



NEPCon OU trading as Preferred by Nature
Ondrej Tarabus

Subject

Assessment recertification
Graanul carried out by Nepcon
SBP ID2E

Date

06 MEI 2022

Your letter

Reference

Your reference
2022/9166

Attachment(s)

NEa assessment recertification
Graanul by Nepcon

Copy



Dear mister Tarabus,

Please find the outcome of the assessment performed by the Nederlandse Emissieautoriteit ("NEa") of the NEPCon OU ("Nepcon") recertification activities of Graanul Imavere factory and Osula Graanul ("Graanul"). The assessment is based on article 19 of the "Besluit conformiteitsbeoordeling vaste biomassa voor energietoepassingen".

The assessment has the aim to assess if Nepcon has performed its certification activities as it should have performed¹. The assessment focusses on the recertification of Graanul with date of decision 23 February 2022.

Conclusion

Based on the work performed by NEa which includes, among others, the questions answered by ASI, Nepcon and Graanul and assessment of documentation and verification of the gate software, it can be concluded that Nepcon has performed its certification procedures for SBP ID2E for certification holder Graanul according to the appropriate standards.

There are two findings for improvements:

- 1) make explicit check on FMUs being smaller than 500 hectare in checklist of SBP ID2E and make a good reference between a non conformity and the finding in the checklist (refer to report);
- 2) Include official reports instead of preliminary reports (refer to report).

However please note that an important element of the certification activities is the stakeholder analyses. The assessment of this element is still outstanding and may impact the overall conclusion.

¹ In compliance to SBP standard documents as approved by the Dutch Minister of Economic Affairs



Nederlandse Emissieautoriteit
Dutch Emissions Authority

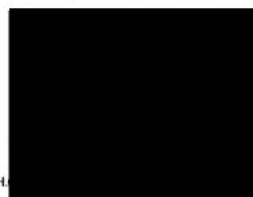
Further information

We hope to have informed you sufficiently. We appreciate to receive your feedback to this report ultimately 13 May 2022.

Yours sincerely,

On behalf of the Nederlandse Emissieautoriteit,

H.C.J. Geritz MPA
Head of the department of Energy for Transport



Datum:
2022.05.05
20:13:26
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Certification of Graanul carried out by Nepcon

Objective

The objective of this investigation is to assess if NEPCon OÜ trading as Preferred by Nature (Nepcon) has performed its certification procedures for SBP ID2E for certification holder Graanul Imavere factory and Osula Graanul according to the appropriate standards.

Scope

The scope relates to the work performed and conclusions drawn by Nepcon for:

- Re-assessment audit Graanul Imavere factory (SBP-01-77) certification decision 23 February 2022;
- Re-assessment audit Osula Graanul (SBP-01-79) certification decision 23 February 2022.

Standards against which the assessment is performed

The standards against which Nepcon's certifications are assessed are the following:

- Instruction Document 2E: SBP Requirements for Risk Based Approach for Biomass Category 2, v1.0, Sep '19 (sbp-cert.org) (SBP ID2E);
- SBP Framework Standard 3: Certification Systems. Requirements for Certification Bodies, v1.0, Mar '15 (sbp-cert.org);
- ISO/IEC 17065:2012;
- RVO, Verificatieprotocol duurzaamheid vaste biomassa voor energietoepassingen, jan '21: chapter 8.

Questions to be answered

- 1) Is Nepcon accredited for certification?
- 2) Are there any findings from accreditation work done which imply that Nepcon has inadequately performed its certification work?
- 3) Has Nepcon performed all work in order to certify Graanul Imavere factory and Osula Graanul for SBP ID2E?
- 4) Has Nepcon adequately assessed that Graanul has gathered sufficient information for the risk assessment and that the information is relevant?
- 5) Has Nepcon adequately performed a stakeholder analysis according to SBP Standard 3 as well as assessed the stakeholder analysis Graanul according to SBP ID2E?
 - a. assessment of representativeness of stakeholders;
 - b. assessment of relevant answers to the stakeholders being asked to reflect on;
 - c. sufficient work performed to investigate signals;
 - d. evaluation of stakeholders' input relating to the risk assessment;
 - e. transparent feedback to stakeholders analysis output.
- 6) Has Nepcon adequately performed the risk assessment taking into account all input from 4 and 5;
- 7) Has Nepcon adequately assessed that Graanul has taken the appropriate mitigation measures and are these measures tested?

Note: question 5 will be answered in a separate assessment. Also the effect of the stakeholder analysis to the risk assessment (question 6) will be included in this separate assessment.

Documents used and interviews performed:

- CB public summary reports: Re-assessment audit Osula Graanul and Graanul Imavere factory;
- CB non public part of the summary reports: Re-assessment audit Osula Graanul and Graanul Imavere factory;

- [Instruction Document 2E: SBP Requirements for Risk Based Approach for Biomass Category 2, v1.0, Sep '19 \(sbp-cert.org\);](#)
- [SBP Framework Standard 3: Certification Systems. Requirements for Certification Bodies, v1.0, Mar '15 \(sbp-cert.org\);](#)
- ISO/IEC 17065:2012;
- ASI assessment report on Nepcon's performance;
- Interviews ASI and Nepcon and questions and answers Graanul;
- Questions and answers from Environmental Inspection;
- Nepcon SBP Service Handbook version 4 May 2020;
- Graanul Invest SDE+ COC and RBA Cat 2 version updated 12 November 2021.

Overall conclusion:

Based on the work performed by NEa which includes, among others, the questions answered by ASI, Nepcon and Graanul and assessment of documentation and verification of the gate software, it can be concluded that Nepcon has performed its certification procedures for SBP ID2E for certification holder Graanul Imavere factory and Osula Graanul according to the appropriate standards.

There are two findings for improvements:

- 1) make explicit check on FMUs being smaller than 500 hectare in checklist of SBP ID2E and make a good reference between a non conformity and the finding in the checklist (refer to Ad3 below);
- 2) Include official reports instead of preliminary reports (refer to Ad4 below).

However, please note that an important element of the certification activities is the stakeholder analyses. The assessment of this element is still outstanding and may impact the overall conclusion.

Ad 1) Is Nepcon accredited for certification?

NEa verification:

Since 27 November 2017 Nepcon is accredited by ASI under code ASI-ACC-066 for SBP Standard 3 for the technical scope SBP BP and SBP SC and the geographical scope: worldwide.² The Dutch Minister of Economic Affairs has recognized Nepcon on 22 November 2018 for an indefinite period.³

The SBP scheme has been approved on 15 January 2020⁴ with the following remarks:

- It ought to be clear for the energy producer that the first entity in the sustainability chain was certified for SBP ID2E;
- The claims are to be included in the Dynamic Batch Sustainability Data (DBSD) throughout the chain.

Graanul has been certified for SBP Standards 1 to 5. The certificate type is Biomass Producer. The certificate scope includes: Supply Base Evaluation and Chain of Custody, Communication of Dynamic Batch Sustainability (DBS) Data (since December 2019), Risk Based Approach for Biomass Category 2 for NL (SBP ID2E) (as per February 2020).

² Refer to the ASI website: <https://www.asi-assurance.org/s/find-a-cab>

³ Staatscourant 2019, 3361 | Besluit tot erkenning van conformiteitsbeoordelingsinstantie NEPCON OU

⁴ Staatscourant 2020, 2389 | Besluit tot (gedeeltelijke) goedkeuring van certificatieschema "Sustainable Biomass Program" (SBP)

Answer:

Nepcon was entitled to certify Graanul as Nepcon was accredited and recognized and the scheme was approved.

Ad 2) Are there any findings from accreditation work done which imply that Nepcon has inadequately performed its certification work?

In autumn 2021 NEa has assessed the ASI accreditation outcomes for Nepcon for several assessment audits in 2019 and 2020, which resulted in no significant findings. Additionally, ASI has performed a witness audit in November 2021 on the work performed by Nepcon on the re-certification of Graanul. The objective of this witness audit was to evaluate Nepcon's implementation of audit procedures, the competence of the audit team and adequateness of audit methods, findings and conclusions. Further ASI had evaluated stakeholder comments or complaints received by ASI in relation to this operation, if applicable.

NEa verification:

NEa took note of the ASI witness report as well as interviewed ASI on the witness report.

ASI identified two minor non conformities and one opportunity for improvement. The first minor non conformity related to some documents being sent to the ASI only after it was requested during the first audit day. The second minor non conformity related to Nepcon's presentation of a major non conformity relating to the absence of pictures in the Supply Audit Report. However, it is up to the Certification Body to insert a minimum number of pictures during the audit in the audit report. Therefore, a major non conformity for Graanul did not exist at all. The opportunity for improvement related to three auditors of Nepcon doing interviews which effects the efficiency of the audit team. ASI confirmed that there were no comments or complaints received by them on Nepcon. The overall conclusion of ASI is that Nepcon's accreditation is maintained.

Furthermore ASI confirmed that they have evaluated that Nepcon investigated in a sufficient manner the comments made in the SOMO report. ASI raised no non conformities that would confirm allegations from the SOMO report.

Answer:

Nepcon complies with the accreditation requirements.

Ad 3) Has Nepcon performed all work in order to certify Graanul Imavere factory and Osula Graanul for SBP ID2E?

NEa verification:

NEa assessed the non public part of the recertification audit of Graanul Invest SA and Osula Graanul. The conclusion from the assessment of the non public part is that all requirements from SBP ID2E were included in the audit. In the last NEa assessment a comment was made that the checklist does not mention to check on FMUs smaller than 500 hectares that can only be accepted under this certification. It appears that in this audit a minor non conformity was raised that Graanul does not keep track how much private forest is over 500 hectares, as this would be very rare. So apparently Nepcon has checked this requirement, however when following the reference to the checklist there is no mentioning of this check nor the finding.

Finding (opportunity for improvement) 1): make explicit check on FMUs smaller than 500 hectare in the checklist of SBP ID2E and make a good reference between a non conformity in the results and the finding in the work done.

Answer:

Nepcon has covered all required certification steps for SBP ID2E certification according to the standards.

Ad 4) Has Nepcon adequately assessed that Graanul has gathered sufficient information for the risk assessment and that the information is relevant?

The SBP ID2E certification is based on a risk-based approach for category 2. The scope of SBP ID2E is category 2 (biomass sourced from forests smaller than 500 hectares) coming from the whole country of Estonia. Graanul has drafted a risk-based approach for Estonia updated 12 November 2021. First step in the risk-based approach is the gathering of information: documents and consultation of stakeholders. Documents include several information sources like laws, government reports and databases, NGO reports, best practice guideline manuals, expert articles and interviews. Please note that an external third party assesses the process of stakeholder consultation on behalf of NEa (see Ad 5).

Nepcon raised no non-conformities on the sufficient and relevant information gathering.

NEa verification:

For principle 4.1 ('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') NEa assessed the adequateness of documents: refer to table 1 in appendix for assessment performed. Table 1 shows a check of a requirement rated as 'low' that is relevant in the context of the SOMO report.

The documents included are assessed as sufficient and relevant. We find it important that the SOMO report and Indufor report were included as relevant documents. Furthermore, the Forest Act and Estonian forest statistics are included, as well as the LULUCF reporting 2050. This reporting is however preliminary as the official reporting date is 1 January 2023. It would have been better to include official reports from 2019 on carbon stock development Estonia (like biannual GHG projections reported by each EU Member State to the EC or the National Forestry Accounting Plan Estonia 2019).

Finding (opportunity for improvement) 2): Include official and published reports instead of preliminary reports.

Answer:

Nepcon assessed according to the standards that Graanul has gathered sufficient information for the risk assessment and that the information is relevant. We make a small remark on using official and published reports in stead of preliminary reports.

Ad 5) Has Nepcon adequately performed and assessed a stakeholder analysis?

The evaluation of this question will be separate from this assessment report.

Ad 6) Has Nepcon adequately performed the risk assessment taking into account all input from 4 and 5?

Two risk indicators were assessed as "specified" which is the same as in 2020. All others were assessed as low risk. NEa assessed requirements below that were relevant in the context of the SOMO report.

NEa verification:

For principle 8.2 ('The water balance and quality of both groundwater and surface water in the forest management unit and downstream shall be at least maintained and where necessary improved') NEa assessed if the documents led to the conclusion risk 'low': refer to table 2 in appendix for assessment performed.

According to Graanul the SOMO examples all related to maintenance harvests and were all approved by the Environmental Board.

Nepcon raised a minor non conformity on the risk assessment of this principle. *"The description is not very clear in Graanul's Risk Based Approach. There is a difference between clearcutting and cleaning the buffer zones (i.e. in order to manage the land improvement infrastructure or for removal on storm sensitive trees, fallen and damaged trees or removal on bush culture). Nepcon assessed presented examples where it seems like the clearcuts were done up to the streams. It is ok to clean the areas but not to clear cut and it is not clearly described in the RBA."*

Mitigation measure Graanul: start taking photos before and after cutting in critical cases.

NEa assessed the following documents in more detail:

- Law on Water (chapter 5 paragraph 29): *"there is a water protection zone of 10 metres from the banks of rivers, streams and large ditches where logging is not allowed unless permitted by the Estonian Environmental Board except cutting carried out in artificial recipients of land improvement systems for the performance of work to manage land improvement systems."*
- Nature Conservation Act Clear chapter 6 paragraph 37: *"Clear cutting in the limited management zone of the shore is prohibited."*
- The Environmental Board confirmed that a permit was given to do maintenance /logging activities for all the SOMO areas described. Nepcon confirmed that they assessed the permits given.
- Nepcon assessed the following : harvesting licenses, the inventory data, photos and maps. Nepcon conducted interviews with the responsible person. Nepcon concluded that cutting is allowed however according to the felling permit issued only in order to clean the area. It is not clear if sometimes there was clearcutting instead of cleaning. Nepcon (and Graanul) verified with the Environmental Inspectorate that there were no big issues on this topic. The conclusion was that it is still a low risk. This appears to be reasonable.

Answer:

Based on the documents provided and assessed it is justified that the risk assessment for principle 8.2 results in a 'low'.

For principle 4.1 ('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') NEa assessed if the documents led to the conclusion risk 'low': refer to table 1.

NEa assessed the following documents in more detail:

- Environmental agency information shows that in the last 15 years the felling volume has been smaller then the increase of growing stock. The forest development plan until 2030 is not final yet. There is a preliminary proposal that is going through an environmental impact assessment. It is not expected that the plan will be finalized and approved in 2022.

- The statistics until 2050 taken from the biannual GHG projections reported by each EU Member State to the EC5 show a stable carbon sink from forests until 2030, however a decrease of carbon sink in the period 2030 – 2050. Upon 2050 the carbon sink from forest would increase again. In all years forest remain a carbon sink. The decrease in carbon sink in the years 2030 - 2050 is, according to the Estonian government^{6 7}, due to the uneven age distribution of Estonia forests that are relatively old and mature leading inevitably to release of carbon. Older trees capture less carbon as compared to middle aged trees. An even use of wood over decades is considered a desirable ideal which implies that in managed forests more intense logging could take place. Based on this it can be argued that it is not due to ill management that carbon balances are deteriorating.

Answer:

Based on the documents provided and assessed it is justified that the risk assessment for principle 4.1 results in a 'low'. Please mind that as various opinions and research exist on forest and carbon balance, it cannot be expected that Nepcon can supply an undeniable truth in this matter.

For principle 3.1 ('Biomass is not sourced from permanently drained land that was classified as peatland 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') NEa assessed if the documents led to the conclusion risk 'low': refer to Appendix table 3.

According to Graanul the peatlands were already drained in the Soviet times and renovation of drainage systems is in line with best management practices in order to improve forest soil conditions and prevent erosion and upstream sediments. Furthermore, the carbon balance is not negatively impacted by these activities. Nepcon does not agree with Graanul about the impact on the carbon balance, however considers these areas no longer as peatlands and therefore the risk for this requirement can be assessed as low.

NEa verification:

- Peatlands that were drained in Soviet times are now being renovated. The question is whether these areas can be classified as peatlands as of today. According to Nepcon peatlands that were drained in this period are no longer considered peatlands as all peat has decayed. The forestry from former peatlands is now inventoried in the Forestry Registry database as a forest type and no longer as peatland.
- For any new drainage system an Environmental Impact assessment is required. For repairing existing ones this is not required.

Answer:

Based on the documents provided and assessed it appears to be reasonable that the risk assessment for principle 3.1 results in a 'low'. Main argument is the fact that there is a legal framework applicable for inventory and protection of peatlands and impact assessment for new drainage systems. The assessment whether former peatlands drained prior to 2008 and currently

⁵ [Member States' greenhouse gas \(GHG\) emission projections — European Environment Agency \(europa.eu\)](http://europa.eu)

⁶ Estonia's fourth biennial report under the United Nations Framework Convention on Climate Change page 5 75, 76 and National Forestry Accounting Plan 2021-2025 pages 5 and 15

⁷ ['National Forestry Accounting Plan 2021-2015 Estonia'](#)

being renovated can still be considered peatlands cannot be assessed by NEa and deserves more investigation.

Ad 7) Has Nepcon adequately assessed that Graanul has taken the appropriate mitigation measures and are these measures tested?

NEa verification

The Risk based approach resulted in the two following requirements which were rated as specified by Graanul:

1. 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 species landscape level and cultural values.
2. 10.2 A forest management plan is drawn up that at least includes: • 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.

Graanul further assessed if FSC certification, FSC controlled and PEFC certification sufficiently mitigate these specified risks. Table 4 (refer to appendix) shows to what extent these certification schemes cover the identified risks and how the mitigation measure is implemented by Graanul.

Based on the benchmarking exercise performed by Graanul and assessed by Nepcon it was concluded that FSC certified material mitigates both risks for principle 7.1 and 10.2. FSC controlled material mitigates only the risk for principle 7.1 but not for 10.2. PEFC certified material mitigates only the risk for principle 10.2 but not for 7.1.

NEa verification:

Nepcon:

Nepcon confirmed that they do a sample check on the adequateness of the gate software. Furthermore Nepcon reviewed the work done by the forest specialist (although there was no on-site visit needed during the audit period as apparently there was no issues on unclarity in mappings).

Graanul:

NEa previously already assessed that:

- the weigh bill mentions, among others: the supplier, FMU number, harvest permits, which feedstock is included and the certification. All weigh bills are stored in a database.
- the gate software checks the following databases (for category 2 SDE+, based on FMU number): official list WKH, potential list WKH, sacred grounds, natura protected areas. If there is a match with the official list WKH the supply is not accepted. If there is a match with either potential list WKH or sacred grounds or natura protected areas the supply is not accepted for SBP ID 2E but is accepted for SBP certified and FSC controlled.
- the supplied materials are categorized into various mass balances based on the supplier as well as the certification status.
- All FSC certified material is accepted as SDE+. No FSC controlled material is accepted as SBP ID2E as it appears to be not possible to obtain the FMP and thereby mitigate the risk. All

PEFC is only accepted if there is no match with potential list WKH, sacred grounds, natura protected areas.

In March/April 2022 it was confirmed by Graanul and Nepcon that:

- In case of doubts a forestry expert is assigned by Graanul to check the correct borders of the area;
- All Natura 2000 forest, even if a permit is given for management activities, is excluded for SDE+;
- Permits are no longer given to log in Natura 2000 areas;
- The database of potential WKH areas covers all of Estonia. Therefor the risk resulting from the fact that not all of Estonia is covered by the official WKH database is mitigated by the check with the potential WKH database. If an area is matching the potential WKH database the biomass is either not accepted or the area is visited by a forestry expert.

Regarding the cross trees issue mentioned in the SOMO report, Nepcon came to the conclusion that the cross trees felling mentioned were incidents. The examples were relating to cross trees not being notified to the Heritage Board / Environmental Board and therefore not included in the cross trees database. RMK as well as Graanul check the database and RMK makes site visits according to Graanul. Nepcon showed the map of cross trees. Any felling of cross trees is shown by making the cross tree grey. NEa verified that there were some grey cross trees indicated on the map, it does not seem to be widespread. It is however difficult to see the grey trees on the map. There is no registry or database of felled cross trees.

The provided evidence of how this risk is evaluated (third party certification, field visits, excluding all Natura 2000 forest, gate software checks) appears to be sufficient mitigation.

Answer:

Based on the analysis and the checks performed at Graanul it is assessed that according to the standards:

- Nepcon assessed that the BP has taken the appropriate mitigation measures (gate software and discussion with forest specialist); and
- Nepcon has tested these measures.

APPENDIX

TABLE 1:

	SDE requirement	Findings	Evidence	Risk
4.1	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.	The FMUs are split into smaller lots which are managed in a cyclical system enabling one lot to start regeneration before the next one can be harvested. Official government forest inventory most recent statistics (and last 5 year) statistics show harvesting rate is always below forest growing stock and even below growing stock of managed forests. This clearly shows the forest management routine works and retains carbon balance. Forest Act requires that the forest owner must apply the reforestation methods that ensure regeneration of the forest not later than five years. The Estonian LULUCF strategy regulates forest management activities to support carbon sequestration increase in Estonia up to 2050. "Maakasutuse, maakasutuse muutuse ja metsanduse sektori sidumisvõimekuse analüüs kuni aastani 2050" chapter 2. Therefore, the risk is considered low. This principle under Graanul Invest's SDE+ RBA has been disputed within and outside public consultation. In July Centre for Research on Multinational Corporations (SOMO) published a set of allegations in a op-ed called "Wood pellet damage". The document did not focus on Graanul Invest's procedures and mitigation measures but provided several statements about Estonian forestry and allegations about both SBP and SDE+ non-compliance at Graanul's primary supplier and sourcing area level. These are relevant to consider within this RBA. It is important to read the SOMO discussions under chapter 5 of the linked document (related to principle 4) in full but the main outtakes to this RBA are: -Cases in chapter 5 are all RMK operations. While RMK is a supplier of Graanul Invest their feedstock does not qualify as category 2 and therefore is out of the scope of this RBA and the mitigation measures. - The use of logs from peatland forests where drainage restoration works take place also violate criterion 4.1. This is because drainage causes the peat soil to release more CO₂ than the increased tree growth on top of the drained soil can compensate for. This means that carbon stock from what is formally called forest management units is not retained in the medium or long term, as the criterion explicitly requires. The practice is also in direct violation to the corresponding SBP criteria, which this type of forest management also needs to comply with. This is not in line with Estonian land management categorization and ignores the Soviet era history of the Oxalis drained peatland forestland type. These areas have stabilized over the decades meaning that a new equilibrium has been reached and the extensive release of soil carbon has stopped. In order to maintain this new balance in these already changed ecosystems the old drainage systems need to be maintained. This is equally important in state forests and private forests. Old drainage system maintenance does not cause depletion and the potential expansion of cross-section increase during maintenance works is limited for this very reason. The SOMO publication was used politically by Greenpeace in the media and with public stakeholders to influence decisions about long-term bioenergy use and to damage the public perception of Estonian forestry. Due to this the Dutch Biomass Certification Foundation (DBC) commissioned a peer review of the SOMO	Forest Act - (Metsaseadus. Vastu võetud 07.06.2006 RT I 2006, 30, 232, jõustumine 01.01.2007, osaliselt 01.07.2007) - https://www.envir.ee/et/metsas_tatistika - https://envir.ee/eluslooduslooduskaitse/metsanduse/lulucf - Wood Pellet Damage https://www.somo.nl/woodpellet-damage/ - Infudor peer review <a 2."="" chapter="" href="https://www.energienederland.nl/onderzoek-weerlegtclaim-milieubeweging-biomaassavoldoet-aan-duurzaamheidseisen/+Maakasutuse,maakasutusemuutusejameetsandusesektorisidumisvõimekuseanalüüsikuni aastani 2050">https://www.energienederland.nl/onderzoek-weerlegtclaim-milieubeweging-biomaassavoldoet-aan-duurzaamheidseisen/+Maakasutuse,maakasutusemuutusejameetsandusesektorisidumisvõimekuseanalüüsikuni aastani 2050" chapter 2. - file:///C:/Users/Kasutaja/Dowl/oads/LULUCF_uuring_veebi_02_09%20(2).pdf	LOW

		allegations to have a clear understanding of the cases from competent forestry and certification experts. The final report was published on 27. September 2021 by Indufor and is linked to this RBA as well. It provides a very detailed and clear review about how the cases in the SOMO op-ed lacked sources and evidence to conclude non-compliance and provides a balanced synthesis of all available information. The report should be read in full but in context of principle 4 the main takeaways are: - As the objective of the SOMO report was to establish the compliance of co-fired pellets in Dutch power plants with the Dutch criteria for sustainable biomass (SDE+), it is surprising that section 1.3, describing the criteria, does not mention that there are different demonstration requirement for category 1 and category 2 biomass. This RBA does not have category 1 in its scope and all cases under this chapter are RMK and therefore category 1. The whole chapter is not to improve sustainable forestry and sourcing practices but to make negative allegations, even if not actually connected with the Dutch market. -The presented cases (while irrelevant to this category 2 RBA) lack solid arguments and cannot, in the view on Indufor experts, be considered as violations of SDE+ standards, at least more empirical data is provided. The authors of the SOMO piece did not provide any data to prove the RMK practices led to water depletion or carbon release, being argued only by general observations and discussions in the NGO publications. -Drainage renovation works, especially in the peatland forests, might increase risk of carbon release if carried out in an improper way. As far as Indufor was able to check the most critical elements of the used drainage renovation procedures seem to follow the latest available silvicultural standards. -If any reconsideration of the related risk assessment is planned, it should be based on proper carbon stock/balance analysis and assessment of the impact of the drainage renovation works (if any). The boundaries of the analysis are critical. As was pointed out the drainage renovation works might release some carbon but at the same time, it can be compensated/mitigated by other aspects which also should be considered. After such an analysis, the impact of drainage renovation works may still be considered low and the risk assessment update will be not needed. After careful review of the inputs presented by SOMO, the expert peer review from Indufor and Graanul Invest supply chain investigations, nothing was discovered what could improve forest management practices immediately and what Graanul Invest could do in its mitigation measures to further reduce the risk under this principle. -The cases presented were irrelevant to category 2 biomass which is the only primary biomass related to the SDE+ context. -All findings were also presented to RMK and private forest operators but specific issues where to immediately improve on were not identified. As best available silvicultural practices are followed Graanul Invest can only make sure to use suppliers who are aware of these. Since only certified leading suppliers are used and category 2 only originates from certified forests, there is no more filtering that can be done. -The challenges presented by Indufor highlight the need to improve on high level analysis to further reduce risk and demonstrate continued low risk. These are on forest management level and even beyond Estonian level and regulated by the	
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	European Commission. Graanul will make sure to implement such assessments immediately once made available. Based on international and Estonian level conditions. -The challenges presented by Indufor highlight the need to include carbon balance criteria in future SBP standards and risk assessments. Graanul monitors standard developments closely and will implement such procedures the moment they become available. -The drainage maintenance works have a cross-section increase restriction and new systems need an EIA. The chance of risk or volume increase is extremely low. -The volumes from Oxallis drained peatland forests are not a common source of resources for the local wood and forest industry. In the context of also annual volumes in Graanul Invest these cases and this principle cannot cause overall potential risk. Therefore, the risk is considered low. This also was not a specified risk after certification benchmarking. Category 2 biomass is sourced from FM certified forests where this is also low risk.		
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TABLE 2:

	SDE requirement	Findings	Evidence	Risk
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) shall be at least maintained and where necessary improved.	The Law on Water regulates the protection and monitoring of water resources, including watercourses in forests, in Estonia. The Nature Conservation Act lists restrictions to different activities in different water protection zones. A special management regime is included in forest management plans or management documents of protected areas where forests are located in order to protect water bodies from damage, pollution, etc. All the maps of the different water protection zones are available in forest management plans. Forest cuttings are allowed depending on the management and protection regime assigned to the forest group. Using residuals to build temporary bridges over ditches and springs is allowed, but there is a requirement to clean the residuals on completing the work. In case the water body is indicated as an artificial upstream recipient fall under the Land Improvement Act § 47, § 48, § 90 which obliges the land owner to clean and maintain land improvement infrastructure elements to guarantee the working condition of the protection zone of artificial upstream recipient of the region/catchment area. These are done for the mid and long-term improvement of the watershed and connected waterbodies. Forest owners are certification systems do not get to question the large-scale land improvement plans and laws of the country. This principle under Graanul Invest's SDE+ RBA has been disputed within and outside public consultation. In July Centre for Research on Multinational Corporations (SOMO) published a set of allegations in an op-ed called "Wood pellet damage". The document did not focus on Graanul Invest's procedures and mitigation measures but provided several statements about Estonian forestry and allegations about both SBP and SDE+ non-compliance at Graanul's primary supplier and sourcing area level. These are relevant to consider within this RBA. It is important to read the SOMO discussions under chapter 4 of the linked document (related to principle 8) in full but the main outtakes for this RBA are: -Based on the Water Act of Estonia, there is a water protection zone of 10 metres from the banks of rivers, streams and large (main) ditches where logging is not allowed, unless permitted by the Estonian Environmental Board. During 2018-2019, in total 54 hectares of water protection zones, were clearcut on land belonging to three Graanul Invest forestry companies. This	Law on Water (Veeseadus. Vastu võetud • jõustumine 01.10.2019) Chapter 5 – Protecting water body from damage • Nature Conservation Act - (Looduskaitse seadus Vastu võetud 21.04.2004, RT I 2004, 38, 258, jõustumine 10.05.2004) Chapter 1 - general provisions, chapter 3 - Organisation of protection, chapter 4 - protected areas, chapter 5 – Limited conservation areas, chapter 6 - Shores and Banks • Forest management regulation (Metsa majandamise eeskiri Vastu võetud 27.12.2006 nr 88 https://media.rmk.ee/files/RMK_aastaraamat_2018_ENG_web.pdf - State Forest Management Centre (RMK) Annual Report 2018, • Land Improvement Act https://www.riigiteataja.ee/akt/MaaParS - Wood Pellet Damage	LOW

	represents 7 per cent of all water protection zones on Graanul-owned lands. The clearcut areas in water protection zones are scattered all over Estonia and are located on over 300 different sites on Graanul-owned lands. This means these practices are no exception or local error, but that trees in water protection zones are being cut down constantly across Estonia. The six cases below are examples of these clearcuts on watersheds. Graanul Invest does and has not owned land. Water protection zones are rarely clear-cut. The harvests are always for maintenance. Either as required by Land Improvement act or for removal on storm sensitive trees, fallen and damaged trees or removal on bush culture. Always and only with Environmental Board approval. The data about 54 hectares or 300 sites is not available to review. The 6 cases presented are all in full compliance and not clear-felled. - the clearcutting in the 10 metre protection zones on Graanul Invest-owned lands presented clearly are not in line with practices required in any of the four indicators and thereby violate criteria 8.1 and 8.2. -The highlighted cases are all clearcuttings in forests owned by Graanul Invest companies. This means that not only do these practices violate the Dutch biomass criteria but they also violate those of the sustainable forestry and forest product standards PEFC and SBP that the company uses to show compliance with the Dutch criteria. Graanul Invest does not have not owned land. The cases proved to be in compliance on local and PEFC, SBP, SDE+ context. The protection zones were not clear-felled. - Graanul Invest makes the misleading claim that no logging or logging-related disturbance will take place in these water protection zones. Only maintenance purpose harvests are presented. Potential disturbance is in line with local requirements and serves a greater long-term good. The water body protection zones are not harvested for SDE+ feedstock sourcing purposes. - Estonian Environmental Board from 2021 is not requiring the conservation of trees in the stream or watershed protection zone but instead recommends that the under forests and bushes be left growing near the streams to protect the waterbody and preserve the coastline compaction, nutrient balance and habitats. This will help remove the misunderstanding why waterbody protection zones are established for. The SOMO publication was used politically by Greenpeace in the media and with public stakeholders to influence decisions about long-term bioenergy use and to damage the public perception of Estonian forestry. Due to this the Dutch Biomass Certification Foundation (DBC) commissioned a peer review of the SOMO allegations to have a clear understanding of the cases from competent forestry and certification experts. The final report was published on 27. September 2021 by Indufor and is linked to this RBA as well. It provides a very detailed and clear review about how the cases in the SOMO op-ed lacked sources and evidence to conclude non-compliance and provides a balanced synthesis of all available information. The report should be read in full but in context of principle 8 the main takeaways are: -The SOMO authors have not fully grasped the applicability of local legislation and the related standards regarding forestry activities around water bodies and thus some of the stated cases cannot be considered as the direct violation of the SDE+ criteria. For example, in cases 4.3.1 and 4.3.6 (and 5.3.3), the loggings were conducted to maintain the land improvement systems, which is allowed by the local legislation and the standards in question. Case 4.3.5 falls under maintenance of the land improvement system too, although the logging may nevertheless conflict with the ecological functions of the	https://www.somo.nl/wood-pellet-damage/ - Infudor peer review https://www.energienederl.nl/onderzoek-weerlegtclaim-milieubeweging-biomassavoldoet-aan-duurzaamheidseisen	
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		natural brook (or spring) which acts as an upstream recipient of the region/catchment area. As for cases 4.3.2 and 4.3.3 and 4.3.4, the relevant authorities have allowed cuttings to remove dead, damaged, storm sensitive and fallen trees, but the operations may still have caused some environmental impacts. Taking pictures (or collecting some data samples where it is possible/reasonable) of such areas before harvests could help to avoid concerns raised in the SOMO report. After careful review of the inputs presented by SOMO, the expert peer review from Indufor and Graanul Invest supply chain investigations, nothing was discovered what could improve forest management practices immediately and what Graanul Invest could do in its mitigation measured to further reduce the risk under this principle. As per the recommendation of the Indufor report Graanul Invest communicated the need for better visual evidence to demonstrate the before and after conditions of waterbody restrictions zones if conditions maintenance is carried out. This would help prove concerns raised in the SOMO like allegations. Also, forest owners justification for the purpose of the maintenance would also be good to document. -Otherwise the level of detail about restriction compliance and good practises served an opposite effect where Graanul Invest clearly understand the need for land improvement system maintenance and encourages practises conducted by their suppliers. -The feedstock associated with waterbody restriction zone maintenance are rarely suitable for wood pellet production (rather hog fuel for CHP and boilers) and the volumes that might originate from such cases are negligible to overall feedstock volumes. The risk continues to be assessed low. Even lower after evaluating the evidence available for Graanul Invest category 2 sourcing areas. This principle was low risk on certification benchmarking level and actually did not need further mitigation.		
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TABLE 3:

	SDE requirement	Findings	Evidence	Risk
3.1	Biomass is not sourced from permanently drained land that was classified as peatland 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.	In Estonia, natural bogs and mires along with the bordering areas around them have a strict protection regime under Estonian legislation - The Forest Act and the Nature Conservation Act. Around bordering areas some forest management can be allowed, but it is usually some sanitary cutting, thinning or shelter wood felling. However, protected bordering areas are small compared to the total forest area, and the amount of timber is not existent compared to the total felling volume. Natural bogs and mires that have had historic damage done to them because of drainage or peat mining are called peatlands. These areas are divided based on the natural conditions restoration possibility. The Estonian bog/mire action plan defines the protection and restoration steps of such areas throughout Estonia. These areas are not harvested and only restoration/protection related activities are allowed. Peatlands that have been historically damaged beyond restoration and have lost their natural bog properties (peat layer, water level) do not fall under strict protection or the long-term restoration action plans. These are often in limited management zones or the land management conditions are established case by case. Peatlands that have been drained during Soviet times and have now lost natural bog properties and have afforested into a forest today are called Oxalis drained peatland forests. These do not qualify as bog or mire areas in Estonia anymore and are under forestland. The	Soode tegevuskava -2023; https://loodusveeb.ee/sites/default/files/inlinefiles/Soode%20tegevuskava%20aastateks%202016-2023%20%28kinnitatud%2018.01.2016%29.pdf https://peatlands.org/assets/uploads/2019/06/Pajula-379.pdf - STATUS AND CONSERVATION VALUE OF PEATLAND FORESTS IN ESTONIA http://www.eelis.ee/default.aspx?state=6;557252012;eng;eelisand;;&comp=objsear ch=ala – Estonian Forest Registry data base	LOW

	protection and restoration plans of Estonian bogs and mires do not extend to this habitat type but the forestland ones do. The sustainability BMPs of Oxalis drained peatland forest types require maintenance of old drainage systems to avoid killing young trees, clearing of under forests and weeds and harvests should be carried out on frozen lands etc. Once the habitat type has been verified as an Oxalis drained peatland forest the natural value of the former bog is beyond restoration and trying to flood this forest type is counterproductive in terms of carbon sequestration and biodiversity. Graanul Invest does not source any material from protected/restorable peatlands or natural bogs and mires. The historically drained Oxalis peatland forest type has been designated as a forestland type today. With specific management conditions and BMPs. This is a vital land management development and sustainability aspect to understand and recognize. Similar to agricultural land that has afforested and has been recategorized as a forestland is now being maintained with the new species mix, biodiversity and carbon conditions in mind. Additionally, majority of drainage systems in Estonia were installed throughout the Soviet era, up to the 1990s and not after 2008. Thus, the effects in areas affected by drainage should mainly be seen as a result of historic processes, rather than being subject to continuously expanding drainage. Peatlands are not being converted to an alternative, dryer ecosystem after 1 January 2008. The purpose of old soviet time drainage system repairs is to maintain the stable conditions of forest water table and soil conditions that have been unchanged for decades. Clogged drainage has devastating impacts on forest soil conditions, causes erosion and upstream sedimentation. Furthermore, since the forest drainage systems are parallel to forest roads it is vital for the drainage systems to work in order to keep the forest roads safe and accessible. Forest roads are the most important tool for fighting forest fires and the only reason why Estonian forest fires are controlled relatively quickly. The drainage systems repair work expansion limit of 10% is less than the % of volume the system has lost since it was constructed. Larger state drainage reconstruction projects have public Environmental Impact Assessments covering overall impact and HCV object level mitigation measures. State Forest has also started repairing old peatlands and by 2025 up to 3800 ha will be restored. The bogs of Estonia are probably one of the most researched wetlands in the world. Estonian bogs have been extensively mapped and the peat resources have been determined. All information about the protected areas, including peatlands, is available in the public Forest Registry database, EELIS. In Estonia there are five national parks, 138 nature conservation areas, 151 landscape protection areas, 344 special conservation areas, and 1,350 species protection sites. All of them are managed under applicable legislation (protection plan, management plan, etc) or not managed at all. The forest operations are planned and implemented following requirements specified in the Forest Management Regulation and Nature Conservation act, which clearly defines various bans to extract biomass in order to protect ecosystems. There is a very detailed public database about drainage systems and repair works which includes the year of construction, reconstruction, dimensions, impact area, maps, owner and satellite images over time https://xgis.maaamet.ee/xgis2/page/app/maaparandus. New drainage systems are only built after Environmental Impact Assessments Therefore, the risk is considered low. Keeping in	https://kasvukohatyybid.ee/mu.ee/mets/sii rdesoo • Nature Conservation Act - (Looduskaitse seadus Vastu võetud 21.04.2004, RT I 2004, 38, 258, jõustumine 10.05.2004) Chapter 1 - general provisions, chapter 3 - Organisation of protection, chapter 4 - protected areas, chapter 5 - Limited conservation areas, chapter 6 - Shores and Banks, chapter 8 - Species • Forest Act - (Metsaseadus. Vastu võetud 07.06.2006 RT I 2006, 30, 232, jõustumine 01.01.2007, osaliselt 01.07.2007) Chapter 1 - General provisions, 3 - Forest survey, chapter 4 - Forest management • Riigiteataja – Database for all Legal Acts in Estonia www.riigiteataja.ee • Forest management regulation (Metsa majandamise eeskiri Vastu võetud 27.12.2006 nr 88 RTL 2007, 2, 16, jõustumine 12.01.2007) all paragraphs □ State Forest EIAs https://www.rmk.ee/organisatsioon/keskkonnategevus/keskkonnamojuanalusi/keskkonnamojuanalusi-2009-2018 □ https://www.rmk.ee/organisatsioon/el-fondid-1/uhtekuuluvusfond/soode-seisundiparandamine □ Wood Pellet Damage https://www.somo.nl/wood-pelletdamage/ □ Infudor peer review
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	mind that the RBA extends to category 2 biomass which effectively excluded RMK primary wood from the scope. This principle under Graanul Invest's SDE+ RBA has been disputed within and outside public consultation. In July Centre for Research on Multinational Corporations (SOMO) published a set of allegations in a op-ed called "Wood pellet damage". The document did not focus on Graanul Invest's procedures and mitigation measures but provided several statements about Estonian forestry and allegations about both SBP and SDE+ non-compliance at Graanul's primary supplier and sourcing area level. These are relevant to consider within this RBA. It is important to read the SOMO discussions under chapter 5 of the linked document (related to principle 3) in full but the main outtakes to this RBA are: -Cases in chapter 5 are all RMK operations. While RMK is a supplier of Graanul Invest their feedstock does not qualify as category 2 and therefore is out of the scope of this RBA and the mitigation measures. -The mentioned cases (section 5.3 of "Wood Pellet Damage") of drainage renovation works are taking place on peatland forests that were formerly undrained bogs or wet peatland forests. As such, these permanently drained lands were classified as peatlands on 1 January 2008 as the application of criterion 3.1 requires. For the drainage works, ditches need to be renovated. In practice, this means that trees along the ditches, and the service roads accessing them, are clearcut and permanently deforested. After this logging, the drainage restoration works take place, which basically means that the ditches are being renewed and dredged. The intention, of course, is the depletion of the water level of larger areas. The last step eventually is logging in these drained peatland forests, which, as discussed, is usually done by clearcutting. All three activities drain water from previously undrained soil, which is also how it is formulated explicitly in criteria 3.1. This practice clearly excludes any wood being used as biomass under SDE+ criteria 3.1- and the corresponding criteria in SBP and FSC- and the supply of any of this wood to a SBP-certified pellet should be considered a violation of these Dutch criteria. This is not in line with Estonian land management categorization and ignores the Soviet era history of the Oxalis drained peatland forestland type. These areas have stabilized over the decades meaning that a new equilibrium has been reached and the extensive release of soil carbon has stopped. In order to maintain this new balance in these already changed ecosystems the old drainage systems need to be maintained. This is equally important in state forests and private forests. Old drainage system maintenance does not cause depletion and the potential expansion of cross-section increase during maintenance works is limited for this very reason. The SOMO publication was used politically by Greenpeace in the media and with public stakeholders to influence decisions about long-term bioenergy use and to damage the public perception of Estonian forestry. Due to this the Dutch Biomass Certification Foundation (DBC) commissioned a peer review of the SOMO allegations to have a clear understanding of the cases from competent forestry and certification experts. The final report was published on 27. September 2021 by Indufor and is linked to this RBA as well. It provides a very detailed and clear review about how the cases in the SOMO op-ed lacked sources and evidence to conclude non-compliance and provides a balanced synthesis of all available information. The report should be read in full but in context of principle 3 the main takeaways are: - As the objective of the SOMO report was to establish the compliance	https://www.energienederl.nl/onderzoek-weerlegtclaim-milieubeweging-biomassavoldoet-aan-duurzaamheidseisen/	
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		of co-fired pellets in Dutch power plants with the Dutch criteria for sustainable biomass (SDE+), it is surprising that section 1.3, describing the criteria, does not mention that there are different demonstration requirement for category 1 and category 2 biomass. This RBA does not have category 1 in its scope and all cases under this chapter are RMK and therefore category 1. The whole chapter is not to improve sustainable forestry and sourcing practices but to make negative allegations, even if not actually connected with the Dutch market. -The presented cases (while irrelevant to this category 2 RBA) lack solid arguments and cannot, in the view on Indufor experts, be considered as violations of SDE+ standards, at least more empirical data in provided. The authors of the SOMO piece did not provide any data to prove the RMK practices led to water depletion or carbon release, being argued only by general observations and discussions in the NGO publications. -Drainage renovation works, especially in the peatland forests, might increase risk of carbon release if carried out in an improper way. As far as Indufor was able to check the most critical elements of the used drainage renovation procedures seem to follow the lasts available silvicultural standards. -If any reconsideration of the related risk assessment is planned, it should be based on proper carbon stock/balance analysis and assessment of the impact of the drainage renovation works (if any). The boundaries of the analysis are critical. As was pointed out the drainage renovation works might release some carbon but at the same time, it can be compensated/mitigated by other aspects which also should be considered. After such an analysis, the impact of drainage renovation works may still be considered low and the risk assessment update will be not needed. After careful review of the inputs presented by SOMO, the expert peer review from Indufor and Graanul Invest supply chain investigations, nothing was discovered what could improve forest management practices immediately and what Graanul Invest could do in its mitigation measured to further reduce the risk under this principle. -The cases presented were irrelevant to category 2 biomass which is the only primary biomass related to the SDE+ context. -All findings were also presented to RMK and private forest operators but specific issues where to immediately improve on were not identified. As best available silvicultural practices are followed Graanul Invest can only make sure to use suppliers who are aware of these. Since only certified leading suppliers are used and category 2 only originates from certified forests, there is no more filtering that can be done. -The challenges presented by Indufor highlight the need to improve on high level analysis to further reduce risk and demonstrate continued low risk. These are on forest management level and even beyond Estonian level and regulated by the European Comission. Graanul will make sure to implement such assessments immediately once made available. Based on international and Estonian level conditions. -The challenges presented by Indufor highlight the need to include carbon balance criteria in future SBP standards and risk assessments. Graanul monitors standard developments closely and will implement such procedures the moment they become available. -The drainage maintenance works have a cross-section increase restriction and new systems need an EIA. The chance of risk or volume increase is extremely low.	
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		-The volumes from Oxallis drained peatland forests are not a common source of resources for the local wood and forest industry. In the context of also annual volumes in Graanul Invest these cases and this principle cannot cause overall potential risk. Therefore, the risk is considered low.		
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TABLE 4:

Principle	FSC certification mitigation	FSC controlled	PEFC certified	Implementation Graanul
7.1	FSC requires mitigation of Natura 2000 forest habitat types, woodland key habitats, potential woodland key habitats and natural sacred places including cross trees. The mitigation measure stabilises by Estonia FSC is to control or restrict material coming from this origin.	Same as FSC certification	Mitigation measure is not sufficient	Graanul has uploaded these checks with the respective databases into pellet plant gate software which automatically highlights any overlaps for each FMU and each load of roundwood. Every truck is checked by the gate. Graanul records the certification of all material. All PEFC certified material which overlaps with FSC Estonia HCV databases can be accepted. PEFC certified material that does not overlap with databases cannot be accepted. Effectively all suppliers have to mitigate measures under 7.1 nad are checked with the respective databases.
10.2	FSC certified material covers the principle: see also benchmarking exercise for principle 10 above	Mitigation measure is not sufficient	PEFC certified material covers the principle: see also benchmarking exercise for principle 10 above	The forest management plan (FMP) according to Estonian law exceeds the verification protocol requirements. Therefore if there is evidence of a state approved FMP in place for that FMU material can be accepted from Estonia with a FSC Controlled Wood claim. The existence of the FMP is double-checked at pellet plant level through public forest registry. If the FMU has a forest lot level distribution and inventory in the registry and the FMP effective date is less than 10 years (at time of purchase) it can be concluded with high probability that the FMP is in place.