Resubmission of Ireland's NFAP – Explanatory Note

Following the submission of the first version of Ireland's National Forestry Accounting Plan (NFAP), a review process has been completed by the LULUCF Expert Group and Commission staff. The purpose of this document is to outline how issues identified during the review process have been addressed in the resubmitted second version of Ireland's NFAP.

1. Technical Recommendations in Commission Staff Working Document (2019) 213 final

Annex IV, Section A Criteria	
Technical Recommendations	**Response from Ireland**
a) Demonstrate how the goal of achieving a balance between anthropogenic emissions and removals will be achieved in the second half of the century. Provide qualitative and quantitative information until at least 2050 consistent with the long-term strategy required under Regulation (EU) 2018/1999.	Long term projections up to 2050 were developed using the CBM modelling framework for the entire forest areas, as used for the FRL projections, which provides net removals (including HWP). The level of harvest was based on data derived from the 2016-2050 roundwood forecast. See Section 4.3 (Pg 65) and Figure 23 (Pg 69)

c) Provide more information on the correlation between the reduced harvest levels (i.e.<70% of net growth) and the negative biomass stock changes (Table 19 at page 51 and Table C1 at page 66, NFAP of Ireland) in the period 2020-2025. Provide more information complementing the statement about the robust accounting system (Table 1, page 4, NFAP of Ireland). Provide detailed information of the implemented accounting system, in particular in relation to biomass and instantaneous oxidation assumption, in a dedicated section.	A) Further text has been added to the report to clarify the statement of <70% of net growth. Gross increment and harvest data will be provided. See Section 3.2.2.3 (Pg 28), Section 4.3.2.1 (Pg 67) and Figure 24 (Pg 69).
	
	 B) Robust accounting, use of 2017 as a starting year provides a more robust accounting system because, the state of the forest is better defined due to (see Section 3.3.1 on Pg 30):
	   -use of improved sampling data in the 2017 NFI better reflects biomass and CSC in the forest.
	   -The accounting system using a forecast based on the most recent year to define the state of the forest is more robust than a system which uses data from 2010 or before because it may result in emissions and removals associated with assumptions of forest management (not actual harvests, age class structure, initial HWP pools, etc) prior to the 1st accounting period (2021-2025). This means that it is more likely to account for emission and removals due to legacy effect if the most recent year to define the state of the forest is not used.
	
	 C) Table 26 in section 4.1 (Pg 57) provides information on emissions and removals for MFL assuming both a 1st order decay and instantaneous oxidation of HWP. All biomass harvests form deforestation are assumed to be instantaneous oxidation (Table 23 pg 55). In addition the mass balance between transfers form harvest of biomass in AR and MFL and HWP inflow is maintained (Figure 9 Pg 39) to ensure robust accounting.

f) Provide information on the consistency between forest management practices and the objectives set by the European Biodiversity and Forest Strategies. Provide further information on how the biodiversity issues associated with the conversion of grasslands and wetlands into forest land are taken into account.	Comprehensive text has been added to the NFAP which describes the statutory licensing processes. In addition, further information is also provided on policy formulation and the implementation of schemes incentivising forest activities. (Section 2.3.5 Pg 16)

Annex IV, Section A Criteria (cont.)	
Technical Recommendations	**Response from Ireland**
g) Demonstrate the consistency with the national projections of anthropogenic greenhouse gas emissions reported under Regulation (EU) No 525/2013. Provide explanations for possible differences between national projections and the proposed FRL.	In 2018, Ireland adopted the CBM modelling approach in preparing its latest national GHG inventory. The estimates prepared in the NFAP also use the same CBM modelling approach. The current national GHG inventory that is published is for the year 2017. This 2017 report is not consistent with the NFAP as the NIR at that time was based on an earlier modelling approach referred to as CARBWARE. However, the data contained in the NFAP is consistent with the latest national GHG inventory for 2018 which has been submitted and will be published in 2020. (Section 4.2 on Pg 57) The projection reported under the MMR used the CBM projections for all forest land this includes MFL and AR for the 30yr transition. The data for 2015-2017 uses the NIR data. There is an error in the 2019 NIR submission, where HWP were included in the forest land figure and again under HWP. This will be corrected in 2020 submission. A section outlining differences between MMR and the FRL projections. (Section 4.2.5 on Pg 64)
h) Estimate the FRL based on the area under forest management as indicated in Annex IV, Part B (e) i. Use the conversion period for Land converted to forest land (Afforested Land) consistent with the latest national GHG inventory.	The area under forest management has been adjusted to ensure consistency with the latest national GHG inventory submission. Ireland's NIR for the year 2019 will include 30 year transitions which are consistent with the FRL. A table has been prepared showing the relationship between the current NIR the FRL and the future NIR submission. (Section 4.2.3 on Pg 60 and Table 28)

Annex IV, Part B Elements	
Technical Recommendations	**Response from Ireland**
b) Noting the inclusion of additional carbon pools in the FRL, include those pools in the next submission of the national GHG inventory to ensure consistency between the FRL and the national GHG inventory.	The 2019 NIR submission now also uses the CBM modelling framework so mineral soils are now reported for the FRL and in the latest NIR. In addition, comparisons between SOC stock changes in the GHGI and the FRL are shown in Figure 19 (Pg 59). Also see the explanatory noted for any differences in section 4.2.2 (Pg 58).
c) Provide a justification for a different starting year of projection than 2010. Provide information on the forest model.	The FRL Technical Guidelines recommend using data from 2010 to describe the "state of the forest". Failing this Member States are requested to justify the use of later data as the "best available". Ireland's has adopted to use the latest NFI data from 2017 for the following reasons (Section 3.3.1 on Pg 30): a. Ireland's NFI methodology was amended and improved between the second (2012) and third (2017) cycles. For the third cycle, sampling intensity was increased through the expansion of the central con-centric sample plot specifically to increase the accuracy of sampling of smaller diameter trees (i.e. ≤12cm in DBH). Given the age-structure of Ireland's forests, the cohort of forests with a DBH ≤12cm is significant. The ingrowth effect associated with the NFI concentric plot design on emission/reduction estimates is also reduced. This change makes the third NFI (2017) the most accurate inventory that has been conducted to date and therefore the most appropriate measure of the state of the forest. b. Earlier data is not considered to be consistent with Article 8(5) of the LULUCF regulation because the state of the forest in 2010 will not reflect the state of the forest prior to the commencement of the CP. Therefore, the state of the forest that reflects dynamic age class characteristics is best defined using data closest to the initiation of the CP ("best available data" (see Article 8(5)) age class of the FRL). This approach is considered to represent the primary goal of employing forest references levels which is to factor out management induced age class legacy effects in the accounting process. c. The state of the DOM pool at initiation of the simulation (i.e. CBM initiation of the DOM pool) is also better defined using the state of the forest in 2017. d. Calibration of sampling factors used in CBM (section 3.3.5 eq 10) could not be performed without including data form the 2017 NFI.
d) Provide information on harvesting rates for at least one different policy scenario.	An alternative harvesting rate scenario has been included looking at the impact on harvesting rates and the availability of pulpwood for biomass. (Section 2.3.4.2 on Pg 15)

Annex IV, Part B Elements (cont.)	
Technical Recommendations	**Response from Ireland**
e) i) Provide the area under forest management consistent with Table 4.A ("Forest land remaining Forest land") from the latest national GHG inventory using the year preceding the starting point of the projection. Given the use of the dynamic area approach, provide a detailed disaggregated calculation of the managed forest land area at annual time steps for the entire time series since, at least, year 2000.	This information has been included in the NFAP in a new table which details the forest category areas reported in the current GHGI, future UNFCC submissions and those presented in the FRL projection. (Section 4.2.3 on Pg 60 and Table 28)
e) iii) Provide additional information on increments.	Gross biomass increment, harvest, and biomass stock changes for MFL (2010-2025) have been added to the NFAP. (Section 4.1 on Pg 50 & Table 24) Additional information on increment is provided through the inclusion of forest age class frequency distributions derived from the CBM model simulations for AR and FM areas. (Section 4.3.2.1 on Pg 67)

2. Conclusions from the LULUCF Expert Group

The conclusions of the LULUCF Expert Group as outlined in the *Technical Assessment of National Forest Accounting Plans* Synthesis Report have been reviewed for Ireland and all of the issues identified therein are addressed in section 1 above.

3. Other issues identified by Member States

During the review and in preparation of the revised NFAP it was noted that there was an inconsistency in the MFL area in the NFAP and areas reported in the GHGI. Projected deforestation rates (993ha per year) were applied to MFL areas before 2017 instead of the observed deforestation rates from 2010 to 2017. As a result, the mean annual net emission for the FRL (2021-2025) has decreased from 282.7 to 141.9 Gg CO_2 eq.