

Public report
on the assessment of

certification scheme
FSC United States
(request for advice from June 2019)

against the Dutch legal sustainability criteria
for solid biomass for energy applications

by the

Advisory Commission on Sustainability
of Biomass for Energy Applications

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1 Introduction

1.1 Dutch sustainability criteria for solid biomass for energy applications

In September 2013 more than 40 Dutch government bodies, companies and non-governmental organisations endorsed the National Energy Agreement for Sustainable Growth. Part of this Agreement deals with targets for the more sustainable use of energy in the years 2020 and 2023. Bio-energy plays an important role in meeting these targets. It was also agreed that sustainability criteria would be formulated for the large-scale application of biomass for cofiring in coal-fired power plants, and that these sustainability criteria would include forest management and climate aspects like greenhouse gas emissions, carbon debt and indirect land use change.

A working group with representatives from energy companies, environmental organisations and the government has further developed the sustainability criteria into principles and underlying criteria. As from 2015 these principles and criteria have been included as a condition in the subsidy regulation SDE+ for cofiring and for production of industrial steam from wood pellets, and from beginning 2018 these principles and criteria are laid down in environmental legislation. In order to demonstrate compliance with these principles and criteria, companies need to demonstrate that the biomass used fully meets the legal requirements. This can be achieved by use of approved certification schemes and/or by use of the verification protocol approved for this purpose by the Dutch minister of Economic Affairs and Climate Policy (minister of EZK).

1.2 The advisory commission sustainability biomass for energy applications

The independent advisory commission on sustainability of biomass for energy applications (further in this document “commission” or “advisory commission” or “ADBE”) has been installed by the Dutch government. The commission advises the minister of EZK on the extent to which certification schemes comply with the sustainability criteria in the Dutch legal *‘regeling conformiteitsbeoordeling vaste biomassa voor energietoepassingen’*. The commission only gives advice on request of the minister, who receives applications for approval of certification schemes and has to decide on the approval. The minister of EZK will approve certification schemes per individual sustainability criterion, and will only approve schemes which address all management criteria. The use of a certification scheme leads to one or a number of claims (for instance the claim “FSC 100%”). The ADBE will advise which Dutch legal sustainability criteria are covered by each claim of the scheme.

Energy companies can use the approved certification schemes and their claims to demonstrate that the solid biomass which they use complies with the Dutch legal sustainability criteria, either as “sustainable biomass” or as “controlled biomass”. Demonstrating compliance is a condition for receiving subsidy from the so-called [SDE+ subsidy scheme](#) for certain applications of solid biomass. Certification schemes might not be approved for all sustainability criteria. In this case a combination of two or more certification schemes and/or a combination of certification and verification might be required to show compliance with all Dutch legal sustainability criteria.

1.3 Readers guide

In chapter 2 of this report the assessment procedure of the advisory commission plus the application by FSC United States (FSC US) and the timeline of the assessment are briefly explained. Chapter 3 gives a summary of the findings from the assessment by the commission for the certification scheme FSC US. In chapter 4, details on the commission’s judgement are given, and chapter 5 lists the documents that were used for this assessment. This report comes with two annexes: the first annex gives background on requirements for biomass categories and the Chain-of-Custody (CoC) system from Dutch legislation, and the second annex lists the abbreviations that are used in this report.

2 The commissions' assessment procedure and assessment of FSC US

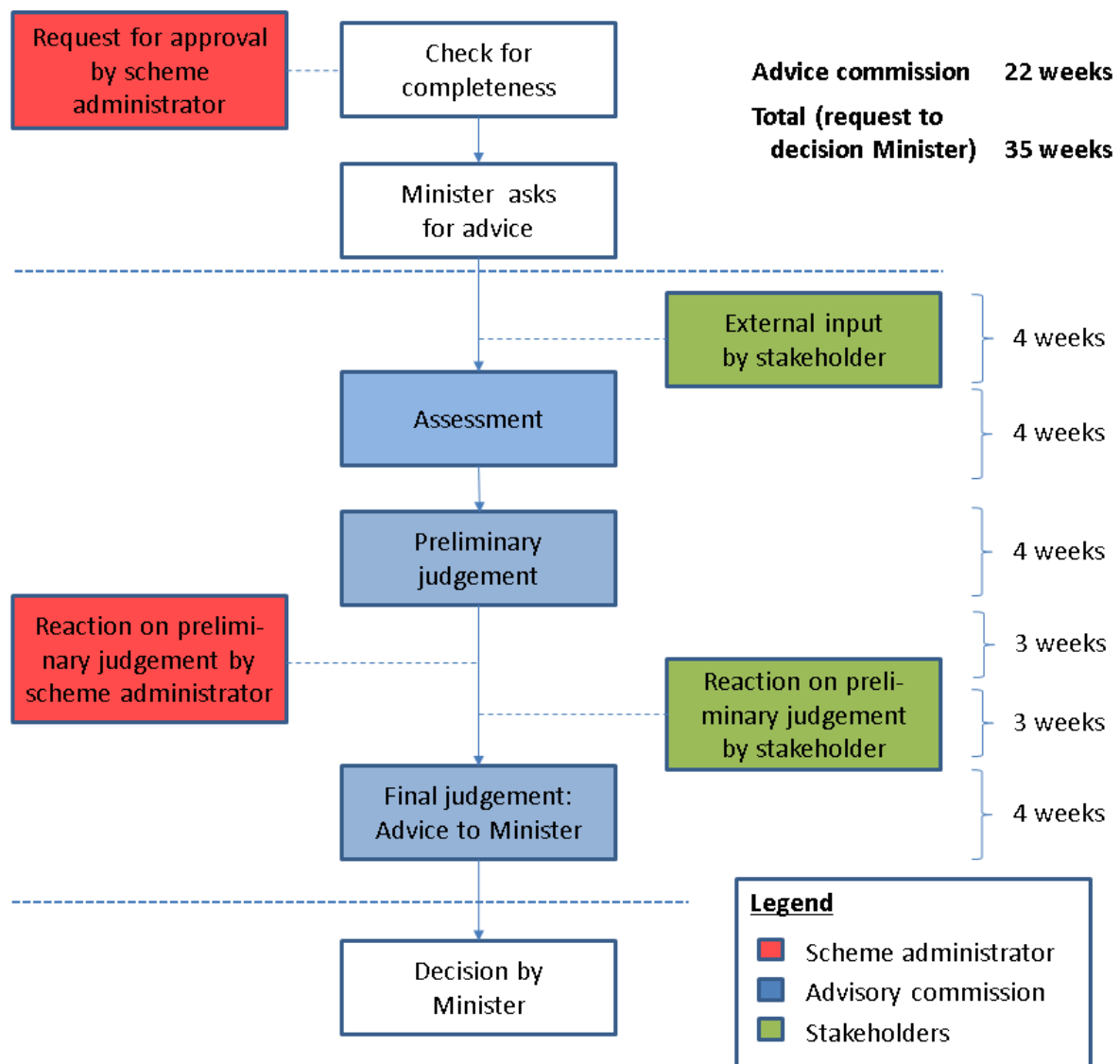
2.1 Assessment protocol

The assessment procedure of the advisory commission is described in a document called "toetsingsprotocol" (assessment protocol). The actual version of this protocol can be found on the [website of the advisory commission](#). The assessment protocol is available in Dutch language only. An English summary of the assessment procedure can be found on [this webpage](#).

The current application of the certification scheme FSC US is assessed using version 2.4 of the assessment protocol.

2.2 Summary of the assessment procedure

Schematically the procedure is visualised in the figure below.



2.3 Application by FSC US

The FSC US scheme manager made an application to the Dutch ministry of EZK in which approval of FSC US (scheme document FSC-STD-USA V1-1-2018) is requested for:

- the Dutch sustainability criteria under Principles P3 - P4 and P6 - P11;
- for biomass categories 1 and 2; and
- geographical coverage “United States (coterminous 48 states)”.

The FSC US scheme is a National Forestry Stewardship Standard (NFSS) on the basis of FSC P&C V4 and approved by FSC International. The FSC International approved schemes generate different claims such as “FSC 100%” and “FSC Controlled Wood”. In the application form, the FSC US manager indicated that the FSC chain of custody requirements include controlled biomass.

FSC International is the formal owner of the FSC US scheme document, as well as of other relevant FSC documentation. The FSC scheme documents that were submitted by the FSC US scheme manager as input for the assessment are listed in paragraph 5.1. The commission also used additional documents that are listed in paragraph 5.2.

2.4 Timeline of the FSC US assessment

The commission received a request for advice on the FSC US application on June 27, 2019. In September 2019 the commission completed its preliminary judgement – which did not yet include a judgement on sustainability criterion 8.7 – and sent it for comments to the FSC US scheme manager. The FSC US scheme manager responded to the preliminary judgement on October 9, 2019.

The commission discussed the responses by mid-October 2019. The FSC US scheme manager was informed on the commissions’ reply and on the preliminary judgement on sustainability criterion 8.7 on October 25, 2019.

In November 2019 the commission came to its final judgement, which is described in this report. The advice that the commission has sent on November 22, 2019 to the minister of EZK consists of a cover letter plus this report.

2.5 External input

Stakeholders have been given the opportunity to submit external input to the commission during the first four weeks of the procedure (see also paragraph 2.2). For this application by the certification scheme FSC US no external input was received from stakeholders.

3 Summary of findings on certification scheme FSC US

A summary of the commission's findings on the application for approval by the certification scheme FSC US is given in the five paragraphs of this chapter 3. The last paragraph in this chapter lists the FSC scheme documents to which these findings apply. Details on the commission's findings are given in chapter 4 "Full assessment tables for certification scheme FSC US". In chapters 3 and 4 reference is made to the "Dutch regulation", which is the Dutch legal *regeling conformiteitsbeoordeling vaste biomassa voor energietoepassingen*¹. The sustainability and management criteria referred to by the numbers in this chapter and listed in chapter 4 are copied from the Dutch legal regulation.

The commission's preliminary judgement, based on the combined findings as described below, is that FSC US can be approved for sustainability criteria 3.3, 4.1, 6.1, 6.3, 7.1 - 7.5, 8.1 - 8.8, 9.1 - 9.2, 10.1, 10.3 -10.5 and 11.1 - 11.2 for biomass categories 1 and 2. This judgement applies to the FSC claim "FSC 100%" and is given for the geographical scope "United States (coterminous 48 states)".

FSC US partly addresses sustainability criterion 10.2, the table in paragraph 4.2 shows which parts of this criterion are addressed by FSC US.

Please note that the CoC criteria 12.1 – 12.6 and 13.1 – 13.3 have been earlier partly approved for FSC International with the scope "worldwide". This approval hence also covers the United States of America. The earlier approval for FSC International for criteria under P3 – P11 does not apply to FSC US, as FSC US is a P&C V4 approved FSC scheme and the FSC International approval has the scope "all countries and regions with P&C V5 approved National- or Regional Forest Stewardship Standards".

Please also note that the FSC claim "Controlled Wood" has earlier been partly approved for FSC International with the scope "worldwide". This approval hence also covers the United States.

3.1 This advice concerns the FSC claims FSC 100% and FSC Controlled Wood

In the FSC certification scheme, a number of different output claims are used:

- FSC 100%
- FSC Mix x% / FSC Mix credit
- FSC Recycled x% / FSC Recycled Credit
- FSC Controlled Wood

For this assessment the FSC claims FSC Recycled x% / FSC Recycled Credit are not relevant as these claims are on recycled/reclaimed material that is Dutch biomass category 5. The claims FSC Mix x% and FSC Mix credit are used when biomass materials are mixed. The commission has earlier concluded that FSC does not comply with the Dutch sustainability requirements on mixing (in Dutch criterion 12.5, for more details see the commissions' assessment on criterion 12.5 in paragraph 4.3 of the [public assessment report on FSC International](#)). This advice was taken over in the approval decision and as a result the Dutch recognition for FSC International on the CoC criteria under principles P12 and P13 does not include the claims FSC Mix x% and FSC Mix credit. For the same reason, this current advice is on the claims FSC 100% and FSC Controlled Wood, and not on any of the other FSC output claims.

3.2 Findings on classification of biomass and on the first link in the CoC to be certified

FSC US requested approval for wood from forest land (biomass category 1 and 2). The commission has concluded that information on the size of the FMU is available through a combination of the FSC-COC-number of the invoice plus data recorded on the website info.fsc.org. As a result, the commission will advise to approve FSC US for category 1 and 2 biomass. FSC US did not apply for approval for the "regional risk based approach" for biomass category 2, so the commission will not advise on this.

¹: translated: "Dutch regulation on conformity assessment solid biomass for energy applications"

FSC certification starts at the forest management level, so the requirements on the first link in the Chain-of-Custody (CoC) from Table 2 in Annex D of the Dutch regulation are met.

3.3 Findings for management criteria

A certification scheme can only be approved if the scheme complies with all management criteria. The ADBE concludes that FSC US complies with all management criteria. The table in paragraph 4.2 gives further details.

3.4 Findings for individual sustainability criteria (claim “FSC 100%”)

The minister of EZK will approve certification schemes per claim and per individual sustainability criterion from the Dutch legal regulation. For the request for approval by FSC US, the commission has assessed compliance against the Dutch sustainability criteria for the FSC claim “FSC 100%”.

The results are shown in the table below which does not show names or descriptions of the individual criteria, please refer to the table in paragraph 4.3 for further details. Green and yellow colours indicate the criteria for which the ADBE will give a positive advice to the Minister of EZK.

Principle	Number of the criterion as related to the respective principle to the left							
	1	2	3	4	5	6	7	8
P1: GHG emissions	Grey							
P2: Soil quality	Grey							
P3: Carbon sinks	Red	Red	Light green					
P4: Long-term carbon debt	Green	Red	Red					
P5: Indirect Land Use Change (ILUC)	Grey							
P6: Laws and regulations	Green	Red	Yellow					
P7: Biodiversity	Green	Light green	Light green	Green	Green			
P8: Regulating effect and quality, health and vitality of forest	Light green	Green	Green	Green	Green	Light green	Light green	Green
P9: Production capacity, safeguard future of forests	Green	Green						
P10: Management system	Green	Orange	Green	Green	Green			
P11: Forest management by a group or regional association	Green	Green						
P12: Chain of custody system	Grey	Grey	Grey	Grey	Grey	Grey		
P13: Chain of custody system for a group	Grey	Grey	Grey					

Legend (scoring table)

Colour	Score	Meaning
Dark green :	3	The sustainability criterion is fully addressed by FSC US.
Light green :	2	The sustainability criterion is largely addressed the FSC US. Supplementary verification or another approved certification scheme is not needed.
Yellow :	c.o.	The sustainability criterion is covered otherwise.
Orange :	1	The sustainability criterion is partly addressed by FSC US. Supplementary verification or another approved certification scheme is needed for those elements that are not addressed.
Red :	0	The sustainability criterion is not or is insufficiently addressed by FSC US. Additional verification or another approved certification scheme is required for the entire sustainability criterion.
Grey :		No request for approval.

3.5 Findings for controlled biomass (claim “FSC Controlled Wood”)

FSC US also applied to be approved for controlled biomass. In the earlier advice on FSC International the commission has reported on its assessment of the claim “FSC Controlled Wood”. This advice is repeated here, including an additional clarification on the group certification criteria under Dutch Principle P11. Controlled biomass according to the Dutch legislation is category 1 and 2 biomass complying with Dutch sustainability criteria 1.1, 3.1, 3.2, 3.3, 4.1, 4.2, 4.3, 5.1, 7.1, 7.3, 12.1, 12.2, 12.3, 12.4, 12.5 and 12.6.

For the claim “FSC Controlled Wood”, the table below summarises the commissions’ findings per individual sustainability criterion from the Dutch regulation.

The commission earlier advised to approve this claim for geographical scope “worldwide” as the two FSC Controlled Wood documents as well as the FSC CoC document apply worldwide and are used for certification. As a result, this earlier advice also applies to the FSC US scheme being applied in the United States of America.

The commission adds one further clarification to this advice that was earlier given as part on the advice on FSC International in October 2018. This clarification is that also group management can be used to demonstrate that biomass is controlled biomass according to the Dutch legislation. As a consequence the commission has added the Dutch sustainability criteria 11.1 and 11.2 in the assessment table below.

Principle	Number of the criterion as related to the respective principle to the left							
	1	2	3	4	5	6	7	8
P1: GHG emissions	Grey							
P3: Carbon sinks	Red	Red	Red					
P4: Long-term carbon debt	Red	Red	Red					
P5: Indirect Land Use Change (ILUC)	Grey							
P7: Biodiversity	Light green			Light green				
P11: Forest management by a group or regional association	Dark green	Dark green						
P12: Chain of custody system	Dark green	Red	Dark green	Orange	Orange	Dark green		

Legend (scoring table)

Colour	Score	Meaning
Dark green :	3	The sustainability criterion is fully addressed by the claim “FSC Controlled Wood”.
Light green :	2	The sustainability criterion is largely addressed the claim “FSC Controlled Wood”. Supplementary verification or another approved certification scheme is not needed.
Orange :	1	The sustainability criterion is partly addressed by the claim “FSC Controlled Wood”. Supplementary verification or another approved certification scheme is needed for those elements that are not addressed.
Red :	0	The sustainability criterion is not or is insufficiently addressed by the claim “FSC Controlled Wood”. Additional verification or another approved certification scheme is required for the entire sustainability criterion.
Grey :		No request for approval

3.6 Scheme documents

This advice is based on the scheme documents – including the versions of these scheme documents – as listed below. This is relevant as the decision of the Dutch minister of EZK on the approval of FSC US will apply to the current “version” of the FSC US certification scheme, which includes FSC International documents as the conclusions in this assessment are based on these documents. This current “version” consists of the documents including version numbers as listed below.

- FSC-STD-USA-1.1-2018 FSC Forest Stewardship Standard for the United States of America
- FSC-STD-01-002 FSC Glossary of Terms (October 2017)
- FSC-STD-20-001 (V4-0) EN General Requirements for FSC Accredited Certification Bodies
- FSC-STD-30-005 (V1-1) EN FSC Standard for Group Entities in Forest Management Groups
- FSC-STD-60-006 (V1-2) EN The development and revision of National Forest Stewardship Standards
- FSC-POL-30-001 (V3-0) EN FSC Pesticides Policy
- FSC-POL-30-001A EN FSC List of ‘Highly Hazardous’ Pesticides
- FSC-PRO-01-001 (V3-1) EN The Development and Revision of FSC Normative Documents
- FSC-PRO-01-005 (V3-0) EN Processing Appeals
- FSC-PRO-01-008 (V2-0) EN Processing Complaints in FSC Certification Scheme
- FSC-PRO-01-009 (V3-0) EN Processing Policy for Association Complaints in the FSC® Certification Scheme

4 Assessment tables for certification scheme FSC US

This chapter contains four paragraphs on respectively a number of general topics of the FSC US (4.1), on the management criteria (4.2) on the sustainability criteria for the claim “FSC 100%” (4.3) and on the claim “FSC Controlled Wood” (4.4). The scores “3”, “2”, “c.o.”, “1” and “0” plus the colours that are used in the tables in this chapter, are explained in the legend on page 6.

4.1 Assessment of classification of biomass and on first link in CoC to be certified

Annex D of the Dutch regulation contains two tables (which are copied into Annex B of this report) with a number of general requirements on biomass categories and on the first link in the CoC to be certified. The ADBE has assessed whether FSC meets these requirements. One important aspect is whether FSC can make a distinction between the five biomass categories.

FSC US requested approval for wood from forest land (biomass category 1 and 2). The commission has concluded that information on the size of the FMU is available through a combination of the FSC-COC-number of the invoice plus data recorded on <https://info.fsc.org/>. As a result, the commission will advise to approve FSC US for category 1 and 2 biomass. The distinction between category 1 and 2 biomass is relevant for Dutch sustainability criterion 5.1, for which category 2 biomass is exempted. FSC US did not apply for approval for the “regional risk based approach”.

For the claim FSC 100%, FSC certification starts at the forest management level. For the claim “FSC Controlled Wood” certification either starts at the forest management unit (FSC-STD-30-010) or at the pellet mill (FSC-STD-40-005 V3-1). As a result the conditions on the first link in the Chain-of-Custody (CoC) from Table 2 in Annex D of the Dutch regulation are met for the claim “FSC 100%” and for the claim “FSC Controlled Wood”.

4.2 Assessment table for management criteria

The table below contains details of the assessment of the advisory commission on the FSC US certification scheme against the Dutch management criteria from the “regeling conformiteitsbeoordeling vaste biomassa voor energiedoeleinden”.

Management criterion from the Dutch “regeling conformiteitsbeoordeling vaste biomassa voor energiedoeleinden”		ADBE judgement on whether FSC US complies with the management criteria	Score
1	A widely supported need exists for the scheme and for the conformity assessments that are performed based on the scheme.	<p>FSC US (or more specific the document “FSC-STD-USA-1.1-2018 FSC Forest Stewardship Standard for the United States of America”) is an approved scheme by FSC International, and as such international FSC sustainability claims such as “FSC 100%” are based on this document and other similar national FSC schemes.</p> <p>FSC was established in 1993, as a follow-up to the United Nations Conference on Environment and Development (the Earth Summit at Rio de Janeiro, 1992). As FSC is organised in three chambers, namely on i) environmental, ii) economic and iii) social interests, the scheme is broadly supported. FSC has over 1660 forest management certificate holders and over 40,000 chain-of-custody certificate holders. Worldwide more than 200 million hectares of forest has been FSC-certified. The country schemes of FSC, such as FSC US, are the implementation of the international scheme in the national context.</p> <p>Therefore, the commission concludes that management criterion 1 is fully addressed by FSC US.</p>	3

2	The development of the scheme is transparent and participation in the process of development of the scheme is open to anyone.	The commission observed that the procedures FSC-STD-60-006 V1-2 and FSC-PRO-01-001 V3-1 for development or updates/revisions of the scheme are described clearly and are available online. These documents do apply for the development of National Forest Stewardship Standards (NFSS) including the FSC US standard which the ADBE assesses in this report. Scheme development is therefore considered transparent. The commission also noted that the consultative forum is open to any stakeholder on request, and therefore the development of the scheme is open to anyone. The commission has checked and confirmed that stakeholder consultation has taken place. As a result, the commission concludes that management criterion 2 is fully addressed by FSC US.	3
3	The methods related to the development of the scheme are documented and at least include the organisations participating in the development of the scheme and the decision-making process for the development of the scheme.	FSC document FSC-PRO-01-001 V3-1 contains requirements for the development of FSC normative documents, amongst others in section 5 on public consultation, section 7 on preparation for decision making and section 8 on decision making. Methods for development of national schemes (NFSS's including the document FSC-STD-USA-1.1-2018) are documented in FSC document FSC-STD-60-006 V1-2, for instance in sections 3 and 4 with requirements for the composition and role of the Standard Development Group, and in the sections 6, 7 and 10 with requirements for the process to develop and make decisions on NFSS's. The FSC Board of Directors has decided to approve the FSC US NFSS. Therefore, the commission concludes that management criterion 3 is fully addressed by FSC US through FSC-PRO-01-001 V3-1 and FSC-STD-60-006 V1-2.	3
4	It can be demonstrated that during the development of the scheme and as part of the scheme management expertise of the sustainability requirements covered by the scheme is applied.	FSC's criteria specifically mention that expert knowledge is a requirement in the working groups that are developing the scheme, for instance in FSC-PRO-01-001 V3-1 (criteria 3.9 and 3.13) and in FSC-STD-60-006 V1-2 (criterion 3.2). The commission received information from the scheme manager on which experts were involved in the scheme development. The commission concluded that relevant expertise was involved in scheme development and consequently the commission concludes that management criterion 4 is fully addressed by FSC US.	3
5	The scheme is publicly available or accessible under fair, reasonable and non-discriminatory conditions.	All documents on which the FSC US scheme is based are publicly available in the document center on the website of FSC International: https://ic.fsc.org/en/document-center . Also the US NFSS (the document FSC-STD-USA-1.1-2018) is available through this document center. As a result, the commission concludes that FSC US fully addresses management criterion 5.	3
6	The scheme manager limits the use of the scheme to the conformity assessment bodies he has entered into an agreement with, unless the scheme owner itself is the only conformity assessment body.	FSC International has indicated – in response to questions by the commission – that an agreement (in the form of a contract) between scheme operator and conformity assessment bodies (CABs) takes place not at the national but rather at the international level between FSC International and the CABs, and that there is no official FSC document where this requirement is made explicit. FSC International added that “such a contract however initiates the official start of the cooperation and licensing. So even if not included in a normative FSC document, it is common sense that one needs to enter into a contract first”. The commission has checked with two CABs to confirm that they need to enter into a contract with FSC International before they can perform FSC audits, and the two CABs confirmed that this is the case. The commission also observed that – through this agreement – the FSC General Director grants the rights to use the scheme to the conformity assessment body. As a result, the commission concludes that also FSC US fully address management criterion 6 through contracts required for by FSC International.	3
7	The scheme manager has enforced effective procedures for handling complaints and appeal. Appeal is treated by persons that are not directly involved in the development and the management of the document.	The commission has observed that FSC distinguishes two different responsibilities for complaint and appeal: During the development or revision of NFSSs, the National Standard Development Groups are responsible. During times when the national scheme is not developed or revised, the management of the scheme is in the hands of FSC International. <u>Ad. 1 Complaint and appeal procedures used by the National Standard Development Group</u> The commission concluded that national FSC offices can have their own complaint and/or appeal procedure. Within FSC, the development or revision of a national or regional standard starts with a proposal and a work plan. FSC document FSC-STD-60-006 V1-2 EN contains (in Annex 2) a requirement that the Work Plans must contain a paragraph on complaints. The suggested content of this paragraph from this Annex 2 reads: <i>9. Complaints: (FSC-STD-60-006 section 13)</i>	3

		<p><i>Complaints related to the content of the approved standard shall be responded to by the Facilitator, by providing an explanation of why a particular point of view was not incorporated into the final standard submitted for approval, and/or explaining how the point may be raised again in relation to future revisions of the standard.</i></p> <p><i>Complaints related to procedural issues shall be responded to initially by the Facilitator. If the complainant is not satisfied with the explanation provided by the Facilitator, the complaint shall be addressed through the FSC Dispute Resolution process.</i></p> <p>FSC US did send the paragraph on complaints from the US work plan for the revision of the FSC USA standard that led to the document FSC-STD-USA-1.1-2018. The commission understands that the procedure from FSC_STF-60-006 section 13 applied during the development of the scheme document, and hence that FSC complied with the Dutch criterion 7 during the period of scheme revision.</p> <p><u>Ad. 2 Complaint and appeal procedure by FSC International</u></p> <p>The commission observed that FSC US refers on its website (assessed on July 2, 2019) to the FSC International procedures for complaints and appeal.</p> <p>The commission looked into the FSC International Dispute Resolution process, which can be found here. This process is defined through FSC procedures FSC-PRO-01-005, FSC-PRO-01-008 and FSC-PRO-01-009 and other supporting documents. The commission concluded that FSC International has clear procedures for complaints and appeals. The appeals have to be handled by impartial persons free of conflict of interest regarding the applicant and the appeal and the person(s) handling the appeal shall not have an interest in the outcome, implying that the person(s) are not allowed to be directly involved in the development and the management of the document [that is under appeal].</p> <p>As a result the commission concludes that management criterion 7 is fully addressed by FSC International.</p>	
8	The scheme manager has a scheme version management system in place.	The scheme documents from the FSC US scheme are managed by FSC International. All normative documents from FSC International have a clearly indicated version number. An updated standard receives a new version number (criterion 12.1 in FSC-STD-60-006 (V1-2)) which shows that a scheme version management system is in place. The commission concludes that management criterion 8 is fully addressed by FSC US and FSC International.	3

4.3 Assessment tables on sustainability criteria for the claim “FSC 100%”

The minister of EZK will approve certification schemes per claim from the certification scheme and per individual sustainability criterion from the Dutch regulation.

The commission has assessed whether the certification scheme FSC US addresses the Dutch sustainability criteria from the Dutch regulation. The assessment results for the claim “FSC 100%” are given in the tables below. The first table lists two general points of attention that the commission found during its assessment.

As the FSC US scheme manager did not request approval for the sustainability criteria under principles P1, P2 and P5, the commission has not assessed whether the claim “FSC 100%” demonstrates compliance with the sustainability criteria 1.1, 2.1 and 5.1 from the Dutch regulation. For the sustainability criteria under principles P12 and P13 the earlier advice on FSC international applies, which for the CoC criteria under P12 and P13 had a geographical scope “worldwide”.

General points of attention		
0.1	Definitions	<p>The FSC US standard documents contain two sets of definitions:</p> <ol style="list-style-type: none"> 1. In Annex A of FSC-STD-USA-1.1-2018 2. In the document FSC-STD-01-002 “FSC Glossary of Terms” (19 October 2017). <p>Both documents contain definitions for the same terms (such as “Certification body” and “Natural Forests”).</p>

		<p>The document FSC-STD-01-002 "FSC Glossary of Terms" contains, under "A Objective" the following sentence: "Definitions of the same term in other normative documents are considered adaptations that are only valid in the context of the document in which they appear."</p> <p>As a result there are no consequences for the judgement by the commission. In case a term is defined in Annex A of FSC-STD-USA-1.1-2018 as well as in FSC-STD-01-002 "FSC Glossary of Terms, then the definition in Annex A of FSC-STD-USA-1.1-2018 takes precedence when applying this document FSC-STD-USA-1.1-2018.</p>
0.2	SLIMF criteria	<p>FSC US distinguishes between indicators for small and for large FMU's. The small or "Family Forest" (FF) indicators apply for FMU's up to 1000 ha.</p> <p>If the commission would conclude that – for a certain Dutch sustainability criterion – the FF indicators are not sufficient to cover the Dutch criterion, the consequence is that this conclusion applies to Dutch biomass category 2 as well as to Dutch biomass category 1, as the definition of Dutch biomass category is "Woody biomass from small Forest Management Units (FMUs <500 ha)".</p>

Principle 3: Production of raw biomass does not result in the destruction of carbon sinks		
Sustainability criterion from the Dutch "regeling conformiteitsbeoordeling vaste biomassa voor energiedoeleinden"	ADBE judgement on whether FSC US (claim FSC 100%) complies with the sustainability criteria	Score
3.1 Biomass is not sourced from permanently drained land that was classified as peat land on 1 January 2008, unless it can be demonstrated that the production and harvesting of the biomass does not result in water depletion of a previously undrained soil.	FSC US (version 1.1, 2018) does not include specific provisions to prevent that (forest) peatlands are drained into (drier) forest areas. The commission has also looked into US legislation (the US Clean Water Act) and consulted the US Fish & Wildlife Service report " Status and Trends of Wetlands in the Conterminous United States 2004 to 2009 ", and concludes that US legislation does not prevent all forest types from site preparation including drainage of peat lands. Also, FSC does not mention a historical cut-off date (2008) (which is required in the Dutch legal regulation) for not using drained land that was classified as peat land on 1 January 2008, causing that there is a gap in the protection of peatlands between 2008 and the first date of certification. As a result, the commission concludes that Dutch sustainability criterion 3.1 is insufficiently addressed by FSC US.	0
3.2 Biomass is not sourced from land that was converted from wetland to an alternative, dryer ecosystem after 1 January 2008.	<p>Criterion 6.3 from FSC-STD-USA-1.1-2018 stipulates that ecological functions and values shall be maintained intact, enhanced, or restored, including ..[.]. genetic, species, and ecosystem diversity. Criterion 6.5 from FSC-STD-USA-1.1-2018 requires the preparation and implementation of guidelines to protect water resources. Although FSC US includes requirements on hydrological conditions which prevent conversion of a wetland forest into an alternative, dryer ecosystem, FSC US does not include a historical cut-off date (2008) for conversion of wetlands to drier ecosystems, which is required in the Dutch legal regulation. As a result, there is a gap in the protection of wetlands between 2008 and the first date of certification.</p> <p>The commission has also looked into US legislation (the US Clean Water Act) and consulted the US Fish & Wildlife Service report "Status and Trends of Wetlands in the Conterminous United States 2004 to 2009", and concluded that US legislation does not prevent all forest types from site preparation including drainage. As a result, the commission concludes that Dutch criterion 3.2 is insufficiently addressed by FSC US.</p>	0
3.3 Biomass is not sourced from wood plantations that were created by means of conversion of natural forests after 31 December 1997, unless the forest manager is not directly or indirectly responsible for the conversion. Biomass originating from wood plantations that were created after 1997 by means of conversion of degraded natural forests	<p>The Dutch criterion consists of two parts:</p> <p>1. <u>Biomass is not sourced from wood plantations that were created by means of conversion of natural forests after 31 December 1997, unless the forest manager is not directly or indirectly responsible for the conversion</u></p> <p>FSC US criterion 10.9 stipulates that plantations established in areas converted from natural forests after November 1994 normally shall not qualify for certification, and that certification may be allowed in circumstances where sufficient evidence is submitted to the certification body that the manager/owner is not responsible directly or indirectly for such conversion. FSC US indicator 10.9.a stipulates that for plantations</p>	2

	<p>or degraded land is exempt from this requirement on condition that it is ecologically and economically justified to do so and that the forest manager is not directly or indirectly responsible for the degradation.</p>	<p>established in areas converted after 1994, the forest owner or manager demonstrates to the CB that the manager/owner was not directly or indirectly responsible for the conversion of the natural forest to the plantation. As a result, the commission concludes that FSC US fully covers this part of the criterion.</p> <p>2. <u>Biomass originating from wood plantations that were created after 1997 by means of conversion of degraded natural forests or degraded land is exempt from this requirement on condition that it is ecologically and economically justified to do so and that the forest manager is not directly or indirectly responsible for the degradation.</u></p> <p>FSC US stipulates that natural or semi-natural stands are not converted to plantations whereas degraded, semi-natural stands may be converted to restoration plantations (FSC-STD-USA-1.1-2018, indicator 6.10.d). FSC US criterion 6.10 stipulates that forest conversion to plantations shall not occur except three conditions are met, the third condition being that the "conversion will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit". This is comparable to one of the two conditions mentioned in the Dutch criterion. The second condition in the Dutch criterion "the forest manager is not directly or indirectly responsible for the degradation" is not covered by FSC US in case of conversion following indicator 6.10.d. In such a case FSC US requires (indicator 10.9.b) that the forest owner or manager develops and implements a plan to restore the plantation stands to conditions characteristic of natural forests and to manage those stands in compliance with all indicators of Principles 1-9 as quickly as feasible. As a result, the commission concludes that this part of the criterion is largely covered by FSC US.</p> <p>As a result the commission concludes that FSC US largely addresses Dutch sustainability criterion 3.3.</p>	
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<p>Principle 4: The use of biomass does not result in a long-term carbon debt</p>			
	<p>Sustainability criterion from the Dutch "regeling conformiteitsbeoordeling vaste biomassa voor energiedoeleinden"</p>	<p>ADBE judgement on whether FSC US (claim FSC 100%) complies with the sustainability criteria</p>	<p>Score</p>
<p>4.1</p>	<p>The forest management unit where the wood is sourced is managed with the aim of retaining or increasing carbon stocks in the medium or long term.</p>	<p>FSC US criterion 5.6 stipulates that the rate of harvest of forest products shall not exceed levels which can be permanently sustained. The indicators 5.6.a and 5.6.b are on the calculation of the sustained yield harvest level and include a requirement that average annual harvest levels, over rolling periods of no more than 10 years, do not exceed the calculated sustained yield harvest level. FSC US criterion 5.5 stipulate that "Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries". Indicator 5.5.a makes clear that forest services and resources also includes carbon storage and sequestration.</p> <p>The commission therefore concludes that Dutch criterion 4.1 is fully addressed by FSC US based on criteria 5.5 and 5.6 plus underlying indicators from FSC-STD-USA-1.1-2018.</p>	<p>3</p>
<p>4.2</p>	<p>Biomass is not sourced from stumps unless these stumps had to be removed from the site for other reasons than wood or biomass production.</p>	<p>Harvesting of stumps is not explicitly excluded under FSC-STD-USA-V1-1-2018. Stumps are not mentioned in the FSC US principles, criteria and indicators.</p> <p>The commission understands from various experts that currently, harvesting of stumps is rarely practiced in the US. The commission is however of opinion that in times of high demand for biomass, stump harvesting might increase, as has been observed in Sweden, where stumps have also been harvested from FSC-certified forests (IEA Bioenergy, "Stump Harvesting - Impact on Climate and Environment", 2017).</p> <p>Although criteria 5.3, 6.3 and 6.5 and underlying indicators from FSC-STD-USA-V1-1-2018 require that erosion is minimized and controlled and that management maintains, enhances, or restores habitat components including</p>	<p>0</p>

		dead woody material, this does not ensure that stumps are not used for bio-energy. As a result, the commission concludes that sustainability criterion 4.2 is insufficiently addressed by FSC US.	
4.3	On average less than half the volume of the annual round wood harvest from forests is processed as biomass for energy generation. Round wood from thinnings or from production forests with a rotation period of 40 years or less is exempt from this requirement.	FSC US has a criterion 5.4 plus underlying indicators that stipulates that forest management should strive to strengthen and diversify the local economy, avoiding dependence on a single forest product. The commission notes that this criterion contains the word "should" and is therefore a recommendation rather than a requirement. As FSC US does not include a requirement on the maximum share of round wood used for energy purposes, the commission concludes that sustainability criterion 4.3 is insufficiently addressed by FSC US.	0

Principle 6: Relevant international, national, regional and local laws and regulations are complied with			
Sustainability criterion from the Dutch "regeling conformiteitsbeoordeling vaste biomassa voor energiedoelinden"		ADBE judgement on whether FSC US (claim FSC 100%) complies with the sustainability criteria	Score
6.1	The forest manager holds the legal right to use the forest.	Based on FSC-STD-USA-1.1-2018 criterion 2.1 plus underlying indicators, the commission concludes that Dutch sustainability criterion 6.1 is fully addressed by FSC US.	3
6.2	The forest manager complies with all obligations to pay taxes and royalties.	The commission has noted that for FSC US criterion 1.2 "All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid", the FF indicator reads "FF indicator 1.2.a Low risk of negative social or environmental impact". The "Low risk of negative social or environmental impact" is further explained near the end of the section "Family forests" in the introductory part of the FSC US standard document. The commission is of the opinion that – although the impact of not paying taxes by Family Forest owners might be small – the Dutch sustainability system as described in the Dutch legal regulation requires that criteria must be complied with. As a result the Dutch sustainability system does not allow to simply assume – for instance as the risk and/or the impact of non-compliance is low - that a criterion is met. When assessing whether a certification scheme demonstrates that the Dutch sustainability criteria are met, the commission can take into account scale, impact and/or risk. By doing so, the commission can come to an advice "largely addressed" or "fully addressed" when indicators for small FMU's are less extensive as compared to indicators for large FMU's. However, the commission cannot advise that a criterion is largely or fully addressed when the certification body can assume an FSC criterion to be complied with in the absence of evidence presented to, or otherwise brought to the attention of the Certifying Body. As a result, the commission concludes that FSC US insufficiently addresses Dutch sustainability criterion 6.2 as family forest owners do not have to demonstrate compliance to FSC US criterion 1.2 FSC-STD-USA-1.1-2018.	0
6.3	Anti-corruption legislation is complied with. If no anti-corruption legislation exists, the forest manager takes alternative anti-corruption measures proportionate to the scale and intensity of the management activities and the risk of corruption.	Criterion 1.1 from FSC-STD-USA-1.1-2018 stipulates that "Forest management shall respect all national and local laws and administrative requirements". FSC US does not have requirements on corruption. Compliance with Dutch criterion 6.3 therefore depends on US anticorruption legislation: the US Foreign Corrupt Practices Act. The commission concludes that this act demonstrates compliance to this Dutch criterion and that the US scores high enough on the corruption perception index of Transparency International to meet the Dutch criterion. As a result, and based on criterion 1.1, the commission concludes that sustainability criterion 6.3 is fully addressed through national legislation and is scored as covered otherwise (c.o.).	C.O.

Principle 7: Biodiversity is maintained and where possible enhanced		
Sustainability criterion from the Dutch "regeling conformiteitsbeoordeling vaste biomassa voor energiedoelinden"	ADBE judgement on whether FSC US (claim FSC 100%) complies with the sustainability criteria	Score
7.1 Sites with a high conservation value and representative areas of the forest types that are found in the forest management unit have been identified and are protected and where possible enhanced. The sites may contain one or more of the following values: diversity of species, ecosystems and habitats, ecosystem services, ecosystems at landscape level and cultural values.	<p>Dutch criterion 7.1 consists of two parts:</p> <ol style="list-style-type: none"> <u>Sites with high conservation values that are found in the forest management unit have been identified and are protected and where possible enhanced.</u> FSC US criterion 9.1 stipulates that an assessment to determine the presence of attributes consistent with the HCV forests will be completed, whereas FSC US criterion 9.3 stipulates that the management plan shall include and implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. As a result, the commission concludes that the first part of criterion 9.1 is fully covered by FSC US. <u>Sites with representative areas of the forest types that are found in the forest management unit have been identified and are protected and where possible enhanced.</u> FSC US criterion 6.1 plus indicator 6.1.a stipulate that an assessment of environmental impacts shall be completed. FSC US criterion 6.4 stipulates that 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 commission concludes that 'samples of existing ecosystems within the landscape' is similar to 'representative areas of forest types', which is part of the Dutch criterion. As a result the commission concludes that FSC US identifies and protects sites with representative areas of the forest types, and hence covers this second part of the criterion. <p>The commission therefore concludes that Dutch sustainability criterion 7.1 is fully addressed by FSC US.</p>	3
7.2 Measures have been taken to protect endangered plant and animal species and, if applicable, to increase the populations and enhance the habitats of these species.	<p>FSC US requires, through criterion 6.2, to protect rare, threatened and endangered species and their habitats. Indicator 6.2.b. stipulates that – when such species are present - modifications in management are made in order to maintain, restore or enhance the extent, quality and viability of the species and their habitats. This fully addresses Dutch sustainability criteria 7.2 in case FSC US protects the same species as are protected under the Dutch regulation which are "plant and animal species that are at least classified as "threatened" in the global Red List of the IUCN and in the IUCN's guidelines for the regional application of the Red List".</p> <p>As FSC US in its definition of rare, threatened and endangered species refers to federal and state lists and to the National Heritage database – and hence not to IUCN - the ADBE has made a detailed analysis on whether FSC US protects the same species as protected by the Dutch definition as given above.</p> <p>On the basis of the detailed analysis the commission concludes that the protection offered by the FSC US definition of rare, threatened and endangered species which is – amongst others – based on the global and state rankings in the NatureServe Explorer tool (giving access to the National Heritage Database) concerns more or less the same species as the species that have status "vulnerable", "endangered" or "critically endangered" (so called threat categories) in the IUCN global red list. This conclusion is based on a sample of 240 US species taken and assessed by the commission. As NatureServe seems to make less regular updates of its database as compared to updates made by IUCN (causing that some species that are declining have recently been classified in a "threat" category by IUCN and have not (yet) been updated by NatureServe), the commission concludes that – based on the federal and state lists and the National Heritage Database – FSC US largely addresses Dutch sustainability criterion 7.2.</p>	2
7.3 The conversion of forests within the forest management unit to other forms of land use,	<p>Similar to the Dutch sustainability criterion 7.3, criterion 6.10 from FSC-STD-USA-1.1-2008 forbids conversion of natural forests with a conditional 'unless'. The main part of the criterion is met by FSC US as it forbids the same conversion and as the FSC definitions of natural forest and plantation come close to the Dutch definitions. FSC</p>	2

	<p>including wood plantations, is not permitted unless:</p> <ul style="list-style-type: none"> - the area concerned is small which means the total converted area over the years is no greater than 5% of the area of the forest management unit on benchmark date 1 January 2008; and - it clearly leads to long-term advantages for nature conservation; and - there is no damage or threat of damage to sites with a high conservation value. 	<p>includes the same conditions. Condition 2 and 3 of the Dutch criterion 7.3 are fully covered by FSC criterion 6.10. The first condition of the Dutch criterion reads "the area concerned is small which means the total converted area over the years is no greater than 5% of the area of the forest management unit on benchmark date 1 January 2008". FSC US requires in criterion 6.10 that "the conversion entails a very limited portion of the forest management unit", with very "limited portion" being defined in the FSC USA standard as "less than 2% of the certified forest area on the FMU over a rolling five-year period. Lands that are converted for forest management purposes (e.g. roads, landings, management buildings) are not included in calculations of this limit". The only two differences are therefore that (i) the Dutch criterion mentions a benchmark date of 1 January 2008 where FSC US does not, and (ii) in the long term there is a chance that the converted area which is under FSC US certification surpasses the 5% limit of the Dutch criterion. The commission concludes that the risk that this will happen is fairly small, as this would require a period of at least 13 years with frequent conversions that over a rolling 5 year period come close to 2%.</p> <p>As a result the commission concludes that Dutch criterion 7.3 is largely addressed by FSC US through FSC criterion 6.10 from FSC-STD-USA-1.1-2008 plus the FSC US definition of "very limited portion".</p>	
7.4	<p>In the case of wood plantations, there is a preference for native species, and a relevant percentage of the plantation must be able to revert to natural forest at a later stage.</p>	<p>The Dutch criterion 7.4 consists of two parts.</p> <p><u>(1) Preference for native species:</u> FSC US criterion 10.4 stipulates that native species are preferred over exotic species in the establishment of plantations and the restoration of degraded ecosystems. Exotic species, which shall be used only when their performance is greater than that of native species, shall be carefully monitored to detect unusual mortality, disease, or insect outbreaks and adverse ecological impacts". Indicator 6.3.e stipulates that "Native species suited to the site are normally selected for regeneration". The commission therefore concludes that FSC US fully covers this first part of the criterion.</p> <p><u>(2) A relevant percentage of the plantation must be able to revert to natural forest:</u> FSC US criterion 10.5 stipulates that a proportion of the overall forest management area, appropriate to the scale of the plantation and to be determined in regional standards, shall be managed so as to restore the site to a natural forest cover. Indicator 10.5.f sets a minimum percentage for this, with the minimum percentage depending on the size of the FMU. Other indicators under criterion 10.5 set further requirements on how the areas to be restored to natural conditions are chosen. The commission concludes that FSC US fully covers this part of the criterion.</p> <p>As a result, the commission concludes that Dutch sustainability criterion 7.4 is fully addressed by FSC US.</p>	3
7.5	<p>Exploitation of non-timber forest products, including products from hunting and fishing, is regulated, monitored and controlled, among others to safeguard the maintenance of the biodiversity in the forests.</p>	<p>Criterion 5.6 from FSC-STD-USA-1.1-2008 stipulates that the rate of harvest of forest products shall not exceed levels which can be permanently sustained. The indicators under this criterion demonstrate that this is a requirement for forests wood products and for NTFP's; indicator 5.6.d. stipulates that, even if NTFP's are not harvested in significant commercial operations or traditional or customary use rights are not impacted, the forest owner or manager is required to set harvesting levels that will not result in a depletion of the non-timber growing stocks or in other adverse effects to the forest ecosystem. Another FSC US indicator (8.2.b.) requires the forest owner or manager to maintain records of harvested timber and NTFP's, and hence the commission concludes that under FSC US the exploitation of NTFP's is monitored and controlled with the intention to avoid adverse effects to the forest ecosystem. The commission therefore concludes that Dutch sustainability criterion 7.5 is fully addressed by FSC US.</p>	3

Principle 8: The regulating effect and the quality, health and vitality of the forest are maintained and where possible enhanced		
Sustainability criterion from the Dutch "regeling conformiteitsbeoordeling vaste biomassa voor energiedoeleinden"	ADBE judgement on whether FSC US (claim FSC 100%) complies with the sustainability criteria	Score
8.1 The soil quality of the forest management unit is maintained and if necessary improved, with special attention to coasts, river banks, erosion-sensitive areas and sloping landscapes.	<p>Dutch criterion 8.1 contains two parts:</p> <ol style="list-style-type: none"> <u>The soil quality of the FMU is maintained and if necessary improved ...</u> FSC-STD-USA-1.1-2018 includes requirements on minimizing soil compaction, rutting and erosion and on using (whenever feasible) techniques and equipment that minimize impacts to vegetation, soil, and water (indicator 5.3.b). Moreover, FSC US indicator 6.5.c stipulates that management activities including site preparation, harvest prescriptions, techniques, timing, and equipment are selected and used to protect soil and water resources and to avoid erosion, landslides, and significant soil disturbance, and gives actions to do so. FSC US does not include a requirement to improve soil quality (if necessary). The commission therefore concludes that FSC US largely covers the first part of the criterion. <u>.. with special attention to coasts, river banks, erosion-sensitive areas and sloping landscapes</u> FSC gives special attention to erosion-sensitive areas and sloping landscapes in indicator 6.5.c and to river banks in indicator 6.5.e.1. Coastal areas are not mentioned under FSC. The commission concludes that FSC covers this part of the criterion. <p>The commission concludes that Dutch criterion 8.1 is largely addressed by FSC US.</p>	2
8.2 The water balance and quality of both groundwater and surface water in the forest management unit and downstream outside the forest management unit are at least maintained and where necessary improved.	<p>Criterion 6.5 in FSC-STD-USA-1.1-2018 stipulates that written guidelines shall be prepared and implemented to (amongst others) protect water resources. Indicator 6.5.e.1 stipulates that the forest owner or manager implements written Streamside Management Zone (SMZ) buffer management guidelines that are adequate for preventing environmental impact, and include protecting and restoring water quality, hydrologic conditions in rivers and stream corridors, wetlands, vernal pools, seeps and springs, lake and pond shorelines, and other hydrologically sensitive areas. The guidelines include vegetative buffer widths and protection measures that are acceptable within those buffers. Moreover, FSC US requires (indicators 6.5.f and 6.5.h) that unavoidable crossings of stream and wetland are located and constructed to minimise impacts on water quality and hydrology, and that grazing by domesticated animals is controlled to protect in-stream habitats and water quality (amongst others). As a result, the commission concludes that FSC US includes measures to maintain the water balance and quality of both groundwater and surface water in the FMU. FSC-STD-USA-1.1-2018 includes requirements to maintain water quantity and quality outside the FMU through the requirements on High Conservation Values (in particular on HCV4) in principle 9 plus underlying criteria and in Appendix F. As a result the commission concludes that Dutch criterion 8.2 is fully addressed by FSC US.</p>	3
8.3 Important ecological cycles present in the forest management unit are preserved, including carbon and nutrient cycles.	<p>FSC US contains a principle on environmental impact (principle 6 in FSC-STD-USA-1.1-2018). Criterion 6.3 stipulates that ecological functions and values shall be maintained intact, enhanced, or restored, including ..[..]. natural cycles that affect the productivity of the forest ecosystem. In FSC-STD-USA-1.1-2018, natural cycles are defined as "nutrient and mineral cycling as a result of interactions between soils, water, plants, and animals in forest environments that affect the ecological productivity of a given site". "Carbon storage and sequestration" is part of forest services and resources that serve public values and that are to be maintained and/or enhanced (FSC US indicator 5.5.a). As a result, the commission concludes that FSC US fully addressed Dutch sustainability criterion 8.3.</p>	3
8.4 Unnecessary damage to ecosystems is prevented by applying <i>reduced impact logging</i> and the most	<p>The Dutch criterion consists of two parts:</p> <ol style="list-style-type: none"> <u>Reduced impact logging</u>: FSC-STD-USA-1.1-2018 criterion 6.5 stipulates that written guidelines shall be prepared and implemented to: control erosion; minimize forest damage during harvesting, ..[..]. Indicator 	3

	<p>suitable road construction methods and techniques for local conditions.</p>	<p>5.3.b stipulates that harvest practices are managed to protect residual trees and other forest resources, including soil compaction, rutting and erosion are minimized; residual trees are not significantly damaged to the extent that health, growth, or values are noticeably affected; damage to NTFPs is minimized during management activities; and techniques and equipment that minimize impacts to vegetation, soil, and water are used whenever feasible.</p> <p>The Dutch definition on Reduced Impact Logging is “harvesting techniques and methods that have been developed to prevent unnecessary damage to the forest, the environment and the harvested wood while at the same time promoting safe working conditions”. As a result, the commission concludes that the first part on reduced impact logging is fully covered by FSC US.</p> <p>2. <u>Road construction:</u> The second part on road construction is covered by FSC US criterion 6.5 and indicator 6.5.d from FSC-STD-USA-1.1-2018.</p> <p>The commission concludes that Dutch criterion 8.4 is fully addressed by FSC US.</p>	
8.5	<p>If fires are used to achieve forest management objectives, such as regeneration of specific tree species, then adequate control measures have been taken.</p>	<p>FSC-STD-USA-1.1-2018 indicator 10.7.b stipulates that a strategy is in place to control fire damage. It also stipulates that, where applicable, prescribed burns are conducted according to Best Management Practices (BMPs) and with adequate planning, equipment, training and weather conditions to maintain control of the burn within the burn plan area. As a result, the commission concludes that FSC US fully addresses Dutch sustainability criterion 8.5.</p>	3
8.6	<p>The forest management measures are designed to prevent and control diseases and pests where these form a threat to natural capital.</p>	<p>FSC-STD-USA-1.1-2018 criterion 6.6 is on promoting environmentally friendly non-chemical methods of pest management, and FSC-STD-USA-1.1-2018 criterion 10.7 stipulates that measures shall be taken to prevent and minimize outbreaks of pests, diseases, fire and invasive plant introductions. The criterion includes further requirements on integrated pest management and on plantation management. The Dutch criterion applies to plantations and to natural forests, the FSC US criteria and indicators under principle 10 apply only to plantations. Although the prevention and control of diseases and pests is more important in plantations as compared to in natural forest, the prevention and control in natural forests is also covered by the Dutch criterion and might be relevant in some cases. As a result, the commission concludes that FSC US largely addresses Dutch sustainability criterion 8.6.</p>	2
8.7	<p>The use of chemicals is only permitted if ecological processes and the optimal deployment of sustainable alternatives prove insufficient. Pesticides classified as Type 1A and 1B by the World Health Organisation and chlorinated hydrocarbons are not permitted.</p>	<p>The Dutch criterion consists of 2 parts:</p> <p>1. <u>Alternatives to chemical pesticides</u> Criterion 6.6 from FSC-STD-USA-1.1-2018 stipulates that the management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. Indicator 6.6.b (and the equivalent indicator for family forests) from FSC-STD-USA-1.1-2018 stipulates that chemical pesticides can only be used if “non-chemical management practices are: a) not available; b) prohibitively expensive ..[.].”; c) the only effective means for controlling invasive and exotic species; or d) result in less environmental damage than non-chemical alternatives ..[.].”. (e.g., top soil disturbance, loss of soil litter and down wood debris). As a result the commission concludes that the first part of Dutch criterion 8.6 on alternatives for chemical pesticides is fully covered by FSC US.</p> <p>2. <u>Pesticides classified as Type 1A and 1B by the WHO and chlorinated hydrocarbons are not permitted</u> The second part is on pesticides classified as Type 1A and 1B by WHO and on chlorinated hydrocarbons. Criterion 6.6 from FSC-STD-USA-1.1-2018 includes a prohibition to use such pesticides. However, the FSC Pesticide policy also applies to FSC US certified companies causing that under specific conditions as defined in the FSC pesticide policy, these pesticides can be used. FSC is in the middle of a transition period from the old pesticide policy to a new pesticide policy. Parts of the old policy (e.g. the derogations) are still effective, whereas also the new policy is effective since August 1, 2019. The commission will assess both policies.</p>	2

		<p>a. <u>"Old" FSC Pesticides Policy (FSC-POL-30-001 (2005))</u> In the 2005 version of the FSC pesticides policy, exclusion of chlorinated hydrocarbons and of WHO Type 1A and 1B pesticides is covered under FSC-STD-30-001 V1-0 EN indicators and thresholds for the identification of 'highly hazardous' pesticides' (HHP) and under FSC-STD-30-001a EN "FSC List of highly hazardous pesticides". The use of these pesticides is prohibited in FSC certified forests and plantations unless a temporary derogation for their use has previously been approved for this certificate holder by the FSC Pesticides Committee. Derogations (around 50 both in September 2017 and in May 2019) shall normally be applicable for a five-year period. Since the new version 3-0 of the FSC Pesticides Policy became effective on August 1, 2019, the FSC-PRO-30-001 V1-0 EN Pesticides Derogation Procedure is phased out and no new derogations applications will be processed. The commission has taken into account that worldwide and also in the US a limited number of WHO Type 1A and 1B and chlorinated hydrocarbon pesticides are being used by FSC certified companies through derogations. In an earlier assessment on FSC International (P&C V5) including the old pesticide policy, the commission therefore concluded that sustainability criterion 8.7 was largely addressed. As a result, the commission now also concludes that the second part of the Dutch criterion is largely covered by the old FSC pesticides policy.</p> <p>b. <u>"New" FSC Pesticides policy (FSC-POL-30-001 (V3-0, 2019))</u> Under the new FSC pesticides policy, the use of derogations is phased out. The list of highly hazardous pesticides (HHPs) has been updated to become more detailed: it now subdivides HHP's into prohibited, highly restricted and restricted HHPs. All three types of HHPs contain WHO Type 1A and 1B as well as chlorinated pesticides. The derogation procedure has been replaced by a procedure in which overall environmental and social risk assessments (ESRAs) have a central role. Based on these risk assessments, Standard Development Groups or Certification Bodies (CBs) decide whether or not the HHP may be used. The commission has studied the new FSC policy and noted that the policy puts a strong focus on finding alternatives for the use of HHP's by focussing on the lowest risk option to control a pest, weed or disease. The commission concluded that the use of HHPs is expected not to increase under the new policy. However, the policy offers no certainty that a rise in the use of HHP's can be completely avoided. There is a small risk that the use of WHO Type 1A and 1B and chlorinated pesticides in FSC certified forests in the US will increase under the new FSC pesticides policy. As a result, the commission concludes that the second part of the Dutch criterion is largely covered by the new FSC pesticides policy.</p> <p>Overall, the commission concludes that Dutch sustainability criterion 8.7 is largely addressed by FSC US.</p>	3
8.8	The accumulation of inorganic waste and litter is prevented or such waste and litter is collected, stored in approved areas and disposed of responsibly.	Dutch sustainability criterion 9.1 consists of two parts of which at least one needs to be complied with. Criterion 6.7 from FSC-STD-USA-1.1-2018 stipulates that chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off-site locations. As the commission considers collection and storage to be integral part of the disposal process, the commission concludes that Dutch sustainability criterion 8.8 is fully addressed by FSC US.	3

Principle 9: The production capacity for wood products and relevant non-timber forest products is maintained in order to safeguard the future of the forests		
Sustainability criterion from the Dutch "regeling conformiteitsbeoordeling vaste biomassa voor energiedoelinden"	ADBE judgement on whether FSC US (claim FSC 100%) complies with the sustainability criteria	Score
9.1 The production capacity of all forest types represented in the forest management unit is maintained.	Criterion 5.6 from FSC-STD-USA-V1.1-2018 stipulates that the rate of harvest of forest products shall not exceed levels which can be permanently sustained. FSC US indicators under this criterion include more detailed requirements on the calculation of sustained yield harvest level and on how actual harvest levels relate to	3

		sustained harvest levels. This is in line with maintaining forest productivity as required by the Dutch criterion. The commission concludes that FSC US fully addresses Dutch sustainability criterion 9.1 based on criterion 5.6 from FSC-STD-USA-V1.1-2018 plus underlying indicators.	
9.2	The forest management unit is sufficiently protected against all forms of illegal exploitation of timber and non-timber forest products, including hunting and fishing, illegal establishment of settlements, illegal land use, illegally initiated fires and any other illegal activities.	The commission does not take into account FSC US criterion 1.5 as it contains the word "should" which to the understanding of the commission expresses a recommendation, not a requirement (see also the ISO document " How to write standards ", page 4). This would be different if the word 'should' was replaced by 'shall' or 'must'. FSC US requires, in indicator 1.5.a of FSC-STD-USA-1-1-2018, that the forest owner or manager supports or implements measures intended to prevent illegal and unauthorized activities on the FMU. Moreover, FSC US requires through indicator 1.5.b that the forest owner or management implements actions in case illegal or unauthorized activities occur. FSC US criterion 6.2 stipulates that inappropriate hunting, fishing, trapping and collection shall be controlled and that safeguards shall exist which protect rare, threatened and endangered species and their habitats. As a result, the commission concludes that Dutch criterion 9.2 is fully addressed by FSC US.	3

Principle 10: Sustainable forest management is achieved through a management system			
	Sustainability criterion from the Dutch "regeling conformiteitsbeoordeling vaste biomassa voor energiedoelinden"	ADBE judgement on whether FSC US (claim FSC 100%) complies with the sustainability criteria	Score
10.1	The forest management system is designed to achieve the objectives of a forest management plan and covers the inventory, analysis, planning, implementation, monitoring, evaluation and adjustment cycle.	FSC US contains detailed requirements on management planning including requirements on setting and achieving objectives, inventory, analysis, planning, implementation, monitoring, evaluation and adjustment. These elements are addressed in FSC-STD-USA-1.1-2018 in the criteria and indicators under principles 7 and 8, and also apply (in adapted wording) to family forests. As a result, the commission concludes that FSC US fully addresses Dutch sustainability criterion 10.1.	3
10.2	A forest management plan is drawn up that at least includes: <ul style="list-style-type: none"> - a description of the current condition of the forest management unit; - long term goals for the ecological functions of the forest management unit; - the annual allowable cut per forest type and, if applicable, the annual allowable harvest of non-timber forest products based on reliable and current data; - budget planning for the implementation of the forest management plan. 	The Dutch criterion 10.2 requires that the management plan includes 4 aspects. The commission concludes from FSC-STD-USA-1.1-2018 criteria 7.1 plus underlying indicators that the first three aspects of the Dutch criterion are addressed by FSC US. However, FSC US does not explicitly require the forest management plan to include a budget planning, which is the fourth aspect required by the Dutch criterion. As a result, the commission concludes that Dutch sustainability criterion 10.2 is partly addressed by FSC US.	1
10.3	Essential elements for the management of the forest are indicated on maps.	FSC-STD-USA-1.1-2018 criterion 7.1 stipulates that the management plan and supporting documents shall provide "[...] maps describing the forest resource base including protected areas, planned management activities and land ownership. As a result, the commission concludes that FSC US fully addresses Dutch sustainability criterion 10.3.	3
10.4	The implementation of the forest management plan is periodically monitored and the ecological effect of the forest management is evaluated.	FSC US criterion 8.4 stipulates that the results of monitoring shall be incorporated into the implementation and revision of the management plan. FSC US further requires, through criterion 7.2 and indicator 7.2.a in FSC-STD-USA-1.1-2018, that the management plan shall be periodically revised to incorporate the results of monitoring which includes (indicator 7.2.a) responding to changing environmental, social and economic circumstances.	3

		Moreover a full revision occurs at a minimum every 10 years (indicator 7.2.a). The commission therefore concludes that FSC US fully addresses Dutch sustainability criterion 10.4.	
10.5	The forest management is implemented by professional office and field staff, whose expertise and knowledge is maintained by means of an effective and regular training programme.	FSC-STD-USA-1.1-2018 criterion 7.3 stipulates that forest workers shall receive adequate training and supervision to ensure proper implementation of the management plan. This is further detailed in indicator 7.3.a. As a result, the commission concludes that FSC US fully addresses Dutch sustainability criterion 10.5.	3

Principle 11: Forest management by a group or regional association offers sufficient safeguards for sustainable forest management															
Sustainability criterion from the Dutch "regeling conformiteitsbeoordeling vaste biomassa voor energiedoeleinden"		ADBE judgement on whether FSC US (claim FSC 100%) complies with the sustainability criteria	Score												
11.1	A group or regional association is lead and supervised by an independent legal entity.	The Dutch legal sustainability criterion 11.1 requires that a group shall be lead and supervised by an independent legal entity. In the group criteria of FSC it is stipulated that the group entity is an independent legal entity, or is an individual acting as a legal entity. Therefore, the commission concludes that Dutch criterion 11.1 is fully addressed by FSC.	3												
11.2	A group or regional association meets the requirements of sustainable forest management (requirements 6.1 through 10.5). The separate forest management activities of the individual members of the group or regional association shall also meet these requirements if applicable for the management of the forest concerned.	<p>Dutch sustainability criterion 11.2 consists of 2 parts. The first part ("a group or regional association meets the SFM requirement) is covered by criterion 2.2 of FSC-STD-30-005 (V1-1). The second part of the criterion ("individual group members meet the requirements of SFM") is covered by criterion 3.4 of FSC-STD-30-005 (V1-1).</p> <p>Therefore the commission concludes that Dutch criterion 11.2 is fully addressed by FSC.</p> <p>Additional note. The commission also checks whether the scheme does include an appropriate sample rate (for auditing by external certification bodies) as (1) the Dutch legal criteria do not set requirements on sampling rate but (2) the ADBE will not advice to approve a certification scheme for criterion 11.2 in case the sample rate is very low.</p> <p>FSC includes the following sampling rate (FSC-STD-20-007 (V3-0) EN, Annex I), which according to the commission is an appropriate sampling rate:</p> <p style="text-align: center;">2 Sampling process for large and medium size FMUs</p> <p style="text-align: center;">Table 1 Number of FMUs to be evaluated (x) within each set of 'like' FMUs</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Size class</th> <th>Main evaluation</th> <th>Surveillance eval.</th> <th>Re-evaluation</th> </tr> </thead> <tbody> <tr> <td>> 10,000 ha</td> <td>X= y</td> <td>X= 0.8 * y</td> <td>X= 0.8 * y</td> </tr> <tr> <td>> 1,000 – 10,000 ha</td> <td>X= 0.3 * y</td> <td>X= 0.2 * y</td> <td>X= 0.2 * y</td> </tr> </tbody> </table> <p style="text-align: center; font-size: small;">NOTE: the number of units calculated (x) has to be rounded to the upper whole number to determine the number of units to be sampled</p>	Size class	Main evaluation	Surveillance eval.	Re-evaluation	> 10,000 ha	X= y	X= 0.8 * y	X= 0.8 * y	> 1,000 – 10,000 ha	X= 0.3 * y	X= 0.2 * y	X= 0.2 * y	3
Size class	Main evaluation	Surveillance eval.	Re-evaluation												
> 10,000 ha	X= y	X= 0.8 * y	X= 0.8 * y												
> 1,000 – 10,000 ha	X= 0.3 * y	X= 0.2 * y	X= 0.2 * y												

		<p>3 Sampling process for small size FMUs</p> <p>Table 2</p> <table border="1"> <thead> <tr> <th>Size class</th> <th>Main evaluation</th> <th>Surveillance eval.</th> <th>Re-evaluation</th> </tr> </thead> <tbody> <tr> <td>100 -1,000 ha</td> <td>$X = 0.8 * \sqrt{y}$</td> <td>$X = 0.6 * \sqrt{y}$</td> <td>$X = 0.6 * \sqrt{y}$</td> </tr> <tr> <td>< 100¹ ha</td> <td>$X = 0.6 * \sqrt{y}$</td> <td>$X = 0.3 * \sqrt{y}$</td> <td>$X = 0.3 * \sqrt{y}$</td> </tr> </tbody> </table> <p>NOTE: the number of units calculated (x) has to be rounded to the upper whole number to determine the number of units to be sampled</p>			Size class	Main evaluation	Surveillance eval.	Re-evaluation	100 -1,000 ha	$X = 0.8 * \sqrt{y}$	$X = 0.6 * \sqrt{y}$	$X = 0.6 * \sqrt{y}$	< 100 ¹ ha	$X = 0.6 * \sqrt{y}$	$X = 0.3 * \sqrt{y}$	$X = 0.3 * \sqrt{y}$
Size class	Main evaluation	Surveillance eval.	Re-evaluation													
100 -1,000 ha	$X = 0.8 * \sqrt{y}$	$X = 0.6 * \sqrt{y}$	$X = 0.6 * \sqrt{y}$													
< 100 ¹ ha	$X = 0.6 * \sqrt{y}$	$X = 0.3 * \sqrt{y}$	$X = 0.3 * \sqrt{y}$													

4.4 Assessment on sustainability criteria for the claim “FSC Controlled Wood”

FSC US also applied to be approved for “controlled biomass”. In its assessment for FSC International, the commission already assessed to which extent “FSC Controlled Wood” complies with the Dutch sustainability criteria that need to be covered for Dutch controlled biomass. A public summary of this analysis can be read in paragraph 4.4 of the FSC International public assessment report (2018-10).

The commission has added a further clarification to this earlier advice, see paragraph 3.5.

5 Documents used for the assessment of certification scheme FSC International

5.1 Documents submitted by the scheme manager as part of the request for approval

1. [FSC-STD-USA-1.1-2018](#) FSC Forest Stewardship Standard for the United States of America
2. [FSC-STD-01-002](#) FSC Glossary of Terms (October 2017)
3. [FSC-STD-20-001 \(V4-0\) EN](#) General Requirements for FSC Accredited Certification Bodies
4. [FSC-STD-30-001 \(V1-0\) EN](#) Indicators and Thresholds for the Identification of 'Highly Hazardous' Pesticides (HHP)
5. [FSC-STD-30-005 \(V1-1\) EN](#) FSC Standard for Group Entities in Forest Management Groups
6. [FSC-POL-01-004 \(V2-0\) EN](#) Policy for Association of Organizations with FSC
7. [FSC-POL-30-001 \(V3-0\) EN](#) FSC Pesticides Policy
8. [FSC-POL-30-001A EN](#) FSC List of 'Highly Hazardous' Pesticides (May 2019)
9. [FSC-PRO-01-001 \(V3-1\) EN](#) The Development and Revision of FSC Normative Documents
10. [FSC-PRO-01-005 \(V3-0\) EN](#) Processing Appeals
11. [FSC-PRO-01-008 \(V2-0\) EN](#) Processing Complaints in FSC Certification Scheme
12. [FSC-PRO-01-009 \(V3-0\) EN](#) Processing Policy for Association Complaints in the FSC® Certification Scheme
13. ILO Code of Practice on Safety and Health in Forestry Work

5.2 Additional documents used in the assessment

14. FSC-STD-01-001 V4-0 EN_FSC Principles and Criteria
15. FSC-STD-01-001 V5-2 EN FSC Principles and Criteria
16. FSC-STD-20-007 (V3-0) EN Forest management evaluations
17. FSC-STD-30-001A (2017) FSC List of 'Highly hazardous' pesticides
18. FSC-STD-40-005 (V3-1) FSC Requirements for Sourcing FSC Controlled Wood
19. FSC-STD-60-006 V1-2 EN Development National Forest Stewardship Standards
20. FSC-POL-30-001 (2005) FSC Pesticides Policy
21. FSC-PRO-30-001 V1-0 EN Pesticide Derogation Procedure
22. FSC-PRO-30-001a EN List of approved derogations for use of HHP
23. Persson, T., Egnell, G., Lithell, C. (editors) 2017. [Stump harvesting - impact on climate and environment](#). IEA Bioenergy Task43 TR2017:02
24. The IUCN Red List of Threatened Species, available at <https://www.iucnredlist.org> (accessed between 4 and 12 July, 2019).
25. The tool "NatureServe explorer", available at <http://explorer.natureserve.org/> (accessed between 4 and 12 July, 2019).
26. List of federally protected species, available at <https://www.fws.gov/endangered/species/us-species.htm> (accessed between 4 and 12 July, 2019).
27. State lists of protected and endangered species. The commission has – as part of its assessment – consulted the lists from [California](#), [Connecticut](#), [Delaware](#), [Florida](#), [Maine](#), [Maryland](#), [Massachusetts](#), [Nevada](#), [Oregon](#), [Tennessee](#), [Texas](#) and [Virginia](#) between 4 and 12 July, 2019.
28. State Natural Heritage programs, such as the [species list of the Florida National Areas Inventory](#) and the [Tennessee Natural Heritage Program Rare Animals List](#) consulted between 4 and 12 July, 2019.
29. ISO document "[How to write standards](#)".

Annex A – Biomass categories and the CoC system

The sustainability and management criteria in paragraphs 4.2 and 4.3 are a translation from the criteria in Annexes B and C of the Dutch regulation on conformity assessment of solid biomass for energy production. In Annex D of this regulation two tables show which requirements apply to the five categories and the set-up of the chain of custody. In the explanatory notes to the legislation a table can be found with additional guidance to the requirements.

Biomass categories and the chain of custody system

There are five biomass categories for which the sustainability requirements apply. Table 1 lists for each category which sustainability requirements apply:

Table 1. Biomass category's with the applicable sustainability requirements

Category	Sustainability requirements	Greenhouse gas emission	Soil management	Carbon and land use change	Sustainable forest management	Chain of custody
1. Woody biomass from forest management units		1.1		3.1-3.3, 4.1-4.3, 5.1	6.1-6.3, 7.1-7.5, 8.1-8.8, 9.1-9.2, 10.1-10.5, 11.1-11.2	12.1-12.6, 13.1-13.3
2. Woody biomass from forest management units less than 500 ha		1.1		3.1-3.3, 4.1-4.3	6.1-6.3, 7.1-7.5, 8.1-8.8, 9.1-9.2, 10.1-10.5, 11.1-11.2	12.1-12.6, 13.1-13.3
3. Residues from nature and landscape management		1.1	2.1			12.1-12.6, 13.1-13.3
4. Agricultural residues		1.1	2.1			12.1-12.6, 13.1-13.3
5. Biogenic residues and waste		1.1				12.1-12.6, 13.1-13.3

The source of the five categories and controlled biomass has to be known for each consignment. The conformity assessment by a conformity assessment body starts at the first link of the chain of custody. In Table 2 for each category the source of the material and the first link of the chain of custody are listed.

Table 2. Distinction between the source and the first link in the chain of custody per biomass category

Category	Source	First link chain of custody
1. Woody biomass from forest management units	Forest management unit	Forest management unit
2. Woody biomass from forest management units less than 500 ha	Forest management unit or predefined supply base of which the forest management unit <500 ha forms a part	Forest management unit or biomass producer
3. Residues from nature and landscape management	Predefined supply base	First collection point
4. Agricultural residues	Predefined supply base	First collection point
5. Biogenic residues and waste	Company that generates the residues or waste	First collection point

As part of the SDE+ subsidy scheme a temporary exemption applies for category 2 biomass regarding the first link of the chain of custody. For this category either the forest management unit or the biomass producer can be the first link. In case the biomass producer is the first link a risk based approach is used to demonstrate compliance with the sustainable forest management requirements.

Annex B – Abbreviations

ADBE	Advisory commission Sustainability Biomass for Energy applications
BMPs	Best Management Practices
c.o.	covered otherwise
CAB	Conformity Assessment Body
CB	Certification Body
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CoC	Chain-of-Custody
EU	European Union
EZK	“Ministry of EZK” is the Dutch Minister of Economic Affairs and Climate Policy
FF	Family Forest
FMU	Forest Management Unit
FSC	Forest Stewardship Council
GHG	GreenHouse Gas
HCV	High Conservation Value
HHP	Highly Hazardous Pesticides
ILO	International Labour Organization
ILUC	Indirect Land Use Change
ISO	International Standardization Organization
IUCN	International Union for the Conservation of Nature
NFSS	National Forestry Stewardship Standard
NTFPs	Non-Timber Forest Products
P&C V4	Principles and Criteria version 4
P&C V5	Principles and Criteria version 5
SDE+	A Dutch subsidy scheme (feed-in tariff) for production of renewable energy
SFM	Sustainable Forest Management
SLIMF	Small and Low Intensity Managed Forests
SMZ	Streamside Management Zone
US	United States (of America)
WHO	World Health Organisation