Effort:1 Reward:5 | Message 16 |</p>
<table>
<thead>
<tr>
<th>Result (Criteria)</th>
<th>Supporting Evidence</th>
<th>Notes</th>
<th>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</th>
<th>Sample message</th>
</tr>
</thead>
<tbody>
<tr>
<td>values and risks (C6.1)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Process in place and implemented for identifying and assessing impacts on values (C6.2)</td>
<td>i. Process for doing this (Conformance/Non-conformance)</td>
<td>Result of 6.1 and 6.2 could be combined (see above)</td>
<td>Already recorded in audit report; Effort:1 Reward:5</td>
<td>Message 16</td>
</tr>
<tr>
<td>Actions implemented to prevent negative impacts to environmental values (C6.3)</td>
<td>i. Presence of negative impacts (Y/N)</td>
<td></td>
<td></td>
<td>Message 16</td>
</tr>
<tr>
<td></td>
<td>ii. Actions taken to prevent negative impacts (multi-select checklist: bridge replacement/culvert replacement; road maintenance/closure; RIL implementation)</td>
<td>ii checklist needs additional work to identify broad categories of actions</td>
<td>None are currently recorded in audit report, though are sometimes briefly referred to in the public summary ER not clear, and may not be worthwhile to include this result or any of the supporting evidence.</td>
<td>Message 21</td>
</tr>
<tr>
<td></td>
<td>iii. Dollars spent on mitigation/repair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protection of RTEs and their habitats (C6.4)</td>
<td>i. Area allocated to RTE protection</td>
<td>Collect all in self-reporting form</td>
<td>i-iii, Not currently recorded in audit report in this detailed manner, and often no information that links species to areas; also, some FMUs have large number of species and therefore would need to select some key ones that could be used for stats purposes; Effort:2 Reward:5+</td>
<td>Message 16</td>
</tr>
<tr>
<td></td>
<td>ii. Number of RTE species protected</td>
<td>Compare with control data</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii. Names of these species</td>
<td>ii can be extrapolated from iii, though might still be helpful to have number readily available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Result (Criteria)</td>
<td>Supporting Evidence</td>
<td>Notes</td>
<td>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</td>
<td>Sample message</td>
</tr>
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</tr>
<tr>
<td>Protect/restore all native ecosystems (C6.5)</td>
<td>i. Area allocated for RSA</td>
<td>Collect in self-reporting form</td>
<td>i already recorded in audit report; Effort:1 Reward:5+</td>
<td>Message 16</td>
</tr>
<tr>
<td></td>
<td>ii. Dollars spent on protection and restoration</td>
<td>Compare with control data</td>
<td>ii not currently recorded in audit report; Effort:2 Reward:5+</td>
<td>Message 21</td>
</tr>
<tr>
<td>Maintenance and enhancement of biodiversity (C6.6)</td>
<td>[expert consultation is required for defining appropriate supporting evidence]</td>
<td>More work needed here. There are many attributes that could be associated with biodiversity, but already overlap with other criteria and therefore now sure if/how to utilize 6.6: * preserve dead/dying trees * maintain diversity of tree species * multi-successional stages * tree retention in harvest areas * protect RSAs * HCVs/IFLs * native biodiversity So, maybe the result is something more specific, and then this criterion as well as others link to the broader message around biodiversity. These are also associated with climate benefits, so could have double results</td>
<td>TBD</td>
<td>Message 16</td>
</tr>
<tr>
<td></td>
<td>i. Total lineal length of watercourse</td>
<td>iii is considered to strongly correlate with biodiversity and water quality</td>
<td>i and iii not currently recorded in audit report. It will be easier for plantations/large operations and challenging for smaller operators without GIS tools to do this. Consider prioritizing iii; Effort:3 Reward:4</td>
<td>Message 18</td>
</tr>
<tr>
<td></td>
<td>ii. Dollars spent on restoration</td>
<td></td>
<td></td>
<td>Message 21</td>
</tr>
<tr>
<td></td>
<td>iii. Width of riparian buffer around primary and secondary watercourses</td>
<td></td>
<td></td>
<td>Other multiple</td>
</tr>
<tr>
<td>Result (Criteria)</td>
<td>Supporting Evidence</td>
<td>Notes</td>
<td>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</td>
<td>Sample message</td>
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</tr>
<tr>
<td>No conversion of natural forest (except under very limited circumstances) (C6.9)</td>
<td>i. Conformance/Non-conformance</td>
<td>Will need to be careful with messages and what is meant by ‘conversion’, etc, particularly messages related to avoided deforestation Compare to control</td>
<td>ii not currently recorded in audit report, and not clear whether information will be useful, Effort:2 Reward:3</td>
<td>Message 3</td>
</tr>
<tr>
<td></td>
<td>ii. Area converted</td>
<td></td>
<td>i. Currently recorded in audit report Effort:1 Reward:4 ii. Not currently recorded in in audit report: Effort:1 Reward:3</td>
<td>Message 15</td>
</tr>
<tr>
<td>Robust planning of management activities (C7.1)</td>
<td>i. Conformance/Non-conformance</td>
<td>Currently recorded in audit report Effort:1 Reward:5</td>
<td></td>
<td>Message 20</td>
</tr>
<tr>
<td>Transparency in planning and with active stakeholder engagement (C7.5)</td>
<td>i. Presence of publicly available plan (y/n)</td>
<td>Overlaps with C7.6, though this criterion selected over other one</td>
<td>i Currently recorded in audit report Effort:1 Reward:5 ii, iii Register of consultations is reviewed during audit, but data not always recorded in audit report; Effort:2 Reward:3 Quality is more important than quantity, so not sure what this would reveal. Need to rethink how best to quantify (if necessary) effectiveness.</td>
<td>Message 20</td>
</tr>
<tr>
<td></td>
<td>ii. Number of consultations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii. Number of stakeholders consulted</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Robust monitoring plan</td>
<td>i. Conformance/non-conformance</td>
<td>Currently recorded in audit report; Effort:1 Reward:5</td>
<td></td>
<td>Message 20</td>
</tr>
<tr>
<td>Result (Criteria)</td>
<td>Supporting Evidence</td>
<td>Notes</td>
<td>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</td>
<td>Sample message</td>
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<tr>
<td>and with active stakeholder engagement (C8.1)</td>
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<tr>
<td>CoC from beginning of the supply chain (C8.5)</td>
<td>i. Conformance/non-conformance</td>
<td>Currently recorded in audit report; Effort:1 Reward:4</td>
<td></td>
<td>Message 22</td>
</tr>
<tr>
<td>Identify HCVs based on credible, robust process and consultation with stakeholders (C9.1)</td>
<td>Process in place for identifying and protecting HCVs (Y/N)</td>
<td>All already required as general info collected in audit, Effort:1 Reward:5</td>
<td>Area for HCV animals may be challenging</td>
<td>Message 16</td>
</tr>
<tr>
<td>Protection of HCVs (C9.2)</td>
<td>i. HCV protection measures are implemented and effective (y/n)</td>
<td>Description of protection measures is recorded in audit report, but not effectiveness; Effort:1 Reward:5</td>
<td></td>
<td>Message 16</td>
</tr>
<tr>
<td>Maintain forest cover (C10.1)</td>
<td>i. Area of FMU regenerated, categorized by natural regeneration, planting/coppicing or both</td>
<td>Already required in 20-007, Effort:1 Reward: 5</td>
<td>There is sometimes overlap with these categories, so challenging to define specific areas.</td>
<td>Message 3</td>
</tr>
<tr>
<td>No use of GMOs (C10.4)</td>
<td>i. Conformance/Non-conformance</td>
<td>Already recorded in audit report; Effort:1 Reward:5</td>
<td></td>
<td>Message 23</td>
</tr>
<tr>
<td>Result (Criteria)</td>
<td>Supporting Evidence</td>
<td>Notes</td>
<td>Feasibility (is it already required? Is it considered a core result for FSC? What is the effort-reward balance?)</td>
<td>Sample message</td>
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</tr>
<tr>
<td>Use of ecologically appropriate forestry practices (C10.5)</td>
<td>i. Use of RIL or other harvesting BMPs implemented to protect environmental resources and residual stands (Y/N)</td>
<td>Consider whether this supporting evidence is just a conformance/non-conformance and a general attribute of FSC certification</td>
<td>Not currently recorded in audit report, TBD if it is a priority</td>
<td>Message 3</td>
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<tr>
<td>Careful and reduced use of chemical fertilizers (C10.6)</td>
<td>i. Use of chemical fertilizers (Y/N) ii. Type (active chemical) and amount of fertilizers used iii. Percent reduction of chemical fertilizer use (ave vol/ha)</td>
<td>All can be gathered in self-reporting</td>
<td>i-ii required in 20-007, Effort:1 Reward:4</td>
<td>Message 24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i can be compared to control</td>
<td>i-ii</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii can be compared to baseline</td>
<td>iii Not currently required in audit report, Effort:2 Reward:5</td>
<td>Message 25</td>
</tr>
<tr>
<td>Reduced use of chemical pesticides (C10.7)</td>
<td>i. Use of derogation (y/n) ii. HH name (active chemical) and volume iii. non-HH name (active chemical) and total amount used over defined area.</td>
<td>All can be gathered in self-reporting</td>
<td>Required in 20-007, Effort:1 Reward:5</td>
<td>Message 24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consider control with respect to CHs that don’t have derogations and in countries where HH are being used.</td>
<td></td>
<td>Message 25</td>
</tr>
</tbody>
</table>
Annex 2. Basic Quantitative Information Collected During the Certification Audit

<table>
<thead>
<tr>
<th>Data collected</th>
<th>Notes</th>
<th>Feasibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total hectares of FSC-certified forests further characterized by:</td>
<td>Data collected in self-</td>
<td>Already required in 20-007b</td>
</tr>
<tr>
<td>• Size (small, medium, large, group)</td>
<td>reporting form</td>
<td>For forest type: currently this is a challenge because there is often a mix</td>
</tr>
<tr>
<td>• Country</td>
<td></td>
<td>of both</td>
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<tr>
<td>• Forest Zone (tropical, subtropical, temperate, boreal)</td>
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<td></td>
</tr>
<tr>
<td>• Forest type (natural, plantation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Forest management (public, private, community)</td>
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</tr>
<tr>
<td>Total area certified, and categorized:</td>
<td>Data collected in self-</td>
<td>Already required in 20-007b</td>
</tr>
<tr>
<td>• production</td>
<td>reporting form</td>
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<tr>
<td>• no harvest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• protected (and categorized by RTE, RSA, HCV (and type of HCV), etc)</td>
<td></td>
<td></td>
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<tr>
<td>• managed for NTFP</td>
<td></td>
<td></td>
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<tr>
<td>• non-forest area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species harvested</td>
<td>Data collected in self-</td>
<td></td>
</tr>
<tr>
<td>• timber (type; estimated amount)</td>
<td>reporting form</td>
<td></td>
</tr>
<tr>
<td>• NTFPs (type; estimated amount)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSC products:</td>
<td>Data collected in self-</td>
<td>Products currently required in 20-007b; volume sold not currently required;</td>
</tr>
<tr>
<td>• Product category</td>
<td>reporting form</td>
<td>value not currently required</td>
</tr>
<tr>
<td>• Volume sold (per category)</td>
<td></td>
<td></td>
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<tr>
<td>• Total value sold</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex 3. Sample messages, associated results, and corresponding criteria

<table>
<thead>
<tr>
<th>Sample Message</th>
<th>Associated Results (Criteria)</th>
</tr>
</thead>
</table>
| **Message 1:** FSC Certification increases transparency and improves accountability that forests are being proactively managed according to all legal requirements, critical in countries where the culture of compliance is weak. | Legality compliance (C1.3)  
Not involved in corruption (C1.7) |
| **Message 2:** FSC Certification requires that processes are in place and implement to resolve disputes related to customary laws and tenure.  
* In X country, certification led to a decrease in disputes over customary laws by X percent over a 5-year period.  
* Across all forest operations that supply X company, disputes have decreased by X percent due to FSC certification. | Resolution of disputes related to customary laws and tenure (C1.6) |
| **Message 3:** FSC Certification has placed over X million ha of our world’s forests into responsible stewardship, including the conservation of:  
* X ha tropical forests that could have otherwise been converted to X  
* X ha of tropical forests, whose soil stores significant amount of carbon and is therefore critical for mitigating climate change.  
* X ha boreal forests that provide habitat for X  
* X ha community forests that provide direct benefit to forest-dependent communities  
* In X country, X ... |  
No conversion of forest to other land uses (C6.9)  
Protection from encroachment and illegal harvest (C1.4)  
Harvest levels that can be permanently sustained (C5.2)  
Biodiversity conservation; maintain biodiversity (C6.6)  
Maintain forest cover for minimizing erosion (10.1)  
Ecologically appropriate FM practices (10.5) |
| X company derives X% of its forest supply from FSC-certified tropical forests, providing habitat for X.  
FSC operators are committed to protecting natural forests and ecosystems, and avoided forest degradation through responsible management. |  |
| **Message 4:** A core goal of FSC Certification is to enhance the well-being of workers: to protect their rights and access to safe working and decent living conditions. In X year alone:  
* X workers in X country were trained in X  
* Accident rates in X country fell by X%  
* In forest operation supplying X company, accidents rate fell by X% over a 5-year period | Workers core rights are protected (2.1)  
Ensure safe working conditions (C2.3) |
| **Message 5:** Certification works to eliminate forced and child labour | No child or forced labour (2.1) |
| **Message 6:** FSC recognizes that women’s empowerment is key to sustaining our forests, and has made it a priority to monitor and strengthen their role in FSC certified forestry.  
* In X country, X% of the workforce are women, compared to X regional norm | Women’s rights, place in the workforce (C2.2) |
| **Message 7:** Through FSC certification, timber companies commit to providing quality jobs to their forest workers  
* In X country, workers are paid X% higher than the regional norm for similar work  
* In X country, worker wages on certified forests increased by X% over a 5-year period | Improved wages (C2.4) |
| **Message 8:** FSC certification requires that all stakeholders have access to recourse via mutually defined grievance mechanisms | Dispute resolution (C1.6, C2.6, C4.6) |
**Message 9:** Through FSC certification, IP rights and special sites are identified and protected:

* In X, over X certificate holders have identified and mapped IP rights
* Over X million ha of sites of special significance for IPs are being protected
* In X, X million ha of sites designated for cultural and spiritual use are being protected for IPs.

Identify and map IP rights (3.1)
Protection of IP sites (C3.5)

**Message 10:** Through FSC certification, IPs maintain control over their rights & resources unless there is a negotiated FPIC agreement in place.

IPs maintain control (3.2)
FPIC agreements are in place (3.3)

**Message 11:** Through certification, local community rights and special sites are identified and protected:

* X local communities have their rights protected through FSC certification
* In X, FSC certification led to X forest-dependent communities having their livelihoods supported through X
* In X, X million dollars were invested in local community economic development in the last 5 years.

Protect community rights (C4.1)

**Message 12:** Certification helps to foster positive relationships with local communities, including those that rely on the forests for their livelihoods.

* In X year, X communities in X were provided with opportunities such as X
* X jobs were provided to community residents in X
* X dollars were invested in local communities in X
* FSC certification in X has led to an X percentage of reduced X.
* General message about reduced crime, access to better housing, etc.

Jobs and training to local communities (C4.3)
Local development and benefits (C4.4)
Positive impact on local economy (C5.4)

**Message 13:** Through FSC certification:

* Forest managers diversified the products and services they produced by X percent over a 5-year period in X country.

Diversified forest management enhances long-term economic viability (C5.1)

**Message 14:** Message specific to ecosystem services and the ha or forests that have demonstrated specific impacts [this should be done by FSC Ecosystem Services procedure where possible]

Maintenance of ecosystem services (add-on impact) (C5.1)

**Message 15:** FSC certification delivers direct and indirect climate benefits through multiple requirements in its forest management standard. Carbon stocks are retained and increased through:

* Long-term commitments to protect forests from conversion to other land uses
* Harvest practices based on the principles of sustained yield
* Restoration of degraded forests
* Retaining a higher volume of trees in harvested areas compared to what the law requires [can also use specific numbers by having national reference points]
* Minimized waste and damages from harvesting
* X ha of designated protected areas not required under law
* Retention of old and dead trees so that carbon is kept in the forest

Harvest based on sustained yield (C5.2)
No significant conversion to non-forest use (C6.9)

**Message 16:** Certification aims to protect important ecosystem services and environmental values, including high conservation values, biodiversity, old growth and endangered species:

* FSC-certified operators are required to identify and assess environmental values and mitigate negative impacts from management

Identification/assessment of environmental values (6.1, 6.2)
Prevent/mitigate negative impacts (6.3)
Conservation of natural areas, rare species and their habitats:
**Tropical forests are extremely important for biodiversity.** More than X million ha of forest in X have been set-aside for protection compared with X% [national reference point needed].

* X HCVs have been identified with stakeholder input and maintained through appropriate management
* In X country, where important mammal species are endangered, more than X million ha of land are allocated to RTE protection, including the X animal.
* In X country, X RTEs are being protected that would not otherwise be protected under law [national reference point needed]
* In X country, X certificate holders are protecting native ecosystems, critical to biodiversity protection.

**Message 18:** A core goal of FSC Certification is to protect and restore water quality.

* In X country, X million ha of watercourses are protected that would have otherwise lacked protection [reference point for legal requirement compared to stream buffers protected]

**Message 19:** FSC Certification requires a commitment to protect endangered species and other animals that call the forest their home.

* Over X number of RTE species live in FSC certified forests, and over X million ha have been designated for their protection.
* In X country, X rare species are being protected that would otherwise not have been protected [compared to regional control]

**Message 20:** FSC requires forest managers to have forest management and monitoring plans, and as a result:

* In X country, X ha of forest are being managed under robust management and monitoring plans

**Message 21:** Through FSC certification, companies commit to making the necessary investments to restore the health of the forest:

* X million ha of forests and their biodiversity are being restored
* X million dollars have been spent on restoration activities
* X million invested in watercourse restoration

**Message 22:** FSC certification provides assurance that wood can be tracked throughout the supply chain.

**Message 23:** FSC certification prohibits GM trees.

* In X country where the use of GM X continues to grow, X m ha are protected from using them.

**Message 24:** FSC Certification promotes practices that protect soil nutrients, and reducing the use of fertilizers, chemicals and other inputs that can destroy soil health.

**Message 25:** Pesticide use is highly regulated under FSC certification.

* FSC certified forests do not use X chemical used in conventional forestry and found to be the cause of X impacts [national reference point needed on which HH don’t have any derogations]

**General message:** Responsible forest management and forest stewardship continues to increase through FSC certification.

<table>
<thead>
<tr>
<th><strong>Appropriate Management</strong></th>
<th><strong>FSC Certification</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>HCV (except for animal values)</td>
<td>Protection and conservation of water resources (C6.7)</td>
</tr>
<tr>
<td>RSA</td>
<td>Protect RTE species and their habitat (C6.4)</td>
</tr>
<tr>
<td>RTE</td>
<td>Management plans and monitoring (7.1, 7.5, 8.1)</td>
</tr>
<tr>
<td>Other</td>
<td>Restored/enhanced natural forests/ecosystems (C6.3, C6.5, C6.7)</td>
</tr>
<tr>
<td>Total</td>
<td>CoC requirements (C8.5)</td>
</tr>
</tbody>
</table>

**Message 18:** Protect HCVs (C9.1 and 9.2) and change of HCV protection over time (9.4)

**Message 19:** Protection of RSAs (C6.5)

**Message 20:** Protection of RTE species (C6.4)

<table>
<thead>
<tr>
<th><strong>Fertilizer use</strong></th>
<th><strong>Pesticides (10.7)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Protect RTE species and their habitat (C6.4)</td>
<td>Prohibit HH; minimize pesticide use (10.7)</td>
</tr>
</tbody>
</table>

General message: Responsible forest management and forest stewardship continues to increase through FSC certification.
Annex 4. How the supporting evidence can be used

<table>
<thead>
<tr>
<th>Kind of Statement</th>
<th>Supporting Evidence</th>
<th>Analysis required</th>
<th>Example Message (using Criterion 6.4, rare/threatened/endangered species)</th>
<th>Feasibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Message</td>
<td>Basic quantitative info (20-007a 1.1)</td>
<td>None</td>
<td>X million hectares in Tropical Forests are managed as protected areas, including for RTE species. [For example...then add another message with statistics.]</td>
<td>Tier 1</td>
</tr>
<tr>
<td>General Message</td>
<td>Conformance/ Non-conformance</td>
<td>None, except for the need to extrapolate this from public summaries, one by one, until automated templates are available.</td>
<td>X million hectares of RTE species habitat are under conservation action plans in community managed FSC-certified forests in Indonesia.</td>
<td>Tier 1</td>
</tr>
<tr>
<td>Certification leading to improvements – general</td>
<td>Conformance/ non-Conformance over time, showing continual improvement</td>
<td>Comparison to Baseline Conformance/non-conformance changes over time</td>
<td>Via FSC certification controlling illegal hunting activities led to a decrease in poaching of X in X over the last X years</td>
<td>Tier 2</td>
</tr>
<tr>
<td>Certification leading to improvements – quantitative/ statistical</td>
<td>Quantitative/ statistical data, showing continual improvement</td>
<td>Comparison to Baseline quantitative/statistical changes over time</td>
<td>FSC certification led to X% increase in X animal habitat protection in Indonesia over the past X years.</td>
<td>Tier 2</td>
</tr>
<tr>
<td>Certified forest provides better protection than regional norm</td>
<td>Quantitative/ statistical data</td>
<td>Comparison to Control (National/sector norm)</td>
<td>FSC forestry protects rare species, for example in the USA X million hectares of X species habitat was excluded from harvesting activity, which would not have been set aside in conventional forestry.</td>
<td>Tier 2</td>
</tr>
</tbody>
</table>
1. Title of method

GUIDELINES FOR PUBLICATION INCLUSION CRITERIA

2. Introduction

In 2016-2017, the ‘evidence map’ work stream of the Value and Impact Analysis (VIA) initiative sought to develop communications about the performance and impacts of FSC certification based on scientific evidence. The first step in this process was to determine which publications would be included in their analysis.

This document explains the guidelines for setting the publication inclusion criteria agreed by the Technical Advisory Group of VIA. It also explains that the VIA initiative focused on only a subset of the publications meeting the inclusion criteria. In addition, for contextual information, it refers to a recent overview of the state of scientific evidence relevant for evaluating the effectiveness of FSC certification (see section 4).

3. Description of method

The Technical Advisory Group of VIA agreed that in order to make a statement based on scientific evidence, that evidence has to be reported in a scientific publication, as detailed below:

- The publication has to be peer-reviewed, defined as ‘Articles that are written by experts and are reviewed by several other experts in the field before the article is published in the journal in order to insure the article’s quality. This review process makes the article more likely to be scientifically valid, reach reasonable conclusions, etc. In most cases the reviewers do not know who the author of the article is, so that the article succeeds or fails on its own merit, not the reputation of the expert.’ Journals that have peer-reviewed articles state so on their websites.
- Not all items in a peer-reviewed journal are actually peer-reviewed. For example, editorials, letters, news items might not be peer reviewed. Such items are not used for making claims / statements.
- Publication coming up in research search engines, such as Google Scholar (https://scholar.google.com/) are more likely to be peer-reviewed than simple Google search hits.
- Exceptionally, articles published by major international think tanks or NGOs that have an internal or external peer-review process can be used too. The NGOs must not be linked to the FSC or another...
certification body, or have any other important conflict of interest. An example of such acceptable publications is the Occasional Papers by CIFOR.
- Each publication has to specify the following details, as a minimum requirement: i) geographic location and scope of the study, ii) type of forestry operation that has been carried out (e.g. natural forest, plantation), iii) whether the forest management is carried out by an external logging company or a resident community, iv) the method with which the outcomes have been obtained (e.g. GIS study, empirical field study, literature review), v) the specific outcome assessed (e.g. species richness, number of new jobs created), vi) type of interventions assessed and compared (FSC certification, Reduced Impact Logging, other type of Sustainable Forest Management practice), vii) whether or not the article is peer reviewed, viii) where it is published, ix) which of the assessed interventions performed better in terms of the evaluated outcome.
- The study must present original research. That is, opinion pieces, policy perspectives, qualitative literature reviews are not included. Qualitative review can be used as a resource to get to original research articles. Modelling studies are excluded.

The number of studies on FSC certification’s impacts is still very low, and out of those only a few scientific articles met the inclusion criteria set by the ‘evidence map’. Next, the group identified the type of outcomes associated with FSC certification, whether positive or negative.

When it came to developing messages based on this evidence base, the group decided that, if the relation between FSC and a certain outcome seemed positive in one study but negative in another (i.e., there was contradictory evidence), the group would not produce any messages in relation to that outcome.

The group would also not produce messages on evidence that associated FSC certification with negative outcomes, because the purpose of the project was to produce messages that companies could use to communicate about the benefits of using FSC certification.

Therefore, all messages produced by the VIA initiative based on scientific evidence, are on positive outcomes associated with FSC certification for which there is no contradictory evidence.

4. Contextual information

On the last year of the VIA initiative, one of the researchers leading the ‘evidence map’ work concluded an analysis on the state of scientific evidence on the effectiveness of FSC certification (‘Does forest certification really work?’). Given the low number of studies that compare FSC certified forests with non-certified, conventionally logged forests in the tropics, the evidence base for this analysis was expanded to also include the effects of managing a forest under Reduce Impact Logging (RIL) practices, which are used in most FSC-certified forests.

The analysis concluded that the scientific evidence currently available associates FSC certification mostly with positive outcomes. In the graph below, positive outcomes are shown in green squares, neutral in yellow, and negative in red.
The analysis also highlighted that the strength of the evidence available varies greatly depending on the type of research method used in the specific studies. (For more information on the messages that can be developed based on different types of evidence, please see M-4b Evidence Typology and Language Guidelines.

5. References


8. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of M-6.

<table>
<thead>
<tr>
<th>M-6a</th>
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</thead>
<tbody>
<tr>
<td>- Introduction should explain the purpose of these guidelines more clearly.</td>
</tr>
</tbody>
</table>

9. Summary of comments received and voting results from the Technical Advisory Group for current revision (M-6b).

| n/a |

10. Overall period of endorsement:

| Start date: 10 August 2017 |
| End date: 17 August 2017 |

11. Number of revisions:

| 1 |

12. Endorsement results:

| Endorsed. |
For information on how this document was completed, please consult the VIA Endorsement Procedure.

<table>
<thead>
<tr>
<th>1. Business ready message:</th>
<th>5. Message number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Among other goals, FSC aims to keep forests healthy and resilient through responsible management practices; these include setting aside areas for protection that are not commercially logged. Of the nearly 20 million hectares of biodiversity-rich tropical and drier sub-tropical forest that were under FSC certified management in 2014, over 3 million hectares—an area roughly the size of XXXXX (e.g., Belgium)—had been set aside for protection.</td>
<td>BRM-1d</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Corresponding statement:</th>
<th>6. Survey Monkey link:</th>
</tr>
</thead>
<tbody>
<tr>
<td>As of mid-2014, 16,912,748 hectares of tropical forest and 3,011,024 hectares of subtropical forest, under 233 and 94 FSC forest management certificates respectively, had met FSC requirements for responsible management. Of this total certified area, 2,906,292 hectares of tropical forest and 470,620 hectares of subtropical forest were set-aside for protection (i.e., no management intervention and left in a natural state).</td>
<td>n/a</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>3. Type of outcome:</th>
<th>7. Statement number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected areas.</td>
<td>ST-1d</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>4. Acknowledged limitations and caveats for use</th>
</tr>
</thead>
<tbody>
<tr>
<td>The business ready message uses the total of the sub-tropical and tropical set-aside hectare amounts (i.e., areas left in a natural state) under the umbrella of the tropical forest biome. The limitation of the business ready message is that it is based on a point of time, i.e., mid-2014 and must be referenced as such. The Data mining subgroup endorses the opportunity to give the user of the ‘business ready’ message an option to exchange the comparison area and species examples with regionally relevant equivalents. The data is not attached to any specific details on what type of areas were protected, and compliance with requirements was not assessed (CARs).</td>
</tr>
</tbody>
</table>

**Revised message (BRM-1c):** While FSC certification is designed to ensure that working forests remain healthy and resilient through responsible management, it also provides for the protection of set-aside areas that are completely off-limits to even responsible logging. Of the nearly 20 million hectares of biodiversity-rich tropical and drier sub-tropical forest that were under FSC certified management in 2014, over 3 million hectares—an area roughly the size of XXXXX (e.g., Belgium)—had been set aside for protection.
Re-phase the first sentence, removing the part about 'completely off-limits to even responsible logging'. Use 'commercially logged' instead.

Revised message (BRM-1b): While FSC certification is designed to ensure that working forests remain healthy and resilient through responsible management, it also provides for the protection of set-aside areas that are completely off-limits to even responsible logging. Of the nearly 20 million hectares of biodiversity-rich tropical and drier sub-tropical forest that were under FSC certified management in 2014, 3.5 million hectares—an area roughly the size of XXXXX (e.g., Belgium)—had been designated for set-aside protection.

Further clarified that protection means off-limits to responsible logging.

The BRM must be used in its entirety to be referenced as TAG endorsed.

Change “3.5 million hectares” to “over 3 million”

Discussed the use of “biodiversity rich” — decided to keep these terms in the BRM-1b.

Original message (BRM-1a): By 2014, FSC forests managers were protecting over three million hectares of tropical forest, an area roughly the size of Belgium.

Concerns:
- The meaning of the word ‘protected’ in the sentence is not clear, as well as how it related to the FSC standard.
- "Protected as set-aside areas" is actually a relatively strict form of protection and equating it to ‘protected’ (which according to some definitions would allow for sustainable logging) might be underselling the benefit.
- Guaranteeing protection status without rigorous audit (see data limitations), opens up for criticism.
- We don’t have substantial evidence that forest managers are actively protecting the forest, only that they are excluding some forest from their operations.
- Combining tropical and sub-tropical biomes into one doesn’t seem to be common practice and it’s already very good that almost 0.5 million ha of tropical forests are protected, no need to mix that up with sub-tropical forests.
- Listing ‘forest managers’ in the message seems to indicate that ‘local communities’ do not matter, which is not the case.

Change requests:
- Include a practical definition of ‘protected’, including what the benefits of this protection are.
- Find a formulation that does not imply that FSC is solely about protection. Leave out the area reference so that communications people can use what suits them best – e.g. a country, a US state, or number of football fields.
- Consider replacing ‘were protected’ with ‘committed to protecting’ or ‘had set aside for protection’.
- Change ‘FSC forests managers’ to ‘FSC forest managers’ or ‘FSC-certified forest managers’.
- Change to: “FSC certification, promoting tenure security, improved forestry practices* and conservation on working forest lands, spanned ~3million ha of tropical forest, an area roughly the size of Belgium” (* check exact wording with FSC).

Caveats for use, presuming change is made:
- Because of lack of empirical evidence of the effectiveness, it is not possible to assert that certification actually had an additional impact and that it was not just a formality resulting in no changes in threats to forest lands or forestry.

Voting: 5 in favour if changes are made, 4 in favour without changes, 2 have concerns but will not block consensus, 0 will block consensus.
14. **Summary of comments received and voting results from the Technical Advisory Group for current revision (BRM-1d).**

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15. **Overall period of endorsement:**

<table>
<thead>
<tr>
<th></th>
<th>Start date: 26 May 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>End date: 17 August 2017</td>
</tr>
</tbody>
</table>

16. **Number of revisions:**

|   | 3 |

17. **Endorsement results:**

|   | Endorsed. |
1. Proposed statement:

As of mid-2014, 16,912,748 hectares of tropical forest and 3,011,024 hectares of subtropical forest, under 233 and 94 FSC forest management certificates respectively, had met FSC requirements for responsible management. Of this total certified area, 2,906,292 hectares of tropical forest and 470,620 hectares of subtropical forest were set-aside for protection (i.e., no management intervention and left in a natural state).

2. Type of outcome:

Protected areas under FSC certification.

3. Why is this significant?

This total area figure represents the set-aside areas for protection, i.e., areas left in a natural state. This demonstrates that under FSC forest management certification millions of hectares of forest areas are protected.

4. How did FSC influence this outcome?

Establishing set-aside protected areas within FSC certified forest managed areas is a requirement under FSC FSC-STD-01-001 V4 FSC Principles and Criteria, Criterion 6.4. This criterion requires: *Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.* But set-aside protection areas could also be a result of what is required by law linked to the FSC requirement Criterion 1.1: ‘Forest management shall respect all national and local laws and administrative requirements.’ (e.g., legally protected water basins, riparian zones etc.) and/or could fall under other Principle and Criteria (e.g., connected to High Conservation Value requirements), relate to other operational restrictions (e.g., areas where it is too dangerous/expensive/prohibited to harvest like very steep slopes etc.). Note that management of High Conservation Values under Principle 9 does not always require that areas are set aside for protection.

5. Describe the evidence base. What was actually measured and how?

The forest manager reports the total set-aside protected area managed (commonly documented in a forest management plan). The area amount and if the management adheres to FSC standards is verified by a FSC accredited auditor.
This data is reported by FSC accredited certifying body auditors in an annual FSC forest management certification report. These reports are based on the core requirements of FSC-STD-01-001 V4 FSC Principles and Criteria which are adapted to national/regional or certifying body generic standard.

The FSC accredited certifying body auditors audit forest management areas against these standards and report on compliance according to the requirements to FSC-STD-20-007 (V3-0) EN ‘Forest Management Evaluation’ and annexes with reporting requirements. The specific reporting requirement related to protected areas is: ‘Area of forest and non-forest land protected from commercial harvesting of timber and managed primarily for conservation objectives.’

The basic approach to auditing this data is based on the standard and auditing requirements cited above and include:

i) Document and records check – auditors check and verify if forest management plans, maps, procedures, policies etc. are comprehensive and meet FSC requirements. Evidence for NTFP management can be found also in sales records.

ii) Stakeholder consultation – auditors consult ‘directly affected’ stakeholders (according to FSC STD-20-006) to corroborate FSC requirements are being met and/or identify any issues/ gaps.

iii) Field verification – auditors visit sites based on a sample size to authenticate the on-the-ground practices are meeting FSC requirements. These sites are chosen based on the forest management plan and other related documentation and maps, as well as on information received during interviews with forest workers, managers and other stakeholders.

iv) Specialists – experts like ecologists join auditing teams when these teams do not have the expertise to validate the state of biodiversity, quality of habitats etc. These specialists follow the audit steps and visit the sampling sites to verify FSC requirements are being met.

6. Limitations arising from the evidence base (sampling strategy, age of data).

- The data is not attached to any specific details on what type of areas were protected. According to FSC requirements the set-aside areas should be representative of the variety of ecosystem types found within the forest management area; however, without further investigation it cannot be confirmed.

- Any FSC FM certificates with Major or Minor Corrective Action requests were not investigated to determine if the non-conformance was a procedural or substantive non-conformance. In future, these details should be extracted to determine if the set-aside area for protection is representative and meets the FSC standard requirement or if the area under question should be removed from the data set.

- The forest management data used was from the period of 2012 to 2014; however, it should be noted that some data contained in the reports is from as far back as 2007. Thus, the data is presented as the data captured as of mid-2014 and must be referenced as such.

- The sampling rate for auditing field site visits and possible margins of error. FSC using the square root rule to determine the sample size which is not statistically valid. Additionally, sampling rates are usually driven by available time rather than by a sampling plan which can lead to greater margins of error. Furthermore, less sites are sampled during surveillance audits verses main audits.
### 7. Limitations arising from the methodology.

- **Main verses surveillance audit data not distinguished.** A main FSC FM audit is a comprehensive evaluation of a forest management operation compliance against the applicable FSC forest management standard (e.g., regional, national, CB generic standards).
- **Full requirements by an accredited FSC certifying body (CB) and these are done every 5 years.** Surveillance audits are done at least annually and CBs evaluate the compliance of the FSC FM operation against a subset of the applicable FSC forest management standard requirements and prioritise evaluating progress against previously identified non-conformities.
- **Different contexts** – although criteria data (less applicable for quantitative data) is based on the FSC-STD-01-001 V4 for each country FSC FM criteria and indicators are adapted nationally (either through national FM standards or CB adapted standards).
- **Data variability** – the data assumes that every audit is recording and entering data in a consistent manner but there may be variability due to different auditors, differing reporting formats, nuisances in adapted FSC FM standards.
- **Not all 1250 reports include all the data points; when data were available, it was analysed.**

### 8. Language guidelines to reflect attribution to FSC.

**Other types of evidence.** This may include raw data and descriptive statistics, internal reports, conference proceedings and other grey literature. Wording that implies any type of causation cannot be used. Instead, wording such as *“findings suggest”* or *“findings indicate”* are appropriate.

### 9. Reference.

FSC International’s Monitoring and Evaluation (M&E) team culled several data points from each of the 1250 FM certificates valid as of mid-2014. For each of these operations, the team members reviewed at least one annual public FSC forest management certification report. These reports are based on requirements stipulated in the FSC-STD-20-007a (V1-0) EN and the content of FSC-STD-01-001 V4 FSC Principles and Criteria.

While the FSC listed 1,278 forest management certificates covering a total area of over 182 million hectares, as of May 2014, the data analyzed for this exercise reflected information gleaned from 1250 FSC Forest Management certificates across 81 countries, or more than 97% of the organization’s active FM certificates. Though the team evaluated data based on reports dated 2012 to 2014, these reports contained information gathered as far back as 2007.

### 10. Access to relevant evidence/studies via:

https://info.fsc.org/certificate.php

### 13. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of ST-1.

**Revised statement (ST-1c):** As of mid-2014, 16,912,748 hectares of tropical forest and approximately 3,011,024 hectares of subtropical forest, under 233 and 94 FSC forest management certificates respectively, had met FSC requirements for responsible management. Of this total certified area, approximately 2,906,292 hectares of tropical forest and approximately 470,620 hectares of subtropical forest were set-aside for protection (i.e., no management intervention and left in a natural state).

- **Remove the word approximately from the statements (2x).**
Revised statement (ST-1b): As of mid-2014, 16,912,748 hectares of tropical forest and approximately 3,011,024 hectares of subtropical forest, under 233 and 94 FSC forest management certificates respectively, had met FSC requirements for responsible management. Of this total certified area, approximately 2,906,292 hectares of tropical forest and approximately 470,620 hectares of subtropical forest were set-aside for protection (i.e., no management intervention and left in a natural state).

- changed “nature” to “natural”
- These statements are built on an analysis of audit data from certificates based on Version 4 of the standard. This is referenced in the current documentation.
- Use of term protection. This analysis focuses on criterion 6.4 which concentrates on “set aside protection” of representative areas – where the area is left in its current and natural state. FSC requirements use the term protection in the definition of this criteria.
- Decision - TAG member withdrew comment regarding use of term protection in ST-1b.

Original message (ST-1a): As of mid-2014, 2,906,292 hectares under 233 FSC forest management certificates in subtropical forest biomes and 470,620 hectares under 94 FSC forest management certificates in tropical forest biomes were protected as set-aside areas.

Concerns:
- The word ‘protected’ seems assumptive, ambiguous, and dependent on other factors such as the quality of auditors.
- The statement does not give a sense of proportion vis-à-vis the total FSC certified area.

Change requests:
- Provide a definition of ‘protected’.
- Clarify the description of the limitations.
- Suggestion to replace ‘protection as set asides’ with ‘set aside for protection’.

Caveats for use, presuming change is made:
- Statement does not imply anything about the quality / ecological value of set aside forest.

Voting: 7 in favour if changes are made, 1 in favour without changes, 1 has concerns but will not block consensus, 1 will block consensus.

### Summary of comments received and voting results from the Technical Advisory Group for current revision (ST-1b)

| 14. | n/a |

### Overall period of endorsement:

| 15. | Start date: 26 May 2017
End date: 17 August 2017 |

### Number of revisions:

| 16. | 3 |

### Endorsement results:

| 17. | Endorsed. |
For information on how this document was completed, please consult the VIA Endorsement Procedure.

<table>
<thead>
<tr>
<th>1. Proposed business ready message:</th>
<th>5. Message number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>As of 2014, managers of FSC certified boreal forests had set aside an area roughly the size of XXXXX (over 16 million hectares) for protection. This represents nearly 20% of the 91 million hectares of carbon-rich boreal forests that were under FSC certified management.</td>
<td>BRM-2c</td>
</tr>
</tbody>
</table>

**AND/OR Edits:**

Among other goals, FSC aims to keep forests healthy and resilient through responsible management practices; these include setting aside areas that are not commercially logged. From the 91 million hectares of carbon-rich boreal forests that were under FSC certified management in 2014, over 16 million hectares—an area roughly the size of XXXXX (e.g., XXX)—had been set aside for protection. Boreal forests help to regulate the Earth’s climate by storing vast amounts of carbon, support indigenous peoples and provide habitat for large mammals including black bears, wolves and Siberian tigers.

<table>
<thead>
<tr>
<th>2. Corresponding statements:</th>
<th>7. Statement number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>As of mid-2014, over 91 million hectares of boreal forest were managed responsibly according FSC’s requirements. Of this total, over 16 million hectares were set-aside for protection (i.e., no management intervention and left in a natural state).</td>
<td>ST-2d</td>
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</tbody>
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<table>
<thead>
<tr>
<th>3. Type of outcome:</th>
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<tr>
<td>Protected areas under FSC certification.</td>
<td></td>
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<tr>
<th>4. Acknowledged limitations and caveats for use</th>
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<tr>
<td>The protected area amount is based on a point of time, i.e., mid-2014 and must be referenced as such. The Data mining subgroup endorses the opportunity to give the user of the ‘business ready’ message an option to exchange the NTFP examples with regionally relevant equivalents.</td>
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**COMPLETED BY THE VIA COORDINATION TEAM**

| 13. Summary of comments received and voting results from the Technical Advisory Group | Revised message (BRM-2b): By 2014, forest managers complying with FSC certification criteria had set aside 16 million hectares of boreal forest, restricting a total area roughly the size of XXXX (e.g. Wisconsin) from |
even responsible logging.

AND/OR

By 2014, more than 16 million hectares of FSC certified boreal forest had been set aside for protection from even responsible logging. Boreal forests help to regulate the Earth’s climate by storing vast amounts of carbon, supports hundreds of indigenous groups and provides habitat for large mammals including black bears, wolves and Siberian tigers.

Message 1:

- Replace ‘forest managers complying with FSC certification criteria’ with ‘managers of FSC certified boreal forests’.
- Remove ‘restricting (…) from responsible logging’ and use instead ‘set aside for protection’.
- Insert total number of FSC certified hectares in boreal forests to give an idea of how the proportion that is set aside for protection.

Message 2:

- Insert total number of FSC certified hectares in boreal forests to give an idea of how the proportion that is set aside for protection.
- Add link to FSC criteria / explain what set aside is.
- Replace ‘indigenous groups’ with ‘indigenous peoples’.

Original message (BRM-2a): By 2014, forest managers complying with FSC certification criteria were protecting boreal forest roughly equivalent in size to the state of Wisconsin.

AND/OR

By 2014, FSC forest managers were protecting more than 16 million hectares of boreal forest, which provides habitat for mammals including black bears, wolves and Siberian tigers; is home to hundreds of indigenous groups; and helps to regulate the Earth’s climate by storing vast amounts of carbon.

Concerns:

- Not clear what is explicitly meant by ‘protected set-asides’ (protected from what and how?) and what the additive benefits of this protection is over the non-protected areas in certified forests.
- Not everybody has a notion of how big the state of Wisconsin is. Concerned that ‘protected’ implies a more active management role than can be supported by the evidence, and that it is effective.
- Lack of evidence to support the second statement.

Change requests:

- Change ‘hundreds of indigenous groups’ to ‘thousands of indigenous groups’ in the second statement.
- Provide practical definition of ‘protected’.
- Leave out the reference so that communications people can use what suits them best - a country, a US state, or number of football fields. Consider replacing with ‘committed to protecting as set aside’.
- Consider rewording to “By 2014, FSC spanned more than 16 million hectares of boreal forest, which provides habitat for mammals including black bears, wolves and Siberian tigers; is home to hundreds of indigenous groups; and helps to regulate the Earth’s climate by storing vast amounts of carbon”.

Caveats for use, presuming change is made: None.

Voting: 5 in favour if changes are made, 4 in favour without changes, 1 has concerns but will not block consensus, 1 will block consensus.
### 14. Summary of comments received and voting results from the Technical Advisory Group for current revision (BRM-2b).

**Concerns**
Both statements note that set aside areas are except from 'even responsible logging' but doesn't make clear any of the benefits of this protection. The second statement makes clear the general ecosystem services of Boreal forest (although these aren't supported by corresponding evidence), and so is stronger, but doesn't link back to the benefits protection.

**Change request**
Strengthen messages by making clearer the benefits of set aside protection. Consider whether it is appropriate to cite the ecosystem service benefits of Boreal forests without links to the protection of these areas under the FSC system and without any corresponding evidence in ST-2b.

**Caveats:**
- 

### 15. Overall period of endorsement:
- Start date: 26 May 2017
- End date: 17 August 2017

### 16. Number of revisions:
- 2

### 17. Endorsement results:
- Endorsed.
**1. Proposed statement:**
As of mid-2014, over 91 million hectares of boreal forest were under responsible management according to FSC’s requirements. Of this total, over 16 million hectares were set-aside for protection (i.e., no management intervention and left in a natural state).

**11. Statement number:** ST-2d

**12. Survey Monkey link:** n/a

---

**2. Type of outcome:**
Protected areas under FSC certification.

**3. Why is this significant?**
This total area figure represents the set-aside areas for protection, i.e., areas left in a natural state. This demonstrates that under FSC forest management certification millions of hectares of forest areas are protected.

**4. How did FSC influence this outcome?**
Establishing set-aside protected areas within FSC certified forest managed areas is a requirement under FSC FSC-STD-01-001 V4 FSC Principles and Criteria, Criterion 6.4. This criterion requires: *Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources*. But set-aside protection areas could also be a result of what is required by law linked to the FSC requirement Criterion 1.1: *Forest management shall respect all national and local laws and administrative requirements.* (e.g., legally protected water basins, riparian zones etc.) and/or could fall under other Principle and Criteria (e.g., connected to High Conservation Value requirements), relate to other operational restrictions (e.g., areas where it is too dangerous/expensive/prohibited to harvest like very steep slopes etc.). Note that management of High Conservation Values under Principle 9 does not always require that areas are set aside for protection.

**5. Describe the evidence base. What was actually measured and how?**
The forest manager reports the total set-aside protected area managed (commonly documented in a forest management plan). The area amount and if the management adheres to FSC standards is verified by a FSC accredited auditor.

This data is reported by FSC accredited certifying body auditors in an annual FSC forest management certification report. These reports are based on the core requirements of FSC-STD-01-001 V4 FSC Principles and Criteria which are adapted to national/regional or certifying body generic standard.
The FSC accredited certifying body auditors audit forest management areas against these standards and report on compliance according to the requirements to FSC-STD-20-007 (V3-0) EN ‘Forest Management Evaluation’ and annexes with reporting requirements. The specific reporting requirement related to protected areas is: ‘Area of forest and non-forest land protected from commercial harvesting of timber and managed primarily for conservation objectives.’

The basic approach to auditing this data is based on the standard and auditing requirements cited above and include:

i) Document and records check – auditors check and verify if forest management plans, maps, procedures, policies etc. are comprehensive and meet FSC requirements. Evidence for NTFP management can be found also in sales records.

ii) Stakeholder consultation – auditors consult ‘directly affected’ stakeholders (according to FSC STD-20-006) to corroborate FSC requirements are being met and/or identify any issues/ gaps.

iii) Field verification – auditors visit sites based on a sample size to authenticate the on-the-ground practices are meeting FSC requirements. These sites are chosen based on the forest management plan and other related documentation and maps, as well as on information received during interviews with forest workers, managers and other stakeholders.

iv) Specialists – experts like ecologists join auditing teams when these teams do not have the expertise to validate the state of biodiversity, quality of habitats etc. These specialists follow the audit steps and visit the sampling sites to verify FSC requirements are being met.

Results:

- Total area under FSC forest management certification in boreal forests: 91,259,156 hectares.
- Total area excluded from commercial logging/managed for conservation in boreal forests: 16,653,987 hectares.

6. Limitations arising from the evidence base (sampling strategy, age of data).

- The data is not attached to any specific details on what type of areas were protected. According to FSC requirements the set-aside areas should be representative of the variety of ecosystem types found within the forest management area; however, without further investigation it cannot be confirmed.
- Any FSC FM certificates with Major or Minor Corrective Action requests were not investigated to determine if the non-conformance was a procedural or substantive non-conformance. In future, these details should be extracted to determine if the set-aside area for protection is representative and meets the FSC standard requirement or if the area under question should be removed from the data set.
- The forest management data used was from the period of 2012 to 2014; however, it should be noted that some data contained in the reports is from as far back as 2007. Thus, the data is presented as the data captured as of mid-2014 and must be referenced as such.
- The sampling rate for auditing field site visits and possible margins of error. FSC using the square root rule to determine the sample size which is not statistically valid. Additionally, sampling rates are usually driven by available time rather than by a sampling plan which can lead to greater
margins of error. Furthermore, less sites are sampled during surveillance audits verses main audits.

7. Limitations arising from the methodology.

- Main verses surveillance audit data not distinguished. A main FSC FM audit is a comprehensive evaluation of a forest management operation compliance against the applicable FSC forest management standard (e.g., regional, national, CB generic standards).
- Full requirements by an accredited FSC certifying body (CB) and these are done every 5 years. Surveillance audits are done at least annually and CBs evaluate the compliance of the FSC FM operation against a subset of the applicable FSC forest management standard requirements and prioritise evaluating progress against previously identified non-conformities.
- Different contexts – although criteria data (less applicable for quantitative data) is based on the FSC-STD-01-001 V4 for each country FSC FM criteria and indicators are adapted nationally (either through national FM standards or CB adapted standards).
- Data variability – the data assumes that every audit is recording and entering data in a consistent manner but there may be variability due to different auditors, differing reporting formats, nuisances in adapted FSC FM standards.
- Not all 1250 reports include all the data points; when data were available, it was analysed.

8. Language guidelines to reflect attribution to FSC.

Other types of evidence. This may include raw data and descriptive statistics, internal reports, conference proceedings and other grey literature. Wording that implies any type of causation cannot be used. Instead, wording such as “findings suggest” or “findings indicate” are appropriate.

9. Reference.

FSC International’s Monitoring and Evaluation (M&E) team culled several data points from each of the 1250 FM certificates valid as of mid-2014. For each of these operations, the team members reviewed at least one annual public FSC forest management certification report. These reports are based on requirements stipulated in the FSC-STD-20-007a (V1-0) EN and the content of FSC-STD-01-001 V4 FSC Principles and Criteria.

While the FSC listed 1,278 forest management certificates covering a total area of over 182 million hectares, as of May 2014, the data analyzed for this exercise reflected information gleaned from 1250 FSC Forest Management certificates across 81 countries, or more than 97% of the organization’s active FM certificates. Though the team evaluated data based on reports dated 2012 to 2014, these reports contained information gathered as far back as 2007.

10. Access to relevant evidence /studies via:

https://info.fsc.org/certificate.php

13. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of ST-2.

Revised statement (ST-2c): As of mid-2014, over 91 million hectares of boreal forest were managed responsibly according FSC’s requirements. Of this total, 16,653,987 hectares were set-aside for protection (i.e., no management intervention and left in a natural state).

- In the statement, change ‘were managed responsibly’ to ‘under responsible management’.
- change to ‘over 16 million’ instead of the exact number of set aside
Revised statement (ST-2b): As of mid-2014, over 91 million hectares of boreal forest were managed responsibly according to FSC’s requirements. Of this total, 16,653,987 hectares were set-aside for protection (i.e., no management intervention and left in a nature state).

Original message (ST-2a): As of mid-2014, 16,653,987 hectares under 182 FSC forest management certificates in the boreal forest biome were protected as set-aside areas.

**Concerns:**
- The meaning of the word ‘protected’ in the sentence is not clear.
- Not everybody can relate to the size of Wisconsin and the statement does not give a sense of the proportion vis-à-vis the total FSC certified area.
- Does not say if there were any corrective action requests regarding the actual protection practices on the ground.

**Change requests:**
- Provide a definition of ‘protected’ in practice, including what the benefits of this protection are.
- Use an area of reference that is more likely to be generally known.
- Clarify compliance status.
- Add location of these forests by main countries / continents.
- Suggestion to replace ‘protection as set asides’ with ‘set aside for protection’.
- Clarify what this represents relative to the total forest area under FSC forest management certificates in the boreal forest biome.

**Caveats for use, presuming change is made:**
- Statement does not imply anything about the quality / ecological value of set aside forest.

**Voting:** 2 in favour if changes are made, 7 in favour without changes, 2 has concerns but will not block consensus, 0 will block consensus.

<table>
<thead>
<tr>
<th>14. Summary of comments received and voting results from TAC</th>
<th>n/a</th>
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</thead>
<tbody>
<tr>
<td>15. Overall period of endorsement:</td>
<td>Start date: 26 May 2017</td>
</tr>
<tr>
<td></td>
<td>End date: 17 August 2017</td>
</tr>
<tr>
<td>16. Number of revisions:</td>
<td>3</td>
</tr>
<tr>
<td>17. Endorsement results:</td>
<td>Endorsed.</td>
</tr>
</tbody>
</table>
For information on how this document was completed, please consult the VIA Endorsement Procedure.

<table>
<thead>
<tr>
<th>1. Proposed business ready message:</th>
<th>5. Message number:</th>
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</thead>
<tbody>
<tr>
<td>As of 2014, managers of FSC certified forests in Russia had set aside for protection over 7 million hectares.</td>
<td>BRM-10a</td>
</tr>
<tr>
<td>AND/OR</td>
<td>6. Survey Monkey link:</td>
</tr>
<tr>
<td>As of 2014, managers of FSC certified boreal and temperate forests in Russia were conserving over seven million hectares - an area larger than (XXX) - set aside for protection. Boreal forests help to regulate the Earth’s climate by storing vast amounts of carbon, support indigenous peoples and provide habitat for endangered Siberian tigers and Amur leopards.</td>
<td>n/a</td>
</tr>
<tr>
<td>2. Corresponding statements:</td>
<td>7. Statement number:</td>
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<tr>
<td>As of 2014, managers working in FSC certified forests in Russia had set aside for protection over 7 million hectares (7,239,707 hectares) (i.e., no management intervention and left in a natural state).</td>
<td>ST-10b</td>
</tr>
<tr>
<td>3. Type of outcome:</td>
<td></td>
</tr>
<tr>
<td>Protected areas.</td>
<td></td>
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<tr>
<td>4. Acknowledged limitations and caveats for use</td>
<td></td>
</tr>
<tr>
<td>The limitation of the business ready message is that it is based on a point of time, i.e., mid-2014 and must be referenced as such. The Data mining subgroup endorses the opportunity to give the user of the ‘business ready’ message an option to exchange the comparison area and species examples with regionally relevant equivalents. The data is not attached to any specific details on what type of areas were protected, and compliance with requirements was not assessed (Corrective Action Requests).</td>
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</tbody>
</table>

Original message (BRM-10a): ‘By-mid 2014, FSC forest managers working in Russian forests set aside for protection over 7 million hectares, to help safeguard the forest’s biodiversity and cultural values.’

AND/OR

By 2014, FSC forest managers working in Russia’s boreal and temperate forests were conserving over seven million hectares—an area larger than
Ireland—helping to safeguard habitat for nearly extinct wildlife species including Siberian tigers and Amur leopards.

Message 1:
- Replace ‘by mid-2014’ with ‘as of 2014’.
- Replace ‘FSC managers working in Russian forests’ with ‘managers working in FSC certified forests in Russia’.
- Remove ‘to help safeguard the forest’s biodiversity and cultural values’.

Message 2:
- Replace ‘by mid-2014’ with ‘as of 2014’.
- Replace ‘FSC managers working in Russia’s boreal and temperate forests’ with ‘managers working in FSC certified boreal and temperate forests in Russia’.
- Remove ‘Ireland’ to leave choice of country equivalent open.
- Use ‘set aside for protection’
- Add ‘Boreal forests help to regulate the Earth’s climate by storing vast amounts of carbon, support indigenous peoples and provide habitat for endangered Siberian tigers and Amur leopards’.

<table>
<thead>
<tr>
<th>14. Summary of comments received and voting results from the Technical Advisory Group for current revision (BRM-10b)</th>
<th>n/a</th>
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</table>
| 15. Overall period of endorsement: | Start date: 10 August 2017  
End date: 17 August 2017 |
| 16. Number of revisions: | 1 |
| 17. Endorsement results: | Endorsed. |
### Document of Record for Statements

For information on how this document was completed, please consult the VIA Endorsement Procedure.

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<th>1. Proposed statement:</th>
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This data is reported by FSC accredited certifying body auditors in an annual FSC forest management certification report. These reports are based on the core requirements of FSC-STD-01-001 V4 FSC Principles and Criteria which are adapted to national/regional or certifying body generic standard.
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6. Limitations arising from the evidence base (sampling strategy, age of data).

- The data is not attached to any specific details on what type of areas were protected. According to FSC requirements the set-aside areas should be representative of the variety of ecosystem types found within the forest management area; however, without further investigation it cannot be confirmed.

- Any FSC FM certificates with Major or Minor Corrective Action requests were not investigated to determine if the non-conformance was a procedural or substantive non-conformance. In future, these details should be extracted to determine if the set-aside area for protection is representative and meets the FSC standard requirement or if the area under question should be removed from the data set.

- The forest management data used was from the period of 2012 to 2014; however, it should be noted that some data contained in the reports is from as far back as 2007. Thus, the data is presented as the data captured as of mid-2014 and must be referenced as such.

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7. Limitations arising from the methodology.

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• Full requirements by an accredited FSC certifying body (CB) and these are done every 5 years. Surveillance audits are done at least annually and CBs evaluate the compliance of the FSC FM operation against a subset of the applicable FSC forest management standard requirements and prioritise evaluating progress against previously identified non-conformities.
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<td>• Replace ‘by’ with ‘as of’</td>
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<td>• Replace ‘FSC forest managers working in Russian forests’ with ‘managers in FSC certified forests in Russia’.</td>
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9. Reference.

FSC International’s Monitoring and Evaluation (M&E) team culled several data points from each of the 1250 FM certificates valid as of mid-2014. For each of these operations, the team members reviewed at least one annual public FSC forest management certification report. These reports are based on requirements stipulated in the FSC-STD-20-007a (V1-0) EN and the content of FSC-STD-01-001 V4 FSC Principles and Criteria.

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10. Access to relevant evidence /studies via:
https://info.fsc.org/certificate.php

### COMPLETED BY THE VIA COORDINATION TEAM

<table>
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<th>13. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of ST-10.</th>
<th></th>
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| 14. Summary of comments received and voting results from the Technical Advisory Group for current revision (ST-10b). | **n/a** |

| 15. Overall period of endorsement: | Start date: 10 August 2017  
End date: 17 August 2017 |
| 16. Number of revisions: | 1 |
| 17. Endorsement results: | Endorsed. |
THE VIA INITIATIVE
VALUE & IMPACTS ANALYSIS FOR CERTIFICATION

DOCUMENT OF RECORD FOR BUSINESS READY MESSAGES

For information on how this document was completed, please read the VIA Endorsement Procedure.

1. Proposed business ready message:
A study of FSC-certified forests in the Congo Basin found that even in remote concessions, loggers had access to medical care, which is key given the high incidence of death and serious injury among foresters.

AND/OR:
In several countries in the Congo Basin, living and working conditions, such as health insurance and safety procedures were all better for workers in FSC-certified forests than in forests without certification.

2. Corresponding statements:
In Gabon, Cameroon and the Republic of Congo all 9 studied FSC-certified forest concessions had medical facilities, whereas only 3 out of 9 concessions that were not certified had medical facilities. Other variables that pertain to the living and working conditions of employees, such as health insurance, safety equipment checks and injury procedures were all better in certified concessions.

3. Type of outcome:
Health, safety and labour

4. Acknowledged limitations and caveats for use
Whereas loggers did have better access to medical care in FSC-certified concessions in comparison to other concessions, this is by no means sufficient, or equivalent to the medical care available for, for example, European foresters. The study measured outcomes in the Republic of Congo, Cameroon, and Gabon, and not in the Democratic Republic of Congo, which is known for its terrible living conditions of loggers (and the population in general).

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8. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of
Original message (BRM-14a):
A - Logging is among the most dangerous jobs in the tropics, with high rates of death and amputation, which is why the FSC prioritizes safety training, protective equipment and medical access.
B - A study of FSC-certified forests in the Congo Basin found that even in remote concessions, loggers had ready access to medical care, which is key given the high incidence of death and serious injury among foresters.

C - Logging is one of the world’s most dangerous jobs, which is why FSC certification emphasizes good access to medical care, a rarity in tropical forest regions.

- Decision to remove messages A and B due to low communications value for the companies.
- Decision create a new message based on the revised corresponding statement.

9. Summary of comments received and voting results from the Technical Advisory Group for current revision (BRM-14b).

n/a

10. Overall period of endorsement:

Start date: 10 August 2017
End date: 16 August 2017

11. Number of revisions: 1

12. Endorsement results: Endorsed
For information on how this document was completed, please consult the VIA Endorsement Procedure.

<table>
<thead>
<tr>
<th>1. Proposed statement:</th>
<th>11. Statement number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Gabon, Cameroon and the Republic of Congo all 9 studied FSC-certified forest concessions had medical facilities, whereas only 3 out of 9 concessions that were not certified had medical facilities. Other variables that pertain to the living and working conditions of employees, such as health insurance, safety equipment checks and injury procedures were all better in certified concessions.</td>
<td>ST-14b</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Type of outcome:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health, safety and labour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Why is this significant?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logging in tropical forests is an extremely dangerous job. Even a minor injury can be life-threatening due to remoteness and lack of medical facilities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. How did FSC influence this outcome?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The FSC requires that logging be a safe employment.</td>
</tr>
</tbody>
</table>

Related FSC Principles & Criteria:

**FSC Principle #4: Community relations and worker’s rights**

Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.

4.1 The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.

4.2 Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.

4.4 Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups (both men and women) directly affected by management operations.

6.6 Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management (...). If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.
<table>
<thead>
<tr>
<th>Title</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3 Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plan.</td>
<td></td>
</tr>
<tr>
<td>1.1 Forest management shall respect all national and local laws and administrative requirements.</td>
<td></td>
</tr>
<tr>
<td>5. Describe the evidence base. What was actually measured and how?</td>
<td>The sample size for this study was 9 pairs of concessions across 3 countries (Gabon, Cameroon, and the Republic of Congo). The study measured numerous variables that broadly pertain to the living and working conditions of employees. Variables included: the presence of medical facilities, health insurance, safety equipment checks and injury procedures, permanent contracts, salary above national average, availability of safety gear, potable water, electricity, house quality, and percentage of female staff. There was a significant difference in the existence of functional local medical facilities (100% of certified, 38% of noncertified; p &lt; 0.05). Tangible differences were found between certified and noncertified certified forest management units (FMUs) in what can be accessed in case of injury, such as dedicated cars or trucks, mobile or satellite phones, and medicines available on site. Such means were by and large in better condition, more modern, and in larger quantity in the case of certified companies. Additionally, companies in FMUs employed more professional and permanent staff, e.g. doctors and nurses with national certifications or diplomas who are regularly available onsite, compared to a larger number of less formally trained caregivers in noncertified FMUs.</td>
</tr>
</tbody>
</table>
| Note for all statements produced by VIA based on peer reviewed publications (method M-6b): | Based on the body of evidence that was critically appraised, a subset of studies were selected to develop statements based on the following criteria:  
- Topic aligned with VIA priority theme(s);  
- There were no studies the reported conflicting evidence; and  
- Could be used to generate VIA business ready messages that communicate positive results of FSC certification. |
| 6. Limitations arising from the evidence base (sampling strategy, age of data). | Empirical survey through interviews. A reasonable degree of selecting comparable controls, no statistical matching, no confounding variables taken into account. However, a number of outcomes did not show a significant difference between certified and conventional concessions (presence of permanent contracts, salary above national average, availability of safety gear, potable water, electricity, house quality, and percentage of female staff). The presence of medical facilities, health insurance, safety equipment checks and injury procedures all had better outcomes in certified concessions. No social outcomes in this study were reported to be worse in certified concessions. |
| 7. Limitations arising from the methodology. | A lot of the outcomes were reported or perceived outcomes by people on the ground, rather than direct measurements. This does not make the outcomes less valuable, however, it should be kept in mind. |
| 8. Language guidelines to reflect attribution to FSC. | Study I (case-control). A study that evaluates the impacts of an intervention by comparing outcomes for a sample unit (e.g. household, forest concession, individual) where the intervention had been implemented. |
(treatment observations) with outcomes in units where the intervention had not been implemented (control observations). Alternatively, the study can compare a variable before and after implementation. The study design does not take confounding variables into account. This means that we cannot establish whether the potential difference in outcomes between the treatment and control is due to the intervention itself, or whether it is due to another, independent factor. For example, a forest concession that is FSC-certified could have a lower canopy loss due to logging, when compared to a neighbouring concession which is not certified. This difference could be due to improved logging brought about with certification, but also for example because the FSC-certified concession had a lower abundance of commercially desirable trees to begin with, and so it was logged less intensively. This type of study can potentially show a true correlation between implementation of a conservation strategy (e.g. certification) and an outcome (e.g. lower canopy loss), however, it is possible that unknown mechanisms in fact drive the correlation, such as self-selection or another type of systematic bias. Wording that implies any type of causation cannot be used. Instead, wording such as “is associated with”, “was found to have”, “is correlated with” can be used. Note that this is still valuable evidence and can be often reliably used in meta-analyses.

9. Reference.
Cerutti et al. 2014

10. Access to relevant evidence/studies via:

COMPLETED BY THE VIA COORDINATION TEAM

13. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of ST-14.

<table>
<thead>
<tr>
<th>14. Summary of comments received and voting results from the Technical Advisory Group for current revision (ST-14b).</th>
<th>ST-14a: In the Congo basin (Gabon, Cameroon and the Republic of Congo), all 9 studied FSC certified forest concessions had medical facilities, compared to about a third of similar forest concessions in these countries that were not certified.</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Simplify original statement</td>
<td>- Add to the statement something about the study’s results on social outcomes.</td>
</tr>
<tr>
<td>- Add to the statement something about the study’s results on social outcomes.</td>
<td>- Clarify in section 4 that FSC does not so much ‘aim’ but rather ‘requires’ that logging be a safe employment.</td>
</tr>
<tr>
<td></td>
<td>- Add more information on the type of medical facilities in section 5.</td>
</tr>
<tr>
<td></td>
<td>- Use information from section 5 to add to section 6.</td>
</tr>
</tbody>
</table>

14. Summary of comments received and voting results from the Technical Advisory Group for current revision (ST-14b).

n/a

15. Overall period of endorsement:

| Start date: 10 August 2017. |
| End date: 16 August 2017. |

16. Number of revisions:

1

17. Endorsement results:

Endorsed.
For information on how this document was completed, please consult the VIA Endorsement Procedure.

1. Proposed business ready message:

Managers of FSC-certified forests are required to minimize disturbance caused by timber harvesting. Across the tropics, this practice, compared to conventional logging, helps harbour larger populations of mammals / birds, such as sunbear / great argus.

2. Corresponding statements:

Across the tropics, forests where Reduced Impact Logging is practised, harbour larger populations of bird species compared to forests logged conventionally.

Across the tropics, forests where Reduced Impact Logging is practised, harbour larger populations of mammal species compared to forests logged conventionally.

3. Type of outcome:

Biodiversity

4. Acknowledged limitations and caveats for use

Whereas there is evidence that Reduced Impact Logging, which is an integral part of FSC certification, does indeed cause less harm to animal species, it is important to keep in mind that most of the times, RIL is implemented together with lowering the intensity of logging. Therefore, we don’t really know whether the beneficial impact of RIL would still hold true if a company decided to log at much higher (conventional) logging intensities. We do know that animal diversity decreases proportionally with increasing logging intensity.

8. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of BRM-22.

Original message (BRM-22a):

A - While selective logging can successfully maintain habitat for many wildlife species, others such as certain hornbill species require pristine forest habitat, which is why FSC-certification encourages businesses to set aside areas that are permanently off-limit to logging.

B - Some tropical birds—like the spotted fantail, great argus and orange-breasted trogon—need pristine forest habitat, which is why the FSC encourages forest businesses to set aside areas and permanently protect them from logging.
C - In the tropics, FSC certification is helping to protect habitat for mammals including orangutans and sun bears.

- Decision to create a new message combining content from the three original messages.

| 9. Summary of comments received and voting results from the Technical Advisory Group for current revision (BRM-22b) | n/a |

| 10. Overall period of endorsement: | Start date: 10 August 2017  
End date: 17 August 2017 |
| 11. Number of revisions: | 1 |
1. Proposed statement:
Across the tropics, forests where Reduced Impact Logging is practiced harbour larger populations of bird species compared to forests logged conventionally.

2. Type of outcome:
Biodiversity

3. Why is this significant?
Tropical forests are extremely important for biodiversity: about 50% of all terrestrial species live in tropical forests. Whereas some species can tolerate careful selective logging, others need pristine tropical forest for survival. Larger populations are less prone to extinction.

Carefully logged forests, where only commercially useful trees are extracted, provide better less disturbed habitat for many bird species by maintaining old hollow trees that serve as nesting sites, minimizing canopy cover damage. Reduced Impact Logging (RIL) is a concept aiming for managing timber production so as to minimise damaging ecological side effects.

4. How did FSC influence this outcome?
Reduced Impact Logging (RIL) technical and logistic solutions are highly context specific and may vary depending on the inclination of slopes, soil types, rainfall pattern, water regimes, forest road infrastructure, forest management type, human resources, machinery, etc. To implement RIL forest inventories and harvesting interventions have in some cases prepared for years before the actual harvesting of trees takes place (e.g., cutting off lianas in humid tropics to avoid that lianas from a falling tree affect neighbouring trees).

FSC Principles and Criteria address the need to apply RIL in a generic way, in a number of criteria, without using the term RIL explicitly. (*But: No RIL = no FSC certificate.*) Criteria in FSC Principles 6, 7 and 8 require the locally adapted implementation of RIL solutions, based on inventories, planning, monitoring and feedback loops to plans, aiming for managing timber production so as to minimise damaging ecological side effects (on soils and species diversity and regenerative capacity, and on remaining trees and their timber quality / value).

**FSC Principle #6: Environmental impact**
Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

6.1 Assessment of environmental impacts shall be completed -- appropriate to the scale, intensity of forest management and the uniqueness of the affected resources -- and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.

6.2 Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping and collecting shall be controlled.

6.5 Written guidelines shall be prepared and implemented to: control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and protect water resources.

**FSC Principle #7: Management plan**

A management plan -- appropriate to the scale and intensity of the operations -- shall be written, implemented, and kept up to date. The long term objectives of management, and the means of achieving them, shall be clearly stated.

7.1 The management plan and supporting documents shall provide:

(...).

b) Description of the forest resources to be managed, environmental limitations, (...) and a profile of adjacent lands.

c) Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories.

(...) 

f) Environmental safeguards based on environmental assessments.

g) Plans for the identification and protection of rare, threatened and endangered species.

h) Maps describing the forest resource base including protected areas, planned management activities and land ownership.

i) Description and justification of harvesting techniques and equipment to be used.

7.2 The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.

7.3 Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plan.

8.2 Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators:

(...)
c) Composition and observed changes in the flora and fauna.
d) Environmental and social impacts of harvesting and other operations.

8.4 The results of monitoring shall be incorporated into the implementation and revision of the management plan.

5. Describe the evidence base. What was actually measured and how?

This meta-analysis of studies from across the tropics looked at changes in bird species population sizes in selectively logged and not logged forests. Whereas time since logging, and the taxonomic group of the bird species were the most important predictors of shifts in bird abundance, the fact whether the forest was logged under Reduced Impact Logging or not was also found to be important. Forests logged under RIL had smaller changes (both positive and negative) in bird abundance compared to forests logged conventionally. This indicates that RIL causes smaller changes to biodiversity than conventional logging, even when all other variables are taken into account.

Note for all statements produced by VIA based on peer reviewed publications (method M-6b):

Based on the body of evidence that was critically appraised, a subset of studies were selected to develop statements based on the following criteria:

- Topic aligned with VIA priority theme(s);
- There were no studies the reported conflicting evidence; and

Could be used to generate VIA business ready messages that communicate positive results of FSC certification.

6. Limitations arising from the evidence base (sampling strategy, age of data).

Meta-analysis that takes the main confounding variables into account, however, controls within the individual studies were not always selected rigorously.

7. Limitations arising from the methodology.

Populations of bird species could be declining also due to hunting, which is rarely taken into account by the individual studies.

8. Language guidelines to reflect attribution to FSC.

Meta-analysis of Study II (Takes some confounders into account) - A study that evaluates the impacts of an intervention by comparing outcomes in an area where the intervention had been implemented (treatment) with outcomes in an area where the intervention had not been implemented (control). Alternatively, the study can compare a variable before and after implementation. In contrast with Study I, this type of study takes some (typically not all) confounding variables into account. However, in contrast with Study III, it does not select controls a priori, it only takes the confounding variables into account after the fact. For example, it could take into account the logging intensity in certified and conventional concessions, and calculate the canopy loss per tree extracted. It can show correlation between implementation and outcome relatively reliably, especially in cases where the system is well-understood and most of the potentially biases are measurable (such as in the case of structural changes to the forest due to different types of logging). The following wording can be used: “is associated with”, “was found to have”, “is correlated with”, “even when [logging intensity, distance to cities, population size, …] are taken into account, certification is correlated with”.
9. Reference.
Burivalova et al. 2015.

10. Access to relevant evidence/studies via:
http://rspb.royalsocietypublishing.org/content/282/1808/20150164.abstract

### COMPLETED BY THE VIA COORDINATION TEAM

<table>
<thead>
<tr>
<th>13. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of ST-39.</th>
<th>Original statement (ST-39a): Across the tropics, forests where Reduced Impact Logging is used support larger populations of bird species compared to forests logged conventionally.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Replace ‘used’ with ‘practiced’ in the statement.</td>
</tr>
<tr>
<td></td>
<td>- Replace ‘support’ with ‘harbour’ in the statement.</td>
</tr>
<tr>
<td></td>
<td>- Clarify the connection between RIL and biodiversity in section 3.</td>
</tr>
<tr>
<td></td>
<td>- Develop the information on relevant FSC P&amp;Cs in section 4.</td>
</tr>
</tbody>
</table>

| 14. Summary of comments received and voting results from the Technical Advisory Group for current revision (ST-39b). | n/a |

|  | End date: 17 August 2017. |
| 16. Number of revisions: | 1 |
| 17. Endorsement results: | Endorsed. |
**THE VIA INITIATIVE**  
VALUE & IMPACTS ANALYSIS FOR CERTIFICATION

**DOCUMENT OF RECORD FOR STATEMENT**

For information on how this document was completed, please consult the VIA Endorsement Procedure.

<table>
<thead>
<tr>
<th>1. Proposed statement:</th>
<th>11. Statement number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Across the tropics, forests where Reduced Impact Logging is practiced harbour larger populations of mammal species compared to forests logged conventionally.</td>
<td>ST-40b</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12. Survey Monkey link:</th>
</tr>
</thead>
<tbody>
<tr>
<td>n/a</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Type of outcome:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodiversity</td>
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</tbody>
</table>

<table>
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<tr>
<th>3. Why is this significant?</th>
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<tbody>
<tr>
<td>Tropical forests are extremely important for biodiversity: about 50% of all terrestrial species live in tropical forests. Whereas some species can tolerate careful selective logging, others need pristine tropical forest for survival. Larger populations are less prone to extinction.</td>
</tr>
</tbody>
</table>

Habitat disturbance is associated with factors such as falling timber crushing non-harvest trees, the indiscriminate use of bulldozers, and the construction of logging roads. Especially in the case of mammals, an increase in the total road area also increased poaching and hunting pressure.

Reduced Impact Logging (RIL) is a concept aiming for managing timber production so as to minimise damaging ecological side effects. For example, logging roads under RIL are planned after a forestry inventory, and typically result in 20% less total road area. Minimum felling diameters and distances between extracted trees are used in RIL and trees felled under RIL are winched to logging roads (reducing the overall road lengths). Additionally, directional felling and vine cutting are used to minimize damage to adjacent trees (vine cutting prevents connected trees from being dragged down during felling). All of these practices maintain important habitat features for mammal species.

<table>
<thead>
<tr>
<th>4. How did FSC influence this outcome?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced Impact Logging (RIL) technical and logistic solutions are highly context specific and may vary depending on the inclination of slopes, soil types, rainfall pattern, water regimes, forest road infrastructure, forest management type, human resources, machinery, etc. To implement RIL forest inventories and harvesting interventions have in some cases prepared for years before the actual harvesting of trees takes place (e.g., cutting off lianas in humid tropics to avoid that lianas from a falling tree affect neighbouring trees).</td>
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FSC Principles and Criteria address the need to apply RIL in a generic way, in a number of criteria, without using the term RIL explicitly. (But: No RIL = no FSC certificate.). Criteria in FSC Principles 6, 7 and 8 require...
the locally adapted implementation of RIL solutions, based on inventories, planning, monitoring and feedback loops to plans, aiming for managing timber production so as to minimise damaging ecological side effects (on soils and species diversity and regenerative capacity, and on remaining trees and their timber quality / value).

**FSC Principle #6: Environmental impact**

Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

6.1 Assessment of environmental impacts shall be completed -- appropriate to the scale, intensity of forest management and the uniqueness of the affected resources -- and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.

6.2 Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping and collecting shall be controlled.

6.5 Written guidelines shall be prepared and implemented to: control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and protect water resources.

**FSC Principle #7: Management plan**

A management plan -- appropriate to the scale and intensity of the operations -- shall be written, implemented, and kept up to date. The long term objectives of management, and the means of achieving them, shall be clearly stated.

7.1 The management plan and supporting documents shall provide:

7.2 The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.
7.3 Forest workers shall receive adequate training and supervision to ensure proper implementation of the management plan.

8.2 Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators:

(…)

c) Composition and observed changes in the flora and fauna.

d) Environmental and social impacts of harvesting and other operations.

(…)

8.4 The results of monitoring shall be incorporated into the implementation and revision of the management plan.

5. Describe the evidence base. What was actually measured and how?

This meta-analysis of studies from across the tropics looked at shifts in animal abundance. Collating individual empirical studies, the meta-analysis found that there were smaller shifts in animal abundance under Reduced Impact Logging compared to conventional logging.

Note for all statements produced by VIA based on peer reviewed publications (method M-6b):

Based on the body of evidence that was critically appraised, a subset of studies were selected to develop statements based on the following criteria:

- Topic aligned with VIA priority theme(s);
- There were no studies the reported conflicting evidence; and
- Could be used to generate VIA business ready messages that communicate positive results of FSC certification.

6. Limitations arising from the evidence base (sampling strategy, age of data).

Meta-analysis of empirical studies, which took the most important confounding variables into account. However, some studies that contributed to the meta-analysis did not select controls rigorously.

7. Limitations arising from the methodology.

Hunting is not clearly taken into account by most individual empirical studies. It is possible that Reduced Impact Logging brings along a better control of illegal hunting, which could then be responsible for the smaller shifts in deforestation. This does not make the results less valuable, however, it is worth keeping in mind.

8. Language guidelines to reflect attribution to FSC.

Meta-analysis of Study II (Takes some confounders into account) - A study that evaluates the impacts of an intervention by comparing outcomes in an area where the intervention had been implemented (treatment) with outcomes in an area where the intervention had not been implemented (control). Alternatively, the study can compare a variable before and after implementation. In contrast with Study I, this type of study takes some (typically not all) confounding variables into account. However, in contrast with Study III, it does not select controls a priori, it only takes the confounding variables into account after the fact. For example, it could take into account the logging intensity in certified and conventional concessions, and calculate the canopy loss per tree extracted. It can show correlation between...
implementation and outcome relatively reliably, especially in cases where the system is well-understood and most of the potentially biases are measurable (such as in the case of structural changes to the forest due to different types of logging). The following wording can be used: “is associated with”, “was found to have”, “is correlated with”, “even when [logging intensity, distance to cities, population size, …] are taken into account, certification is correlated with”.

9. Reference.
   Bicknell et al. 2014

10. Access to relevant evidence/studies via:

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**COMPLETED BY THE VIA COORDINATION TEAM**

<table>
<thead>
<tr>
<th>13. Summary of comments received and voting results from the Technical Advisory Group during previous revisions of ST-40.</th>
<th><strong>Original statement (ST-40a):</strong> Across the tropics, forests where Reduced Impact Logging is practiced support larger populations of mammal species compared to forests logged conventionally.</th>
</tr>
</thead>
</table>
|  | • Replace ‘used’ with ‘practiced’
• Replace ‘support’ with ‘harbour’
• Add clarification on disturbed habitat in section 3.
• Add more information on FSC P&C in section 4. |

| 14. Summary of comments received and voting results from the Technical Advisory Group for current revision (ST-40b). | n/a |

End date: 17 August 2017. |
| 16. Number of revisions: | 1 |
| 17. Endorsement results: | Endorsed. |
Core Members of the Technical Advisory Group


Allen is an expert on environmental and natural resource policy in developing countries, with a focus on tropical deforestation in Latin America and Asia. He coordinates the participation of Resources for the Future (RFF) in the Environment for Development (EfD) initiative and is a research fellow at the EfD Center for Central America. Much of his research evaluates environmental management strategies that aim to overcome barriers to conventional regulation in developing countries, including weak institutions and missing infrastructure. His research on tropical deforestation assesses agroforestry systems and conservation policies such as protected areas and payments for environmental services initiatives. He has also studied the adoption and diffusion of clean and climate-friendly technologies.

**Zuzana Burivalova** (from Feb. 2016 to Sept. 2017)

Zuzana is a postdoctoral research fellow at Princeton University working on tropical forest conservation and ecology. She is particularly interested in the sustainable management of forests for timber, whilst protecting biodiversity. She works with new technologies in the field, such as conservation drones or bioacoustic surveys, and has worked in Madagascar and Papua New Guinea. Zuzana did her undergraduate degree in Biology from Oxford University and finished her PhD at ETH Zurich last year. Previously, she worked at UNEP as a consultant on environmental impacts of conflicts and disasters. Her most recent research project involves comparing environmental, social, and economic benefits of tropical forests under certified and conventional forest management.

**Paolo Cerutti** (from Feb. 2016 to Sept. 2017)

Paolo is a scientist working under the Forests and Governance Programme. Now based in Nairobi, Kenya, he has been working with CIFOR in Yaoundé, Cameroon, from 2004 to 2012. His research focuses on sustainable forest management of tropical production forests, forest certification and timber trade. Paolo holds a PhD in Environmental Governance from the Crawford School of Economics and Government/the Australian National University, and a Masters in Remote Sensing and Natural Resources Evaluation from Agronomic Institute for Overseas Countries (IAO)/Ministry of Foreign Affairs in Florence, Italy. Prior to joining CIFOR, Paolo was a visiting scientist at the United States Geological Survey, and an assistant forest expert to the Coordinator of the Albanian National Forest Inventory.
Elizabeth Clarke (from Feb. 2016 to July 2017)

Liz is the Business and Biodiversity Programme Manager at the Zoological Society of London (ZSL). She has provided guidance on a number of initiatives and publications relating to business and biodiversity, such as advising on certification standards for biodiversity offsets, wildlife friendly markets and palm oil, and business and biodiversity indicators. Liz has extensive programme development, project management and research experience in Sustainability Appraisal (SA) and Environmental and Social Impact Assessment (ESIA); wildlife conservation, biodiversity, ecosystem services and climate change. She is co-chair of the Biodiversity and Ecology for the International Association for Impact Assessment (IAIA). She earned a degree in Zoology from UCL and a masters in environmental policy from the University of Cambridge.

Crystal Davis (from Feb. 2016 to July 2017)

Crystal is the Director of Global Forest Watch, a powerful near-real-time forest monitoring system that unites technology and human networks to create transparency on what is happening in forests around the world. She works with companies, governments, and civil society organizations to use better information about forests to mobilize more effective, rights-based conservation and sustainable management. Crystal previously worked on strengthening forest governance in Brazil, Indonesia, and Cameroon with WRI’s Institutions and Governance Program. Crystal holds a B.S. and M.S. in Earth Systems Science from Stanford University. Her research encompassed environmental governance in Uganda and conservation biology in the tropical rainforests of South America and Eastern Africa.


Luis Felipe serves as the Senior Advisor for Indigenous Peoples for the World Bank based in Washington, D.C. His primary job is to create a constructive dialogue with Indigenous Peoples worldwide to achieve deeper understanding and to work together toward sustainable development. He also assists the World Bank’s regional and country offices to better assess the situation of Indigenous Peoples and prepare plans and programs that take into account their ancestral knowledge, cultural identity and legal rights. Prior to joining the World Bank, Luis Felipe served as the Executive Director of the Amazon Conservation Association. He was also Regional Director for Rainforest Alliance for six years, first in Central America and Mexico and later in Ecuador and the Andean Amazon Region. Luis Felipe has a Master’s in Public and Private Management from Yale University.

Chris Eves (from March 2016 to Sept. 2017)

Chris is Forestry Officer at the Zoological Society of London (ZSL). His work focuses on driving sustainability within landscapes critical to both biodiversity and commodity production. A key area of focus is the SPOTT initiative, which seeks to improve the transparency and environmental, social and governance policies of companies within the tropical timber, pulp and paper sectors. SPOTT informs and facilitates dialogue between companies and their buyers and financiers and forms part of the KELOLA Sendang sustainable landscape project. Prior to joining ZSL, he worked at AECOM as an environmental consultant where his research focused on forest policy, natural capital accounting, and ecosystem markets. Chris holds a Master’s degree in Environmental Technology (Ecological Management) from Imperial College London.
Catharine Grant (from Feb. 2016 to Sept. 2017)

Catharine works as a forest certification specialist for Greenpeace International, with a particular focus on Forest Stewardship Council certification, and her area of expertise is species-at-risk policy and multi-stakeholder conservation planning in the Boreal forest. Before Greenpeace International, Catharine was at Greenpeace Canada where she worked on FSC certification, woodland caribou conservation and corporate procurement policies and sourcing issues. She has also worked on marine species-at-risk policy, fishing regulations, and Marine Stewardship Council certification. Catharine was active in Greenpeace International’s “FSC at work/FSC at risk” project, and a key player in developing Motion 65, adopted at the 2014 FSC General Assembly, which mandates the protection of Intact Forest Landscapes (IFLs). Catharine completed her graduate studies at York University.


Lars is the Principal of Laestadius Consulting, LLC, doing work for FAO and World Resources Institute (WRI) India. In his previous 17 years in WRI’s Forests Program, he led the work of Global Forest Watch Russia to guide wood procurement by providing IKEA and other companies with maps of intact forest landscapes. The method they developed has since been applied worldwide. Lars also led the creation of the Forest Legality Alliance, a business-NGO partnership to reduce the cost of keeping illegal wood out of supply chains. Before joining WRI, he led the efforts of the COST Secretariat in the European Commission to coordinate nationally funded research on forests and forest products in Europe and did research in forestry operations. Lars has a forestry degree (Swedish University of Agricultural Sciences) and a PhD in wood supply systems (Virginia Tech in USA).


Jeffrey is the Rainforest Alliance’s lead scientist and chief advisor for biodiversity and ecosystem conservation. In this role, he works to incorporate best available scientific evidence into the organization’s sustainability standards, programs and overall strategy and to design and implement monitoring, evaluation and impact assessment activities to understand the effects of the Rainforest Alliance’s work on ecosystems and natural resources. He also heads the development and implementation of the Rainforest Alliance’s research strategy. He earned Ph.D. and M.S. degrees in Natural Resources from Cornell University and a B.A. in Earth Sciences from Harvard University. Prior to joining the Rainforest Alliance, he served as director of research for EcoAgriculture Partners. Jeff has held research posts at Cornell University, CATIE and the Lincoln Institute of Land Policy.

Daniela Miteva (from Feb. 2016 to Sept. 2017)

Daniela is Assistant Professor in Sustainable Development and Economy at The Ohio State University in Columbus. She is an environmental economist working on conservation and sustainability issues in developing countries. Combining a microeconomic framework with theory and tools from ecology and biogeography, her research focuses on understanding the drivers of landscape change and quantifying the impacts on ecosystems and human welfare. A large fraction of her work has examined the impacts of common conservation interventions like protected areas and FSC certification in Indonesia. She holds a PhD from Duke University and was until recently a postdoctoral associate at The Nature Conservancy working on a study to assess the effectiveness of protected areas and FSC certification in pantropical commercially important forests.

Karen is Senior Specialist, Research & Development, Forest Programme with WWF. She specializes in designing and managing research projects that provide science-based evidence and solutions to complex global challenges. At WWF she has been involved in a meta-analysis of credible and scientific studies conducted to assess the impact of FSC certification. Karen has 10 years of research, stakeholder engagement, and project management experience across private, non-profit, and academic institutions. Her competencies include global project and team management, qualitative research, quantitative data analysis, strategic thinking and multi-stakeholder engagement. Her topical areas of expertise include: sustainable forestry, community-based natural resource management; REDD+/payment for ecosystem services; corporate social responsibility, and sustainable supply chains.


Derric is Senior Conservation Scientist working with WWF and The Natural Capital Project and Research Associate with the Institute on the Environment, University of Minnesota. He seeks to help improve understanding on how to meaningfully integrate conservation goals, for both people and species, into larger policy decisions. His research interests include evaluating the trade-offs of land-use change on biodiversity conservation, ecosystem services and human well-being. He is also interested in research that expands the conservation discussion beyond protected areas to consider the places where people live, work, and play. His work has focused primarily on the US, South America and Southeast Asia. Derric earned his Ph.D. at the University of Minnesota and an M.Env from Miami University.


As Forest Conservation Specialist with NEPCon, Judy is responsible for managing HCV risk assessments related to FSC Controlled Wood and other forest related commodities such as palm oil, soya and beef. She is also developing NEPCon’s forest conservation initiatives. Prior to joining NEPCon in 2015, Judy worked as a senior forest campaigner with Greenpeace International. She strengthened an array of FSC certification standards and practices through her role as a technical member of FSC’s Chain-of-Custody, Modular Approach Programme and Controlled Wood revisions, an Ecosystem Services Advisory committee member, and through technical submissions on FSC national forest management and accreditation standards. Judy has supported many companies develop forest friendly procurement policies linked to the timber, paper, beef and leather sectors.
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