



SWEDISH  
ENVIRONMENTAL  
PROTECTION  
AGENCY

PM  
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Ärendenummer  
NV-11038-22

## Survey on Favorable Reference Areas

The survey was carried out from 02/06/2023 to 25/06/2023

### 1. Dear members of the Reporting Group under the Nature Directives

The Swedish government has commissioned the Swedish Environmental Protection Agency (EPA) to report methods used for setting and reporting favorable reference areas (FRAs) in relation to other Member States (MS), primarily MS with similar biogeographical conditions as Sweden.

It would be of great value to us if you could take the time to fill in this survey, which focuses on grassland and forest habitats. When answering the questions, please consider all grassland habitats in the 6000 series, and also include other potentially management dependent semi-natural habitats (e.g. 1630, 4030, 5130). When it comes to forests, the questions refer to the 9000 series.

If, for any reason, you are unable to answer all the questions, we would still be grateful for any response you can give us.

If you have questions, please do not hesitate to contact Elin Forsberg at the Swedish EPA ([elin.forsberg@naturvardsverket.se](mailto:elin.forsberg@naturvardsverket.se)).

Any personal data you submit to Swedish EPA will be processed in accordance with GDPR.

We would very much appreciate your answer by 23 June 2023.

## Part I – 2019 Reporting

2. We have analyzed the EU database and compiled all data and answers that your country included in the 2019 reporting. This part of the questionnaire aims to better understand the methods and information used by your country to set FRAs in 2019.

**3. Did you report FRA in km<sup>2</sup> for any grassland habitat? Yes/No.**

Denmark: No  
Estonia: No  
Finland: No  
Germany: Yes  
Latvia: Yes  
Lithuania: No  
Sweden: No

**4. Did you report FRA in km<sup>2</sup> for any forest habitat? Yes/No.**

Denmark: No  
Estonia: No  
Finland: No  
Germany: Yes  
Latvia: Yes  
Lithuania: No  
Sweden: Yes

**5. Did your country report FRA=CV for any grassland habitat? Yes/No.**

**If yes, can you please describe how you assessed what area is sufficient to maintain favorable conservation status of these habitats on a long-term basis?**

Denmark: No  
Estonia: No  
Finland: Yes. Unfortunately no time to check this with the relevant expert.  
Germany: Yes. It was taken into account that the FRA for most habitat types must not be smaller than at the time when the Habitats Directive came into force (for Germany in 1994) and must be large enough to ensure long-term survival. The values are conservative estimates based on the assumption that in 1994 the current area (CV) corresponded to the favourable reference area in most cases. Only in the case of existing potential with a simultaneous increase in the current area from a nature conservation and financial point of view were these areas included in the favourable total area. Methodological changes or more precise knowledge have led to corrections on a case-by-case basis. A systematic, complete review of the favourable reference values (FRV) according to uniform scientific criteria and the new specifications in the Guideline for the FFH Report 2019 has not yet been possible, but we plan to review the FRVs. Thus, further adaptation of FRVs are likely.  
Latvia: No  
Lithuania: Yes. In Lithuania, FRAs were assessed twice: first time in 2007-2012, at the beginning of the implementation of the "Habitats Directive" and during the project "Inventory of natural habitats of EC importance in the country" performed in 2011-2015. First one was set from a very limited data, because until the aforementioned project there was no unified habitats classification system in use.

Second time experts set the FRAs for most type of habitats exactly the same as area covered by habitat mapped during 2011-2015 inventory. This was made due to the lack of historical data.

The problem Lithuania is having that FRAs set first time and second time for the same habitat type can differ hugely (for example, 225 km<sup>2</sup> and 52 km<sup>2</sup> for habitat type 6270), therefore the final assessment for the 2019 Art.17 report was made by an expert.

Sweden: Yes. 6150 Siliceous alpine and boreal grasslands. The favourable reference area (FRA) is expected to be the same as in 1995. Further, it is expected that FRA = current value (CV). For the Alpine region, the best data is still the same as reported 2013 where the estimation of the habitat area was based on a prediction model using data from the National Inventory of Landscapes in Sweden (NILS) in combination with extra sampling within the Life + project MOTH (Monitoring of Terrestrial habitats). More detailed information about the estimation model is available in 'Description of sampling estimation techniques used by THUF in the 2019 Article 17 reporting' (in prep).

**6. Did your country report FRA=CV for any forest habitat? Yes/No. If yes, can you please describe how you assessed what area is sufficient to maintain favorable conservation status of these habitats on a long-term basis?**

Denmark: No

Estonia: No

Finland: Yes. Unfortunately no time to check this with the relevant expert.

Germany: Yes. It was taken into account that the FRA for most habitat types must not be smaller than at the time when the Habitats Directive came into force (for Germany in 1994) and must be large enough to ensure long-term survival. The values are conservative estimates based on the assumption that in 1994 the current area (CV) corresponded to the favourable reference area in most cases. Only in the case of existing potential with a simultaneous increase in the current area from a nature conservation and financial point of view were these areas included in the favourable total area. Methodological changes or more precise knowledge have led to corrections on a case-by-case basis.

A systematic, complete review of the favourable reference values (FRV) according to uniform scientific criteria and the new specifications in the Guideline for the FFH Report 2019 has not yet been possible, but we plan to review the FRVs. Thus, further adaptation of FRVs are likely.

Latvia: No

Lithuania: Yes. See the explanation in question No. 5.

Sweden: Yes. 9040 Nordic subalpine/subarctic forests with *Betula pubescens* ssp. *czerepanovii*. The CVs and trends are estimated mainly on data collected by the National Forest Inventory during two consecutive five-year periods (2008-2012 and 2013-2017; Berglund 2019). The FRAs are set equal to at least the CVs in 1995, the year of entry into force of the Habitats Directive, or to an estimated long-term area need, corresponding to 20% of the pre-industrial/original area (Berglund 2019).

**7. Many countries reported FRA with operators ( $\approx$ ,  $>$ ,  $\gg$ ,  $<$ ). If operators were used for grassland habitats, did you base these operators on estimates of FRA in km<sup>2</sup>?**

- Yes, the operators were based on estimates in km<sup>2</sup>
- No, the operators were not based on estimates in km<sup>2</sup>
- We didn't use operators

Denmark: No, the operators were not based on estimates in km<sup>2</sup>

Estonia: Yes, the operators were based on estimates in km<sup>2</sup>

Finland: -

Germany: Yes, the operators were based on estimates in km<sup>2</sup>

Latvia: We didn't use operators

Lithuania: Yes, the operators were based on estimates in km<sup>2</sup>

Sweden: Yes, the operators were based on estimates in km<sup>2</sup>

**8. Many countries reported FRA with operators ( $\approx$ ,  $>$ ,  $\gg$ ,  $<$ ). If operators were used for forest habitats, did you base these operators on estimates of FRA in km<sup>2</sup>?**

- Yes, the operators were based on estimates in km<sup>2</sup>
- No, the operators were not based on estimates in km<sup>2</sup>
- We didn't use operators

Denmark: No, the operators were not based on estimates in km<sup>2</sup>

Estonia: Yes, the operators were based on estimates in km<sup>2</sup>

Finland: -

Germany: Yes, the operators were based on estimates in km<sup>2</sup>

Latvia: We didn't use operators

Lithuania: Yes, the operators were based on estimates in km<sup>2</sup>

Sweden: Yes, the operators were based on estimates in km<sup>2</sup>

**9. When estimating FRA for grassland habitats, did you utilize data from scientific literature within the fields of landscape ecology or conservation biology? No / Yes, please specify what literature:**

Denmark: No

Estonia: Yes. Pool-looduslike koosluste tegevuskava aastateks 2014-2020;

97 hoiuala poollooduslike koosluste kaitsekorralduskava:

<https://infoleht.keskkonnainfo.ee/GetFile.aspx?fail=-1293828240>

Finland: -

Germany: -

Latvia: No

Lithuania: No

Sweden: Yes. Some examples: Cousins, S. et al. 2015. Regional-scale land-cover change during the 20th century and its consequences for biodiversity. *Ambio* 44: S17-S27.

Dahlström, A., S.A.O. Cousins, & O. Eriksson. 2006. The history (1620-2003) of land use, people and livestock, and the relationship to present plant species diversity in a rural landscape in Sweden. *Environment and History* 12: 191-212.

Eriksson, O. & S. Cousins. 2014. Historical landscape perspectives on grasslands in Sweden. *Land* 2014:300-321.

More literature is listed in: Toräng, P. & A. Jacobson. 2019. An assessment of favourable reference areas for grassland habitat types in the 2019 reporting under Article 17 of the Habitats Directive. ArtDatabanken, SLU.

**10. When estimating FRA for forest habitats, did you utilize data from scientific literature within the fields of landscape ecology or conservation biology? No/ Yes, please specify what literature:**

Denmark: No

Estonia: Yes

Finland: -

Germany: -

Latvia: No

Lithuania: No

Sweden: Yes. The information compiled and the evaluations made are described in detail in Berglund, H. 2019. The conservation status of the forest habitat types 9010-91F0 under the Habitats Directive 92/43/EEC in Sweden. Report SLU.dha.2019.5.2-16. Swedish Species Information Center, Swedish University of Agricultural Sciences, Uppsala, Sweden.

**11. When estimating FRA for grassland habitats, did you utilize any information on historical distribution and abundances of different habitats? No / Yes, please specify what information you used and provide the historical reference period:**

Denmark: No

Estonia: Yes. Laasimer, L. 1965. Eesti NSV taimkate. Valgus. Tallinn. Krall, H., Pork, K., Aug, H., Püss, O., Rooma, I., Teras, T. 1980. Eesti NSV looduslike rohumaade tüübid ja tähtsamad taimekooslused. ENSV Põllumajandusministeeriumi Informatsiooni ja Juurutamise Valitsus, Tallinn.

Database of Estonian semi-natural grasslands (1999-2001), PKÜ (Association of semi-natural grasslands)

Finland: -

Germany: Yes. The values are conservative estimates based on the assumption that in 1994 the current area (CV) corresponded to the favourable reference area in most cases.

Latvia: No

Lithuania: No

Sweden: Yes. For more information, see: Toräng, P. & A. Jacobson. 2019. An assessment of favourable reference areas for grassland habitat types in the 2019 reporting under Article 17 of the Habitats Directive. ArtDatabanken, SLU.

The historical reference period was the pre-industrial/original area (around 1850). The FRAs were set to 20 % of this area.

**12. When estimating FRA for forest habitats, did you utilize any information on historical distribution and abundances of different**

**habitats? No / Yes, please specify what information you used and provide the historical reference period:**

Denmark: No

Estonia: Yes. Laasimer, L. 1965. Eesti NSV taimkate. Valgus. Tallinn. National Forest Registry (1998-2003).

Finland:

Germany: Yes. The values are conservative estimates based on the assumption that in 1994 the current area (CV) corresponded to the favourable reference area in most cases.

Latvia: No

Lithuania: No

Sweden: Yes. The information compiled and the evaluations made are described in detail in Berglund, H. 2019. The conservation status of the forest habitat types 9010-91F0 under the Habitats Directive 92/43/EEC in Sweden. Report SLU.dha.2019.5.2-16. Swedish Species Information Center, Swedish University of Agricultural Sciences, Uppsala, Sweden. The historical reference period was the pre-industrial/original area (around 1850). The FRAs were set to 20 % of this area.

**13. When setting and reporting FRA for grassland habitats, did you take feasibility (possibility to reach the FRA) into account? Yes/No.**

Denmark: No

Estonia: Yes

Finland: -

Germany:

Latvia: No

Lithuania: Yes

Sweden: No

**14. Please explain why you did or did not take feasibility into account. If you took feasibility into account, please explain *how* you took feasibility into account.**

Denmark: We did not take feasibility into account but solely on the current trend and state and not the possible effects of future actions.

Estonia: We took feasibility into account to avoid unrealistic and unachievable reference numbers. It is unfeasible to include into estimate of FRA areas where the present land use makes the restoration impossible.

Finland: -

Germany: -

Latvia: As during reporting on 2019 there was still ongoing country wide mapping of EU habitats and there were plans to set favourable reference values for species and habitats after mapping, we did not reported FRA at all (set as unknown). All the calculations of favourable reference values for habitats using scientific and historic data and modeling is done now and this will be reported on next report.

Lithuania: -

Sweden: -

**15. When setting and reporting FRA for forest habitats, did you take feasibility (possibility to reach the FRA) into account? Yes/No.**

Denmark: No  
Estonia: Yes  
Finland: -  
Germany: -  
Latvia: No  
Lithuania: Yes  
Sweden: No

**16. Please explain why you did or did not take feasibility into account. If you took feasibility into account, please explain *how* you took feasibility into account.**

Denmark: We did not take feasibility into account but solely on the current trend and state and not the possible effects of future actions.  
Estonia: We took feasibility into account to avoid unrealistic and unachievable reference numbers. The possibility to recreate forest habitat types outside protected areas is difficult to predict and arrange. However, we use the concept of potential forest habitats, which we take into account in management planning. In the future we see increase (formation) of forest habitat types due to these areas.  
Finland: -  
Germany: -  
Latvia: please see previous answer. For all habitat types we are setting FRV now. The methodology how FRV are set is available here [https://latvianature.daba.gov.lv/wp-content/uploads/2022/10/Vadlinijas\\_sugu\\_biotopu\\_aizsardzibas\\_merkie\\_m\\_2.0.pdf](https://latvianature.daba.gov.lv/wp-content/uploads/2022/10/Vadlinijas_sugu_biotopu_aizsardzibas_merkie_m_2.0.pdf)  
Lithuania: -  
Sweden: -

**17. Which of the following best describes the method that you used for estimating FRA for grassland habitats (multiple methods can be chosen):**

- Model-based
- Reference-based
- Expert opinion
- Other (please specify)

Denmark: Other. We assessed the FRA based on data analysis of monitoring data (trend of structure and function) as well as expert opinion.  
Estonia: Expert opinion  
Finland: Expert opinion  
Germany: Expert opinion  
Latvia: Expert opinion and Other: The range area were calculated, taking into account results from EU habitat mapping. The range map was not complete as all country was not mapped - map was based on data from 2/3 of state inventory and expert opinion about additional possible area.

Lithuania: Reference-based, Expert opinion and Other: As mentioned before in question No. 5, FRAs were set twice in Lithuania. First time in 2007-2012 they were estimated mostly by the expert opinion because of lack of data. Second time it was estimated that FRAs for most of the types should be the same as area covered by habitat mapped during 2011-2015 inventory. Decision was made because of lack of the historical data.

Sweden: Reference-based

**18. Which of the following best describes the method that you used for estimating FRA for forest habitats (multiple methods can be chosen):**

- Model-based
- Reference-based
- Expert opinion
- Other (please specify)

Denmark: Other. We assessed the FRA based on data analysis of monitoring data (trend of structure and function) as well as expert opinion.

Estonia: Expert opinion

Finland: Expert opinion

Germany: Expert opinion

Latvia: Other: The range area were calculated, taking into account results from EU habitat mapping. The range map was not complete as all country was not mapped - map was based on data from 2/3 of state inventory and expert opinion about additional possible area taking into account data from forest inventories and geological formations (where it is important for habitat)

Lithuania: Reference-based, Expert opinion and Other: As mentioned before in question No. 5, FRAs were set twice in Lithuania. First time in 2007-2012 they were estimated mostly by the expert opinion because of lack of data. Second time it was estimated that FRAs for most of the types should be the same as area covered by habitat mapped during 2011-2015 inventory. Decision was made because of lack of the historical data.

Sweden: Reference-based

**19. Many countries reported that there is a need for more grassland habitats (FRA>CV). Is this the case in your country? Yes/No.**

Denmark: Yes

Estonia: No

Finland: Yes

Germany: -

Latvia: Yes

Lithuania: Yes

Sweden: Yes

**20. If yes on previous question: Is the lack of farmers or grazing animals considered to be a major problem for achieving and maintaining**



**FRAs for grassland habitats in a long-term perspective? Please elaborate:**

Denmark: -

Estonia: -

Finland: Stopping grazing or mowing, or on the other hand extensive grazing or undergrazing and eutrophication.

Germany: -

Latvia: the main problem is the use of grass biomass and the decreasing number of domestic animals (cattle, sheep). If there are no livestock, there is no grazing and nowhere to put the grass biomass. If there would be a demand for hay, management success would improve in many places.

Lithuania: Yes, lack or abandonment of grassland management (e.g. cessation of grazing or mowing) is considered to be major problem. During the nationwide habitats inventory it was also required to add a list of threats for every identified habitat and the most common threat was "Abandonment/lack of mowing" while "Abandonment of pastoral systems, lack of grazing" was third.

Sweden: Yes, the abandonment of grasslands in Sweden can be attributed to the cessation of management activities due to fewer farmers. This phenomenon of diminishing semi-natural grasslands has been evident through agricultural statistics, with a general decline in grassland areas observed nationwide. Several factors contribute to this trend, including the lack of profitability associated with grassland management, the adoption of new production methods, the transition from mixed farming systems to specialised ones, changes in consumer demands, and the influence of globalisation. Cattle keeping has also shifted towards indoor breeding, and the utilization of arable fields as pastures has become widespread, leading to the neglect of semi-natural grasslands. There is also a mismatched spatial distribution of cattle farms and areas hosting grasslands with high biodiversity.

**21. In your country, which of the following bodies made the final decisions on FRAs reported in 2019:**

Ministry

Governmental agency

Researchers at university or institute

Other. Please specify:

Denmark: Ministry

Estonia: Ministry

Finland: Other. Finland did not report FRAs, but used operators.

Germany: Other. Federal agency and Federal States

Latvia: Governmental agency

Lithuania: Other. NGO experts prepared reports on habitats and MoE with its subordinate institutions reviewed and approved them.

Sweden: Governmental agency

**22. In your country, which of the following bodies provided the basis for setting FRAs in 2019:**

Ministry  
 Governmental agency  
 Researchers at university or institute  
 Other. Please specify:

Denmark: Researchers at university or institute

Estonia: Researchers at university or institute

Finland: -

Germany: Other. Federal agency and Federal States

Latvia: Governmental agency

Lithuania: Other. The basis was set by the nationwide "Inventory of natural habitats of EC importance in the country" during which every habitat in the country was mapped and preliminary FRAs were set.

Sweden: Researchers at university or institute

**23. Did you have reference groups, conduct public consultations or any other type of consultations? Yes/No.**

**If yes, please specify:**

Denmark: Yes. Stakeholders were continuously informed about the process for reporting under the article 17 and about the main results.

Estonia: Yes. We involved experts (universities, NGOs) and consulted governmental agencies (Environmental Board, Environmental Agency).

Finland: Yes. Not on FRA especially. In the CS assessment process stakeholders were informed about the CS assessment results.

Germany: Yes. Working groups consisting of representatives of federal agencies and Federal States.

Latvia: Yes. consultations were conducted with experts and specialists (universities, scientific bodies). No consultations with politicians.

Lithuania: No

Sweden: Yes

**Part II – 2025 Reporting**

24. This second part of the questionnaire concerns the 2025 reporting. We fully understand if you have already decided on how to report in 2025, but it would be of great value if you could kindly share your thoughts and preliminary plans with us.

**25. In 2025, will you most likely report FRA for most grassland habitats**

- in km<sup>2</sup>
- in intervals
- as unknown
- not possible to answer at this point

Denmark: not possible to answer at this point

Estonia: in km<sup>2</sup> and in intervals

Finland: not possible to answer at this point  
 Germany: not possible to answer at this point  
 Latvia: in km<sup>2</sup>  
 Lithuania: not possible to answer at this point  
 Sweden: not possible to answer at this point

**26. In 2025, will you most likely report FRA for most forest habitats**

- in km<sup>2</sup>
- in intervals
- as unknown
- not possible to answer at this point

Denmark: not possible to answer at this point  
 Estonia: in km<sup>2</sup> and in intervals  
 Finland: not possible to answer at this point  
 Germany: not possible to answer at this point  
 Latvia: in km<sup>2</sup>  
 Lithuania: not possible to answer at this point  
 Sweden: not possible to answer at this point

**27. Which method will most likely be used for setting FRA for most grassland habitats in 2025? (multiple methods can be chosen):**

- not possible to answer at this point
- reference-based
- expert opinion
- model-based
- other, please specify:

Denmark: not possible to answer at this point  
 Estonia: reference-based and expert opinion  
 Finland: reference-based, model-based and other. The work has not started yet.  
 Germany: not possible to answer at this point  
 Latvia: reference-based and expert opinion  
 Lithuania: not possible to answer at this point  
 Sweden: reference-based and model-based

**28. Which method will most likely be used for setting FRA for most forest habitats in 2025? (multiple methods can be chosen):**

- not possible to answer at this point
- reference-based
- expert opinion
- model-based
- other, please specify:

Denmark: not possible to answer at this point  
 Estonia: reference-based, expert opinion and model-based  
 Finland: reference-based, model-based and other. Most likely reference-based.

Germany: not possible to answer at this point  
Latvia: reference-based and expert opinion  
Lithuania: not possible to answer at this point  
Sweden: reference-based and model-based

**29. Have you made (or will you make) changes in the underlying data or the method for setting FRA for grassland habitats, since the 2019 reporting?**

- No
- Not possible to answer at this point.
- Yes, please specify what changes you have made or will make:

Denmark: not possible to answer at this point  
Estonia: not possible to answer at this point  
Finland: not possible to answer at this point  
Germany: not possible to answer at this point  
Latvia: not possible to answer at this point  
Lithuania: not possible to answer at this point  
Sweden: Yes, more model-based approach will be used.

**30. Have you made (or will you make) changes in the underlying data or the method for setting FRA for forest habitats, since the 2019 reporting?**

- No
- Not possible to answer at this point.
- Yes, please specify what changes you have made or will make:

Denmark: not possible to answer at this point  
Estonia: not possible to answer at this point  
Finland: not possible to answer at this point  
Germany: not possible to answer at this point  
Latvia: not possible to answer at this point  
Lithuania: not possible to answer at this point  
Sweden: Yes, some new and more precise data will be used.

**31. When estimating FRA for grassland and forest habitats, will you utilize relevant data from new scientific literature within the fields of landscape ecology or conservation biology?**

- No
- Not possible to answer at this point
- Yes, please specify what literature:

Denmark: not possible to answer at this point  
Estonia: not possible to answer at this point  
Finland: not possible to answer at this point  
Germany: not possible to answer at this point  
Latvia: not possible to answer at this point  
Lithuania: not possible to answer at this point  
Sweden: Yes

**32. When setting and reporting FRA for grassland habitats, will you take feasibility (possibility to reach the FRA) into account?**

- Yes
- No
- Not possible to answer at this point

Denmark: not possible to answer at this point

Estonia: yes

Finland: not possible to answer at this point

Germany: not possible to answer at this point

Latvia: yes

Lithuania: not possible to answer at this point

Sweden: not possible to answer at this point

**33. Please explain why you will or will not take feasibility into account. If you will take feasibility into account, please also explain how you will take feasibility into account.**

Denmark: -

Estonia: We take feasibility into account to avoid unrealistic and unachievable reference numbers. It is unfeasible to include into estimate of FRA areas where the present land use makes the restoration impossible.

Finland: The work has not started yet.

Germany: -

Latvia: In relation to historical grassland areas, a change in the type of land use has taken place, for example by natural afforestation when grassland areas are located in the middle of forest massifs, in hard-to-reach places where there is no active agricultural activity nearby, there are no access possibilities and, accordingly, it is not possible to ensure the necessary management.

Lithuania: -

Sweden: Not possible to answer at this point. SEPA is currently working on a government assignment on FRA.

**34. When setting and reporting FRA for forest habitats, will you take feasibility (possibility to reach the FRA) into account?**

- Yes
- No
- Not possible to answer at this point

Denmark: not possible to answer at this point

Estonia: yes

Finland: not possible to answer at this point

Germany: not possible to answer at this point

Latvia: yes

Lithuania: not possible to answer at this point

Sweden: not possible to answer at this point

**35. Please explain why you will or will not take feasibility into account. If you will take feasibility into account, please also explain how you will take feasibility into account.**

Denmark: -

Estonia: We take feasibility into account to avoid unrealistic and unachievable reference numbers. The possibility to recreate forest habitat types outside protected areas is difficult to predict and arrange. However, we use the concept of potential forest habitats, which we take into account in management planning. In the future we see increase (formation) of forest habitat types due to these areas.

Finland: This question has not yet been considered.

Germany: -

Latvia: There are forest habitat types that depend on the hydrological regime. In situations where habitats are located in the areas of forests massifs intensively managed and where drainage systems have recently been restored, new roads have been built, or other activities have been carried out that significantly affect the hydrological regime, it is not possible to create a nature reserve for the protection of forest habitats in the massifs of economic forests, without affecting the neighboring economic forests. So this aspect is taken into account creating new protected areas. It should be taken into account that there are types of habitats that depend on extensive management activity, for example, habitat 6530\* or 9070 requires extensive grazing, but if there is no possibility to provide it, these areas will become forest habitats. In some cases, this aspect is also taken into account.

Lithuania: -

Sweden: See 33

**36. In your country, which of the following bodies will most likely make the final decisions on FRAs for grasslands in 2025?**

Ministry

Governmental agency

Researchers at university or institute

Not possible to answer at this point

Other, please specify:

Denmark: Not possible to answer at this point

Estonia: Ministry

Finland: Not possible to answer at this point

Germany: Other, Federal Agency and Federal States representatives

Latvia: Governmental agency and Researchers at university or institute

Lithuania: Ministry and Other: Ministry and its subordinate institutions.

Sweden: Not possible to answer at this point

**37. In your country, which of the following bodies will most likely make the final decisions on FRAs for forests in 2025?**

Ministry

Governmental agency

Researchers at university or institute  
 Not possible to answer at this point  
 Other, please specify:

Denmark: not possible to answer at this point  
 Estonia: Ministry  
 Finland: not possible to answer at this point  
 Germany: Other, Federal Agency and Federal States representatives  
 Latvia: Governmental agency and Researchers at university or institute  
 Lithuania: Ministry and Other: Ministry and its subordinate institutions.  
 Sweden: Not possible to answer at this point

**38. In your country, which of the following bodies will most likely provide the basis for setting FRAs for grassland habitats in 2025?**

Ministry  
 Governmental agency  
 Researchers at university or institute  
 Not possible to answer at this point  
 Other, please specify:

Denmark: not possible to answer at this point  
 Estonia: Governmental agency and Researchers at university or institute  
 Finland: Governmental agency and Researchers at university or institute  
 Germany: Researchers at university or institute  
 Latvia: Governmental agency and Researchers at university or institute  
 Lithuania: not possible to answer at this point  
 Sweden: Researchers at university or institute

**39. In your country, which of the following bodies will most likely provide the basis for setting FRAs for forest habitats in 2025?**

Ministry  
 Governmental agency  
 Researchers at university or institute  
 Not possible to answer at this point  
 Other, please specify:

Denmark: not possible to answer at this point  
 Estonia: Governmental agency and Researchers at university or institute  
 Finland: Governmental agency and Researchers at university or institute  
 Germany: Researchers at university or institute  
 Latvia: Governmental agency and Researchers at university or institute  
 Lithuania: not possible to answer at this point  
 Sweden: Researchers at university or institute

**40. Please provide a brief description of the method you consider using for setting FRA for grassland habitats in 2025:**

Denmark: -

Estonia: We have set national targets of both restoration and maintenance of grassland habitats, based on scientific knowledge, in Action Plan for Seminatural Grasslands: <https://keskkonnaamet.ee/elusloodus-looduskaitse/looduskaitse/parandniitude-hooldamine>  
These national targets took into account historical distribution and area of grasslands in Estonia.

Finland: We plan to follow the Article 17 guidelines on this matter.

Germany: Research of basic data to develop recommendations for FRA, followed by consultations with experts and federal states representatives.

Latvia: There is ongoing project LIFE IP LatViaNature (<https://latvianature.daba.gov.lv/en/about/expected-results/>) where one of tasks is to set Favourable reference values at a national level and at site level both for all terrestrial and freshwater habitat types (59) and species (115) of EU importance. There is methodology description used for all habitats and species - see more detailed here [https://latvianature.daba.gov.lv/wp-content/uploads/2022/10/Vadlinijas\\_sugu\\_biotopu\\_aizsardzibas\\_merkie\\_m\\_2.0.pdf](https://latvianature.daba.gov.lv/wp-content/uploads/2022/10/Vadlinijas_sugu_biotopu_aizsardzibas_merkie_m_2.0.pdf) (unfortunately in Latvian)

Lithuania: So far it is too early to answer this question. Lithuania just now finishing setting the FRR and FRP for most of the species which could be later used as an example for setting appropriate FRAs for habitats.

Sweden: See 33

**41. Please provide a brief description of the method you consider using for setting FRA for forest habitats in 2025:**

Denmark: -

Estonia: We take into account national inventories of forest habitats, historical data and modelling using national soil map.

Finland: We plan to follow the Article 17 guidelines on this matter.

Germany: Research of basic data to develop recommendations for FRA, followed by consultations with experts and federal states representatives.

Latvia: There is ongoing project LIFE IP LatViaNature (<https://latvianature.daba.gov.lv/en/about/expected-results/>) where one of tasks is to set Favourable reference values at a national level and at site level both for all terrestrial and freshwater habitat types (59) and species (115) of EU importance. There is methodology description used for all habitats and species - see more detailed here [https://latvianature.daba.gov.lv/wp-content/uploads/2022/10/Vadlinijas\\_sugu\\_biotopu\\_aizsardzibas\\_merkie\\_m\\_2.0.pdf](https://latvianature.daba.gov.lv/wp-content/uploads/2022/10/Vadlinijas_sugu_biotopu_aizsardzibas_merkie_m_2.0.pdf) (unfortunately in Latvian)



Lithuania: So far it is too early to answer this question. Lithuania just now finishing setting the FRR and FRP for most of the species which could be later used as an example for setting appropriate FRAs for habitats.

Sweden: See 33

42.

### Part III – National definitions and guidance concerning forest habitats

#### 43. Do you have any national guidance, interpretation manuals, criteria or keys which define what forests count as annex I habitats? Yes/No. If yes, could you please share this with us?

Denmark: Yes. Here you can see the danish interpretation manual, which is aligned with the EU interpretation manual:

<https://mst.dk/media/128611/habitatbeskrivelser-2016-ver-105.pdf>

When mapping habitat types in Denmark we also use a classification key together with the manual:

[https://mst.dk/media/128610/habitat-key-ver105\\_opdatering-2016.pdf](https://mst.dk/media/128610/habitat-key-ver105_opdatering-2016.pdf)

Estonia: Yes. Palo, et al 2018: Loodusdirektiivi metsaelupaikade inventeerimise juhend:

Metsaelupaikade inventeerimise juhend | 1.46 MB | pdf

<https://www.envir.ee/elusloodus-looduskaitse/looduskaitse/natura-2000>

Palo, A. 2015. Loodusdirektiivi metsaelupaikade seire välitööjuhend. Eksperttöö, käsikiri. Tellija Keskkonnaagentuur. Täitja OÜ Metsamutt. 29 lk+ lisad.

<http://www.keskkonnaagentuur.ee/failid/Metsaelupaikade%20seire%20metoodika.pdf>

Paal, J. 2007. Loodusdirektiivi elupaigatüüpide käsiraamat. Tallinn.

Finland: Yes. Intepretation manual for the Natura 2000 habitat types 2001 (in Finnish) <https://helda.helsinki.fi/handle/10138/41087>

Guidelines for inventories of Natura 2000 habitat types 2020:

[https://www.ymparisto.fi/sites/default/files/documents/Luontotyyppihje\\_istus-ver9-MH-SYKE-2020.pdf](https://www.ymparisto.fi/sites/default/files/documents/Luontotyyppihje_istus-ver9-MH-SYKE-2020.pdf)

Germany: Yes. National Manual on habitat types (Ssymank et al. (2022): Das europäische Schutzgebietssystem Natura 2000. BfN-Handbuch zur Umsetzung der Fauna-Flora-Habitatrichtlinie und der Vogelschutzrichtlinie. Band 2.2: Lebensraumtypen des Grünlandes, der Moore, Sümpfe und Quellen, der Felsen und Schutthalden, der Gletscher sowie der Wälder. Naturschutz und Biologische Vielfalt 172(2.2)) and manuals of the Federal States

Latvia: yes, please see handbook which is used to define EU habitats in Latvia <https://www.daba.gov.lv/lv/media/1651/download?attachment>

Lithuania: Yes. The main interpretation manual for every habitat of EU importance in the country is "Rašomavičius R. (ed.), 2012: EB svarbos natūralių buveinių inventorizavimo vadovas – Vilnius. ISBN 978-9986-443-61-2". The forest part can be accessed online here: <https://www.yumpu.com/lt/document/view/46941888/eb-svarbos-naturaliu-buveiniu-inventorizavimo-vadovas> . This manual was a base for nationwide "Inventory of natural habitats of EC importance in the country". The final report of the inventory can be accessed online here: [https://am.lrv.lt/uploads/am/documents/files/saugom\\_teritorijos\\_kra%C5%A1tov/natura\\_2000/EB\\_buveiniu\\_inventorizavimo\\_duomenu\\_analize\\_palankios\\_bukles\\_kriteriju\\_nustatymas\\_ataskaita\\_I%20dalis%20Final.pdf](https://am.lrv.lt/uploads/am/documents/files/saugom_teritorijos_kra%C5%A1tov/natura_2000/EB_buveiniu_inventorizavimo_duomenu_analize_palankios_bukles_kriteriju_nustatymas_ataskaita_I%20dalis%20Final.pdf) .

Sweden: Yes, <https://www.naturvardsverket.se/vagledning-och-stod/skyddad-natur/natura-2000-i-sverige#E1182925248>

**44. Are your national definitions of Annex I forest habitat types compatible with any forest management practices involving timber harvest?**

- No
- Yes, all habitat types are compatible with some timber harvest.
- Yes, some habitat types are compatible with some timber harvest.

Denmark: Yes, some habitat types are compatible with some timber harvest.

Estonia: Yes, some habitat types are compatible with some timber harvest.

Finland: Yes, some habitat types are compatible with some timber harvest.

Germany: Yes, some habitat types are compatible with some timber harvest.

Latvia: Yes, some habitat types are compatible with some timber harvest.

Lithuania: Yes, all habitat types are compatible with some timber harvest.

Sweden: No

**45. If yes on previous question, please elaborate which habitats and which forest management practices:**

Denmark: In Denmark most of the habitat forests are seminaturel and a certain degree of forest management for timber production can be carried out, but with respect for the site-specific conservation objectives. For certain types of forest activities within Natura 2000 a notification to the authority is required.

You can find more information on this homepage:

<https://mst.dk/natur-vand/natur/natura-2000/anmeldeordning-i-natura-2000-omraader/>

Estonia: Habitat-types 9060 and 2180 have recommendations to manage these forests by cutting-methods which mimic smallscale natural disturbances.

Finland: Esker forests 9060

Germany: oak habitat types on secondary sites (9160, 9170, 9190, 91G0)

Latvia: please see guidelines for forest habitat management in Latvia  
<https://www.daba.gov.lv/lv/media/8505/download>.

Mainly limited forest management activities are necessary for habitat types 2180, 9060, 91T0, but for other habitat types - just specific biotechnical works to improve habitat quality

Lithuania: Currently it is forbidden to do logging in all Annex I forest habitat types in Natura 2000 sites but only temporarily and only in State forests.

Per Resolution of the Government of the Republic of Lithuania "General regulations of habitat or bird protection" it is allowed to do sanitary logging to prevent spreading of diseases or forest pests and to do special cuttings to form or maintain a habitat; in habitat 9160 it is also allowed to cut part of spruce trees.

Unfortunately, after the nationwide inventory of habitats that took place in 2011-2015, legal protection of Annex I habitats came into force only years after, therefore quite a lot of Annex I forest habitats were cut.

Sweden: -

**46. Do you have national quantitative or qualitative criteria or 'breakpoints' for determining or assessing the quality (structure and functions, including typical species) of different forest habitats?**

**Yes/No.**

**If yes, could you please share this with us?**

Denmark: Yes. For the article 17 reporting in 2019 a model for assessing structure and function for a number of habitats including the forests types were used (multikriteriemodellen). How the model were used is depicted in this report carried out by researchers at Aarhus University:

<https://dce2.au.dk/pub/SR377.pdf> It has not yet been decided how structure and function will be assessed for the next reporting in 2025.

Estonia: Yes. We have defined different quality classes for each habitat type in forest habitats inventory guide: Metsaelupaikade inventeerimise juhend | 1.46 MB | pdf

<https://www.envir.ee/elusloodus-looduskaitse/looduskaitse/natura-2000>

Finland: No

Germany: Yes. Assessment schemes (Bundesamt für Naturschutz (BfN) und dem Bund-Länder-Arbeitskreis (BLAK) FFH-Monitoring und Berichtspflicht (2017): Bewertungsschemata für die Bewertung des Erhaltungsgrades von Arten und Lebensraumtypen als Grundlage für ein bundesweites FFH-Monitoring Teil II: Lebensraumtypen nach Anhang I der FFH-Richtlinie. BfN Schriften 481), German National Forest Inventory

Latvia: Yes. the quality criteria are revised now. Till now quality scored in 4 categories:

Excellent - many good quality WKH (woodland key habitats) structures, umbrella and specialist species are found, no significant influence of negative factors;

Good – there is a WKH and/or a lot of habitat-specific structure, there are indicator species, there may be specialist and umbrella species, the quality of the habitat is expected to improve in the next 10 years;

Medium - there are few WKH and habitat-specific structures, some widespread indicator species or insignificant umbrella species, or some specialist species, the impact of negative factors has been identified, but it is not significant or easily remedied, no improvement in quality to WKH status is expected

Low - meets the minimum criteria set for the habitat, there may be umbrella and indicator species, there are signs of a decrease in the quality of the habitat under the influence of external factors.

Additionally the excellent EU habitats should meet criteria set for nationally protected habitats - criteria are set here

<https://www.daba.gov.lv/lv/media/4654/download?attachment>

Lithuania: Yes "List of criteria of favourable conservation status for the habitats of EU importance": <https://www.etar.lt/rs/aesupplement/8bca5650446111e8ad2f97b2a095557a/JiJRRiURww/ae44fd40c4f211edac36f416a198a714/>.

Sweden: Yes, <https://www.naturvardsverket.se/vagledning-och-stod/skyddad-natur/natura-2000-i-sverige#E1182925248>

47.

#### Part IV – Additional information

#### 48. Please provide any additional information or documents related to this questionnaire that you may share with us at this point:

Denmark: -

Estonia: -

Finland: Please note that this questionnaire was unfortunately answered in haste and there was no time to consult relevant grassland and forest experts.

Germany: -

Latvia: methodologies for habitat mapping/monitoring and other information available here <https://www.daba.gov.lv/lv/biotopu-kartšanas-metodikas-0>

Lithuania: The main interpretation manual for every habitat of EU importance in the country: Rašomavičius R. (ed.), 2012: EB svarbos natūralių buveinių inventorizavimo vadovas – Vilnius. ISBN 978-9986-443-61-2. The forest part can be accessed online here:

<https://www.yumpu.com/lt/document/view/46941888/eb-svarbos-naturaliu-buveiniu-inventorizavimo-vadovas> ; grasslands part:

<https://www.yumpu.com/lt/document/view/36800775/iii-pievu-ir-joms-artimos-buveines> .

"Inventory of natural habitats of EC importance in the country". The final report of the inventory can be accessed online here:

[https://am.lrv.lt/uploads/am/documents/files/saugom\\_teritorijos\\_kra%C5%A1tov/natura\\_2000/EB\\_buveiniu\\_inventorizavimo\\_duomenu\\_analize\\_](https://am.lrv.lt/uploads/am/documents/files/saugom_teritorijos_kra%C5%A1tov/natura_2000/EB_buveiniu_inventorizavimo_duomenu_analize_)

palankios\_bukles\_kriteriju\_nustatymas\_ataskaita\_I%20dalis%20Final.pdf ;

Resolution of the Government of the Republic of Lithuania "General regulations of habitat or bird protection": <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.228645/asr> ;

"Management recommendations for forest habitats of EU importance": <https://naturalit.lt/wp-content/uploads/2021/02/Naturaliu-misko-buveiniu-tvarkymo-rekomendacijos.pdf> (important to note, that these recommendations are only for habitats within Natura 2000 sites, not every Annex I forest habitat in country. Currently, some of the recommendations are conflicting with the official forestry rules - these are noted at the end of the document).

Sweden: -

49. **Would you be available for following up questions by email, Skype, Zoom or telephone in June? If yes, please give your contact details and indicate if you prefer to be contacted by email, Skype or Zoom.**

Finland: In principle it would be interesting to share experiences with Sweden on setting FRVs. However, we (Finland) are just starting to define FRVs per habitat types. After we have gathered more experience at national level, we could try to find time for a Zoom/Teams meeting.