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MEETING DOCUMENT

From:	General Secretariat of the Council
To:	Working Party on the Environment
Subject:	Non-ETS (LULUCF): WPE 27 March - Commission non-paper - Assessment of amendments related to forest accounting and Harvested Wood Products

With a view to the WPE on 27 March delegations will find a non-paper by the Commission on the above.

Working Party for the Environment

Non-paper on LULUCF

20/03/2017

In the context of the Council discussions on the Commission proposal on LULUCF post-2020, this non-paper complements the analysis carried out in the Impact Assessment based on updated figures and an assessment of amendments submitted by Member States or the European Parliament rapporteur related to the rules for the accounting of managed Forest Land and Harvested Wood Products (HWP). Its objective is to enhance the understanding of the impacts of some key changes related to accounting of Forest Land and HWP, and thereby provide an input to the on-going discussions.

This non-paper is structured in five sections:

1. Use of credits from managed forests within LULUCF: alternatives to the 3.5% cap (Article 8(2).
2. Inclusion of future policy impacts in the forest reference level (Article 8 (3)).
3. Accounting rules for managed forests: impact on future forest harvest levels (Article 8(3)).
4. Governance of FRL and involvement of the Member States (Articles 8(5) and 8(6)).
5. Changes to the accounting rules for Harvested Wood Product (Article 9).

1. Use of credits from managed forests within LULUCF: alternatives to the 3.5% cap (Article 8(2))

Like under the current KP rules, the Commission proposes that the LULUCF accounts can only include credits from forest management corresponding to no more than the equivalent of 3.5% of the Member State's total emissions in its base year or period. Some Member States in the Council have proposed to set this cap in proportion to the forest area in each country; others propose to relax this cap, or to delete it.

This section assesses the impact of these different proposals related to this cap on the use of credits from forests: a 3.5% cap, a 7% cap, and a cap based on forest area. The first and third approach were already reviewed in the Impact Assessment (Annex 5, Table 5.9), updated here with more recent figures; the second approach was proposed in the draft report by the rapporteur of the ENVI Committee in the European Parliament. The analysis aims to identify which Member States would be actually limited by the existence of the cap, under the three different approaches.

For the purpose of this exercise, we simulate a situation in which lower harvest levels, and therefore higher sinks, would occur relative to those assumed for the estimation of the Forest Reference Level (FRL): in particular, it is assumed that **only 90%** of the forecast harvest would occur[1], relative to the harvest level applied in the FRL calculation, for the full period 2021-30 (i.e., each year). Typically, such a decrease would generate a significant LULUCF accounting benefit from managed forest land. A cap, such as that in the proposal, *may* place a limit on the possible accounting benefit if this decrease is very significant.

A cap based upon 1990 GHG emissions (without LULUCF)[2] is most likely to impact countries that have large forest sink and relatively small historical GHG emissions in other sectors. **Table 1** below shows output of analysis by the JRC. This analysis suggests that in the period 2021-2030, if harvest over the entire period averaged 90% of that used for the FRL:

- A cap on forest credits equal to 3.5%, **would likely only limit AT, FI, LV and SE**;
- For a cap of 7%, **only FI and SE would still be limited**, and the total amount of credits from Managed Forest Land to offset debits from other categories would double (396Mt/year at EU28 level).
    - In absolute terms, the accounting benefit would largely be limited to FI and SE, at potentially an extra 2.5Mt/yr accounting benefit each; the potential credit for both Member States would double to 50Mt for the 10-year period.
- By contrast, a cap equal in size (198Mt/yr) to the first option, but distributed pro-rata on the reported area of forest land, **would probably not limit any Member State** that on average harvested only 90% of what expected in the FRL exercise.
    - Although the overall cap would remain the same, the redistribution would greatly increase the potential use of credits from Managed Forest Land for FI (from -2.5 Mt/yr to -27.4 Mt/yr) and SE (from -2.5 Mt/yr to 34.8Mt/yr), and by contrast decrease this accounting benefit considerably for various other Member States (NL, DE, CZ, DK, PL, and others).

The probable **total** accounting benefit (i.e. amounts of credits generated) for a decrease in harvest to 90% for all Member States and for every year of the period can be computed by summing up the

[1] For example, this could occur if the harvest in a Member State for the calculation of the FRL was assumed to be 50Mm3 per year, but in reality averaged only 45Mm3.

[2] As used in the 2nd commitment period of the KP, set as 3.5% of base year total emissions, excluding LULUCF. For most MSs, the base year is 1990, although five Member States have variants from 1987 to 1992.

potential credits that can be included in the accounts (whether or not limited by the cap), over all Member States.

This would vary from:

- around 39Mt/y for the 3.5% cap,
- 45Mt/yr for the 7% cap, and
- 53Mt/yr for the area-based cap.

Table 1: Analysis of different cap approaches on managed forest land accounts, for a scenario with 90% harvest relative to the FRL assumption (updated from 2014 GHG inventories). All figures in MtCO2/yr

	Cap on credits (-) 3.5% (GHGI 2016) **Option C0 in IA 2016**	**Cap on credits (-) 7%** GHGI 2016)	**Cap on credits (-)** based on area of FL-FL for 2014 **Option C2 in IA 2016**	**Relative impact of a 90% harvest on the credits (-) or debits (+) during 2021-2030 for:**			**Would a cap of 3.5% limit the potential credits?**	**Would a cap of 7% limit the potential credits?**	**Would a cap proportional to forest area limit potential credits?**
				Managed forest land (no HWP)	**HWP**	**Managed forest land + HWP**			
Austria	-2.8	-5.5	-4.9	-3.6	0.6	-3.0	yes	no	no
Belgium	-5.1	-10.2	-0.9	-0.7	0.3	-0.4	no	no	no
Bulgaria	-3.6	-7.3	-4.6	-0.3	0.1	-0.3	no	no	no
Croatia	-1.1	-2.2	-2.9	-1.0	0.1	-0.9	no	no	no
Cyprus	-0.2	-0.4	-0.2	0.0	0.0	0.0	no	no	no
Czech Rep	-6.8	-13.7	-3.3	-2.0	0.3	-1.7	no	no	no
Denmark	-2.4	-4.9	-0.7	-0.2	0.0	-0.2	no	no	no
Estonia	-1.4	-2.8	-2.8	-0.9	0.2	-0.7	no	no	no
Finland	-2.5	-5.0	-27.4	-9.3	1.0	-8.3	yes	yes	no
France	-19.1	-38.2	-28.5	-5.3	0.8	-4.5	no	no	no
Germany	-43.6	-87.2	-13.6	-4.1	2.3	-1.8	no	no	no
Greece	-3.7	-7.3	-4.3	-0.1	0.0	-0.1	no	no	no
Hungary	-3.3	-6.6	-2.4	-1.1	0.1	-1.1	no	no	no
Ireland	-2.0	-3.9	-0.6	-0.3	0.1	-0.1	no	no	no
Italy	-18.3	-36.5	-9.9	-1.9	0.1	-1.8	no	no	no
Latvia	-0.9	-1.8	-3.9	-1.4	0.3	-1.1	yes	no	no
Lithuania	-1.7	-3.3	-2.6	-0.6	0.1	-0.5	no	no	no
Luxembourg	-0.5	-0.9	-0.1	0.0	0.0	0.0	no	no	no
Malta	-0.1	-0.1	0.0	0.0	0.0	0.0	no	no	no
Netherlands	-7.8	-15.5	-0.4	-0.1	0.0	-0.1	no	no	no
Poland	-16.6	-33.1	-11.0	-5.1	0.9	-4.2	no	no	no
Portugal	-2.1	-4.2	-5.0	-1.7	0.1	-1.6	no	no	no
Romania	-8.9	-17.8	-8.4	-4.4	0.4	-4.0	no	no	no
Slovakia	-2.6	-5.2	-2.5	-0.8	0.2	-0.6	no	no	no
Slovenia	-0.7	-1.3	-1.3	-0.3	0.0	-0.3	no	no	no
Spain	-10.0	-20.0	-18.1	-5.5	0.7	-4.8	no	no	no
Sweden	-2.5	-5.0	-34.8	-10.9	0.5	-10.4	yes	yes	no
UK	-28.0	-56.0	-3.0	-1.4	0.5	-1.0	no	no	no
EU	**-198**	**-396**	**-198**	**-63**	**10**	**-53**			

Source: COM SWD(2016)249 and own calculations

2. Inclusion of future policy impacts in the forest reference level (Article 8 (3))

The Impact Assessment contained a section (Annex 5) analysing the early experience from forest management reference levels in the 2nd commitment period. During this exercise, it was allowed to include assumptions on the *future impact* of policies adopted by the end of 2009. Consequently, an expected significant increase in harvest was factored in many of the reference levels submitted.

As already shown in the Impact Assessment, greenhouse gas inventories for the years 2011-2014 have subsequently indicated that this expected increase in harvesting rates did not take place. The conclusion of the preliminary assessment was that for the EU28, the reported forest management sink in 2013-2014 would be approximately 120 MtCO2/yr greater than the reference level.

Table 2: Forest Management reporting (including HWP) and potential accounting (without cap) based on the available 2017 inventories including technical corrections by MS (to be added to or deduced from original reference level).

	Reported FM net emissions (+) / removals (-), GHGI 2017 (KP), including HWP			FMRL (with HWP)	Technical Correction to FMRL	Potential FM credits (-) and debits (+), annual
	2013	2014	2015			
Austria	-3.4	-3.8	-3.9	-6.5	5.8	-3.0
Belgium	-3.7	-3.7	-3.7	-2.5	NE	-1.2
Bulgaria	-6	-6	-5.8	-8	-0.2*	2.3
Croatia	-7.1	-7	-5.7	-6.3	0.9	-1.2
Cyprus	NE	NE	NE	-0.2	NE	
Czech Republic	-6.4	-6.3	-5.1	-4.7	NA	-1.2
Denmark	-2.5	-3.8	0.7	0.4	-0.1	-2.2
Estonia	-2.9	-3	-3.5	-2.7	NE	-0.4
Finland	-56.2	-54.4	-49.3	-20.5	-13.6	-19.2
France	-57.5	-52.8	-48.9	-67.4	21.8	-7.5
Germany	-54.4	-54.9	-54.9	-22.4	NE	-32.3
Greece	-2	-2	-2	-1.8	0.2	-0.4
Hungary	-1.5	-3.2	-4.3	-1	0	-2.0
Ireland	-0.4	-0.3	-0.5	-0.1	-0.6	0.3
Italy	-30.1	-31.1	-31.6	-22.2	NA	-8.7
Latvia	-3.7	0.5	-2.5	-16.3	11.7*	2.7
Lithuania	-8.9	-8.4	-7.9	-4.6	-0.9	-2.9
Luxembourg	-0.4	-0.4	-0.3	-0.4	0.2	-0.2
Malta	NE	NE	NE	0	0	
Netherlands	-1.4	-1.4	-1.4	-1.4	NE	0.0
Poland	-45.4	-38.1	-34	-27.1	NE	-12.1
Portugal	-7.8	-9.3	-8.2	-6.8	3.4	-5.0
Romania	-27	-27	-27	-15.8	-3.7	-7.5
Slovakia	-6.8	-4.8	-5.2	-1.1	NA	-4.5
Slovenia	-4.5	-4.7	-4.8	-3.2	NE	-1.5
Spain	-24.7	-25.8	-26.1	-23.1	NO	-2.4
Sweden	-53.2	-53.2	-53.0	-41.3	7.3	-19.1
United Kingdom	-19.5	-19.3	-18.6	-8.3	-7.6	-3.2
TOTAL EU	**-437**	**-424**	**-408**	**-315**	**25**	**-133**

* Based on 2016 GHG inventory. The year 2015 was assumed equal to the average of 2013 and 2014 data.
Source: JRC analysis based on MS GHG inventory submissions available on 17 March 2017

Since the publication of the Impact Assessment, more recent data have become available. Based on the latest (2017 submission) greenhouse gas inventory reports, Table 2 shows that the difference between the reported forest management sink (i.e. volume of potential credits, uncapped) and the forest management reference levels has increased further to 133 MtCO2/yr on EU28 level (average of 2013-2015). This strong divergence supports the arguments regarding the risk of reducing environmental integrity by including policy assumptions into the process for determining projected reference levels, and the associated risk of compromising biomass accounting and the credibility of EU climate goals.

3. Accounting rules for managed forests: impact on future forest harvest levels (Article 8(3))

The Commission's proposal sets out an approach for determining the projected Forest Reference Level (FRL) for each Member State. It uses a reference period (1990-2009) to determine parameters such as forest management practice and intensity for modelling future periods. During the discussions in the Council, some Member States have proposed a more recent reference period.

For this non-paper, the Commission has thus modelled scenarios of future harvest levels reflecting the continuation of forest management practice and intensity for a number of different reference periods (1990-2009; 2000-2009, 2000-2012, 2000-2015). This modelling takes into account the future impact of forest aging; for example, when a forest is getting older, extra harvest may be needed *to continue the current management*. In such a circumstance, harvesting as part of the continuation of current management would not be accounted as a debit against the FRL.

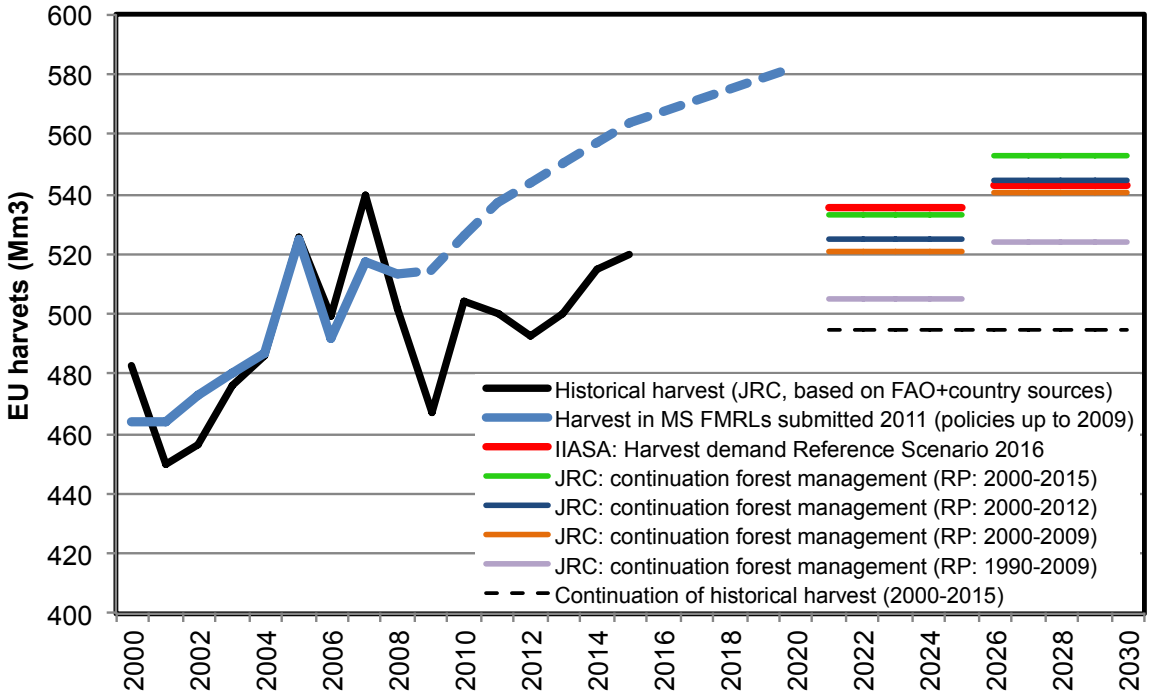
Under the Commission's proposal, therefore, future accounting will reflect emissions and removals resulting from *changes in management practices and policy*, but exclude emissions and removals originating from the natural cycle of forests. This is comparable to the treatment of any other sector in non-ETS and ETS, while it fully takes into account natural circumstances and the biophysical characteristics of forests.

While the result would vary for the individual Member States, for the EU28 results of this modelling exercise are presented in the Figure 1 below. It can be seen that for all of the reference period scenarios applied, continuing the "forest management practice and intensity" would **increase the harvest potential for EU28 of up to 50Mm^3**, or around +10% compared to historic levels (2000-2009). This increase, as it would be factored in the Member State FRLs, would not result in debits from managed forest land. Scenarios using a more recent period – and thus converging upon today's management – would introduce a greater increase in the potential harvest. This is because of the recent **upward** trend in harvests across the EU.

Furthermore, the modelled potential harvest at EU28 level would be similar to the Commission's Reference Scenario 2016 (i.e., with measures) harvest forecast (red line).

Figure 1 also includes the harvest level assumed in the reference levels approved by UNFCCC for the **2nd commitment period of the Kyoto Protocol**. It can be seen that **the harvest forecast** (dashed blue line), in this case including assumptions on policy and market effects, **was greatly over-estimated** compared to the historically reported levels up to today (black solid line).

Figure 1: Comparison of average historical harvest for EU28 with harvesting scenarios based upon different reference periods

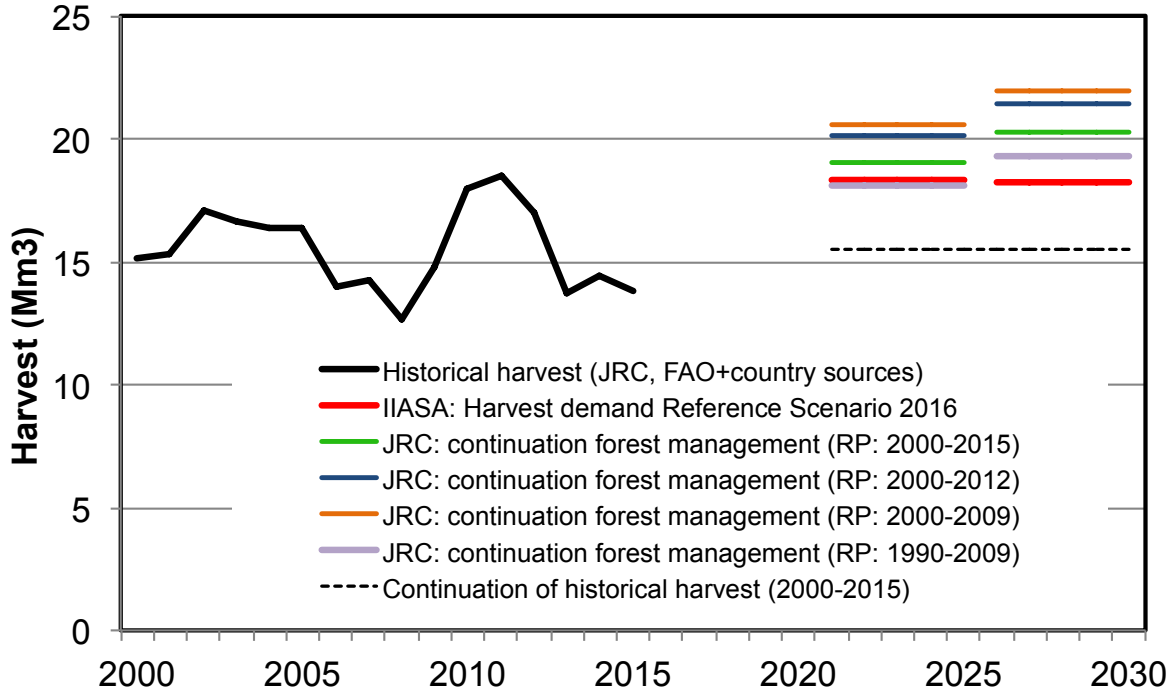


Notes: Comparison of latest historical harvest 2000-2015 from countries (black line) and from the FMRL submission in 2011 (blue line, projected if dotted) with: (i) IIASA harvest demand in Reference Scenario 2016 (red line, including the future assumed impact of market and of policies approved up to 2014) and (ii) JRC harvest for managed forest land expected under "continuation of current forest management", using different Reference Periods. The thin black dotted line is the average of historical harvest (2000-2015) projected into the future. Both JRC and IIASA data were calibrated with country harvest (2000-2012). FMRL harvest is not calibrated.
Source: JRC, 2017

Figure 2 below shows the same exercise carried out for a single Member State. In this case, a relatively skewed forest age class distribution (with the forest becoming older) would imply that harvest quantities for the period 2021-2030 should increase sharply, from around 15Mm^3 to over 20Mm^3. The potential harvest under "continuation of current forest management" for this Member State **would be significantly higher than the historical harvest level**.

In other words, by keeping the same harvest intensity this Member State could potentially increase its harvest volume by more than 30% in the period 2021-2030 without incurring debits under the methodology proposed by the Commission in Article 8, since in the future more wood will be in the class age suitable for harvest. Moreover, the Commission impact assessment finds that, for this Member State, harvest demand (in accordance with economic drivers) in the Reference Scenario 2016 would increase, but still less than might be projected according to the age class structure and the continuation of current forest management.

Figure 2: example of a Member State with skewed forest age-class distribution



Source: JRC 2017

4. Governance of FRL and involvement of the Member States

Regarding the governance of forest reference levels [Articles 8(5) and 8(6)] some Member States have asked to:

- change the empowerment for a delegated act to an implementing act;
- ensure the Member States are properly involved in:
    - the review procedure [Article 8(5)];
    - the preparation of the delegated act [Article 8(6)].

- ***Delegated act vs. implementing act***

The Treaty on the functioning of the European Union (TFEU) allows the co-legislators to empower the Commission to adopt non-legislative acts: i) delegated acts (Article 290 TFEU) or ii) implementing acts (Article 291 TFEU).

In practice the delimitation between the two forms of non-legislative acts, and in particular between the need to *supplement* or *implement* a legislative act, is sometimes open for interpretation. However, when it comes to the *amendment* of the non-essential elements (for example, the annexes) of the legislative act, the provisions of the Treaty are straightforward: the co-legislators may only confer the power to the Commission to adopt such amendments by means of delegated acts. As the purpose of the non-legislative act in Article 8(6) of the LULUCF proposal is to *amend* Annex II, this clearly requires the use of a delegated act. The only alternative is an amendment of the annex by legislative procedure.

- ***Involvement of the Member States***

  - **The review procedure of national forestry accounting plans [Article 8(5)]**

The Commission will conduct the review procedure on the basis of the good practice and experience of the expert reviews under the UNFCCC, including as regards participation of national experts and recommendations. This experience is based on the approach of peer review, where experts provide in-depth technical analysis to improve the quality and credibility of Parties' submissions. This review procedure would in principle be conducted by a group of experts consisting of Member State authority appointees and individual experts acting independently and in the public interest. The review procedure will take place before the preparatory phase laid down in Article 8(6) – see below – commences.

  - **The adoption of the Forest Reference Levels through a delegated act [Article 8(6)]**

The review procedure carried out pursuant to Article 8(5) shall serve as a basis for preparation of a delegated act under Article 8(6). Here too it is clear that, as for the review procedure the preparation of a delegated act will not be carried out by the Commission alone. Indeed, Article 8(6) requires such a delegated act to be prepared and adopted *in accordance with Article 14(Exercise of delegation)*. Paragraphs 4 and 6 of Article 14 explicitly address the question of the Member States involvement.

Article 14(4) obliges the Commission to ensure that experts *designated by each Member State* are consulted before the adoption of a delegated act. It is therefore for the Member States, and not for the Commission or the co-legislator, to decide which experts from each Member State will participate in the preparation of the delegated act.

Moreover, Article 14(4) requires the Commission to ensure that the principles laid down in the Inter-institutional Agreement on Better Law-Making of 13 April 2016[3] are respected in the process of the adoption of a delegated act. This means that, when preparing a delegated act, the Commission will have to ensure the experts designated by each Member State will be consulted in a *timely manner* and that they will be given an opportunity to react to an eventual amended version of the draft delegated act.

This consultation process is comprehensively addressed in the Inter-institutional Agreement and there is no need for spelling this process out in individual acts.

Finally, Article 14(6) mirrors the provisions of Article 290 TFEU and states that the delegated act will only enter into force if no objection has been expressed by the European Parliament or the Council. This means that the Council (i.e. all the Member States) will be given a possibility to scrutinize the Commission delegated adopted under Article 8(6).

The LULUCF legal proposal therefore already gives sufficient detail of the delegated act adoption process, fully respecting and corresponding to the TFEU and the Inter-institutional Agreement.

5. Changes to the accounting rules for Harvested Wood Product

- **Accounting as a separate category**

The Impact Assessment (Annex 5, Table 5.10) already included a preliminary analysis of the impact of "separating" Harvested Wood Product (HWP) accounting from the accounting category "Managed Forest Land".

[3] These principles are mirrored in Recital 18 of the LULUCF proposal mirrors the provisions of the IIA in Recital 18.

The separate accounting of HWP does not directly create significant impact on accounted numbers for the LULUCF sector as a whole. In the impact assessment it is demonstrated that at EU28 level for 2013-2020 (KP2), the overall impact would be very close to zero. However, **at the level of an individual Member State**, the accounting impact of separating HWP may be significant. On the one hand credits from this new category would not be subject to the 3.5% cap and therefore could generate additional benefits. On the other hand, if this accounting category would create emissions they would not be offset by possible credits from Managed Forest Land.

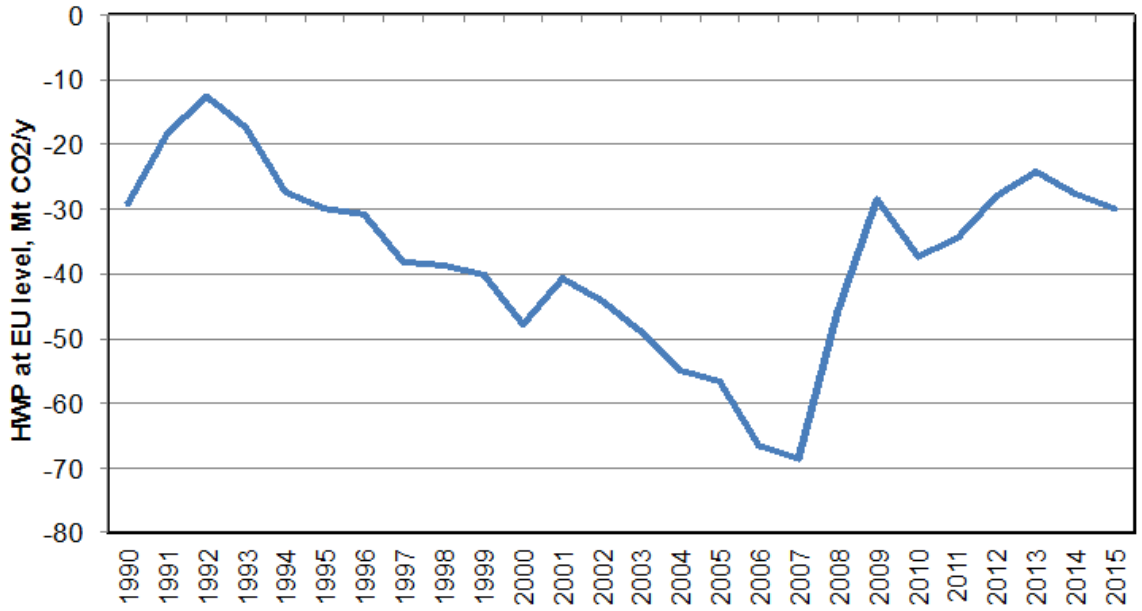
More specifically, under the current configuration including the application of a "3.5%" Managed Forest Land cap, the impact of "separate" HWP accounting under KP2 would likely be:

- Where the cap is not reached, no specific effect (e.g. DE, HU, IT, etc.) since HWP already is "visible" in the accounts, below the cap;
- In the case where the cap limits the accounting benefit and HWP generates more sink: an increase in accounting benefit (e.g. FI, LT) would occur;
- In the case where the cap limits the accounting benefit of managed forest land, and HWP creates more source: an accounting disadvantage (e.g. AT, EE, PT, SE) would occur as the emission would be revealed in the accounts.

Separating HWP accounting will therefore have a mixed effect on Member States, if the cap is maintained at its current level on Managed Forest Land accounting. This "visibility" of separate accounting provides, however, a stronger incentive for mitigation action and policy related to this category. Nevertheless, separate accounting would require a substantial change in the legal framing of existing reporting and accounting systems.

Conversely, if there is no Managed Forest Land cap, or if the cap is configured to likely not limit the accounting benefit, separate HWP accounting would overall leave mitigation action incentives unchanged. This is also a route to further incentivise HWP action, therefore.

Figure 3: Reported total of removals by HWP in the EU, based on 2017 GHG inventories



Source: JRC 2017

- **Changing Harvested Wood Product (HWP) accounting principles**

The latest GHG inventories indicate that current HWP net removals and emissions are reported at about -30 MtCO2/yr for the EU28 (Figure 3) and remain at this level in the future according to the

Reference Scenario 2016. Strong differences exist between individual Member States with a peak observed in the HWP sink in 2000-2007, mainly due to temporary high harvest rate and consequently input in the HWP pool in one Member State (Germany). Note that the current net HWP *emissions* reported by some Member States are linked to high harvest levels in the mid-term past (e.g. Romania).

On the future HWP mitigation potential, a recent JRC study[4] suggests that – assuming a moderate increase in harvest compatible with the harvest analysis shown in Figure 1 – the reported HWP sink in 2021-2030 will likely range between 30 and 40 MtCO2/y, depending on the level of future harvest. The same recent JRC study shows that:

- The current HWP sink will be maintained only by **further increasing the current harvest** (however, in the short term this will tend to reduce the current sink in forest biomass).
- If the harvest rate would stabilize, the **HWP sink will tend to slowly approach zero** in the long term, because inflows and outflows from the HWP pool will tend to balance. A possible future *decrease* in the harvest levels may even lead to HWP becoming a source.
- Overall, the potential for long-term additional HWP sink at EU level is limited.

If HWP accounting was separated, **and** accounting rules changed to include the full amount of emissions plus removals (i.e., gross-net accounting), credits (or debits) would be equal to the reported data. It would amount to 30Mt/yr, which multiplied by 10 (years) would create additional flexibility of about 300Mt for the entire period 2021-2030 which would be greater than the proposed total cap on flexibility towards ESR (i.e. 280Mt). It also should be kept in mind that such a gross-net accounting of HWP will sooner or later yield debits to at least some MS.

Since these debits would not reflect recent changes in management, but rather legacy choices (e.g. 20 or 30 years previously), this situation may be judged as “unfair”. Indeed, this is already the case for Member States that have begun to saturate their HWP accounting pool. The potential future accounting problem created by gross-net accounting of HWP is therefore problematic and should not be ignored.

Lastly, in the case of this accounting principle change, it must be noted that debits and credits associated with harvest changes would be accounted differently to the wood products from that same harvest. This would lead to a problematic imbalance in the accounting principles. Increased harvest for production of HWP *may* be included in forest reference level (thus avoiding negative accounting effects/debits), while benefits from delaying emissions from the same harvest (i.e. credits) would accounted *fully* under HWP.

[4] Pilli, R., Fiorese, G., Grassi, G. (2015) EU mitigation potential of harvested wood products. Carbon Balance and Management, 10:6