

DECISIONS

DECISION No 529/2013/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 21 May 2013

on accounting rules on greenhouse gas emissions and removals resulting from activities relating to land use, land-use change and forestry and on information concerning actions relating to those activities

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee ⁽¹⁾,

After consulting the Committee of the Regions,

Acting in accordance with the ordinary legislative procedure ⁽²⁾,

Whereas:

- (1) The land use, land-use change and forestry ('LULUCF') sector in the Union is a net sink that removes from the atmosphere an amount of greenhouse gases that is equivalent to a significant share of total Union emissions of greenhouse gases. LULUCF activities cause anthropogenic emissions and removals of greenhouse gases as a consequence of changes in the quantity of carbon stored in vegetation and soils, as well as emissions of non-CO₂ greenhouse gases. The increased sustainable use of harvested wood products can substantially limit emissions into and enhance removals of greenhouse gases from the atmosphere. Emissions and removals of greenhouse gases resulting from the LULUCF sector are not counted towards the Union's 20 % greenhouse gas emission reduction targets for 2020 pursuant to Decision No 406/2009/EC of the European Parliament and of the

Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020 ⁽³⁾, and Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community ⁽⁴⁾, though they count in part towards the Union's quantified emission limitation and reduction commitments pursuant to Article 3(3) of the Kyoto Protocol ('Kyoto Protocol') to the United Nations Framework Convention on Climate Change ('UNFCCC'), approved by Council Decision 2002/358/EC ⁽⁵⁾.

- (2) In the context of moving to a competitive low-carbon economy in 2050, all land use should be considered in a holistic manner and LULUCF should be addressed within the Union's climate policy.

- (3) Decision No 406/2009/EC requires the Commission to assess modalities to include greenhouse gas emissions and removals resulting from activities relating to LULUCF into the Union's greenhouse gas emission reduction commitment, whilst ensuring the permanence and environmental integrity of the contribution of the sector, and providing for accurate monitoring and accounting of the relevant emissions and removals. This Decision should, therefore, as a first step, set out accounting rules applicable to greenhouse gas emissions and removals from the LULUCF sector and thereby contribute to policy development towards the inclusion of the LULUCF sector in the Union's emission reduction commitment, as appropriate, while taking into account environmental conditions in the various regions of the Union, including inter alia richly forested countries. To ensure the preservation and enhancement of carbon stocks in the interim, this Decision should also provide for submission of information by Member States on their LULUCF actions to limit or reduce emissions, and to maintain or increase removals, from the LULUCF sector.

⁽³⁾ OJ L 140, 5.6.2009, p. 136.

⁽⁴⁾ OJ L 275, 25.10.2003, p. 32.

⁽⁵⁾ Council Decision 2002/358/EC of 25 April 2002 concerning the approval, on behalf of the European Community, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder (OJ L 130, 15.5.2002, p. 1).

⁽¹⁾ OJ C 351, 15.11.2012, p. 85.

⁽²⁾ Position of the European Parliament of 12 March 2013 (not yet published in the Official Journal) and decision of the Council of 22 April 2013.

- (4) This Decision should lay down the obligations of Member States in implementing those accounting rules and for providing information on their LULUCF actions. It should not lay down any accounting or reporting obligations for private parties.
- (5) Decision 16/CMP.1 of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, adopted by the 11th Conference of the Parties of the UNFCCC meeting in Montreal in December 2005, and Decision 2/CMP.7 of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, adopted by the 17th Conference of the Parties of the UNFCCC meeting in Durban in December 2011, set out accounting rules for the LULUCF sector as of a second commitment period under the Kyoto Protocol. This Decision should be fully consistent with those Decisions to ensure coherence between the Union's internal rules and definitions, modalities, rules and guidelines agreed within the UNFCCC in order to avoid any duplication of national reporting. This Decision should also reflect the particularities of the Union LULUCF sector and the obligations arising from the Union as a separate Party to the UNFCCC and the Kyoto Protocol.
- (6) The accounting rules applicable to the Union LULUCF sector should not generate an additional administrative burden. There should, therefore, be no obligation to include in the reports submitted in accordance with those rules information that is not required pursuant to the decisions of the Conference of the Parties to the UNFCCC and the Meeting of the Parties to the Kyoto Protocol.
- (7) The LULUCF sector can contribute to climate change mitigation in several ways in particular by reducing emissions, and maintaining and enhancing sinks and carbon stocks. In order for measures aiming in particular at increasing carbon sequestration to be effective, the long-term stability and adaptability of carbon pools is essential.
- (8) The LULUCF accounting rules should reflect efforts made in the agriculture and forestry sectors to enhance the contribution of changes made to the use of land resources to reducing emissions. This Decision should provide for accounting rules applicable on a mandatory basis to the activities of afforestation, reforestation, deforestation and forest management, as well as to the activities of grazing land management and cropland management, subject to specific provisions with a view to improving Member States' reporting and accounting systems during the first accounting period. This Decision should also provide for accounting rules applicable on a voluntary basis to revegetation and wetland drainage and rewetting activities. To this effect, the Commission should streamline and improve the outputs of Union databases (Eurostat-Lucas, EEA- Corine Land Cover, etc.) dealing with relevant information, with a view to assisting Member States in meeting their accounting obligations, particularly regarding cropland management and grazing land management and, where available, the voluntary accounting of revegetation as well as wetland drainage and rewetting activities.
- (9) To ensure the environmental integrity of the accounting rules applicable to the Union LULUCF sector, these rules should be based on the accounting principles laid down in Decision 2/CMP.7, Decision 2/CMP.6 of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, adopted by the 16th Conference of the Parties of the UNFCCC meeting in Cancun in December 2010 and Decision 16/CMP.1. Member States should prepare and maintain their accounts ensuring the accuracy, completeness, consistency, comparability and transparency of relevant information used in estimating emissions and removals from the LULUCF sector in line with guidance provided in relevant Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, including on methodologies for accounting for non-CO₂ greenhouse gas emissions adopted under the UNFCCC framework.
- (10) Accounting rules based on Decisions 2/CMP.7 and 16/CMP.1 do not allow for accounting of the substitution effect of using harvested wood products for energy and material purposes, since this would lead to double accounting. However, such use can make an important contribution to climate change mitigation and therefore the information on LULUCF actions provided by Member States may include measures to substitute greenhouse gas intensive materials and energy feedstocks with biomass. That would increase policy coherence.
- (11) To provide a solid basis for future policy-making and the optimisation of land use in the Union, there is a need for appropriate investments. To ensure that these investments can be prioritised to key categories, Member States should initially be allowed to exclude certain carbon pools from accounting. However, in the long-run, a move towards more comprehensive sector accounting including all land, pools and gases should be pursued.
- (12) The accounting rules should ensure that accounts accurately reflect human-induced changes in emissions and removals. In that regard, this Decision should provide for the use of specific methodologies in respect of different LULUCF activities. Emissions and removals relating to afforestation, reforestation and deforestation are the result of direct human-induced conversion of land and should therefore be accounted for in their entirety. Emissions and removals relating to grazing land management, cropland management, revegetation

and wetland drainage and rewetting are all accounted for by applying a base year to calculate changes in emissions and removals. However, emissions and removals from forest management depend on a number of natural circumstances, age-class structure, as well as past and present management practices. The use of a base year does not make it possible to reflect those factors and resulting cyclical impacts on emissions and removals or their interannual variation. The relevant accounting rules for calculating changes in emissions and removals should instead provide for the use of reference levels to exclude the effects of natural and country-specific characteristics. Reference levels constitute estimates of the annual net emissions or removals resulting from forest management within the territory of a Member State for the years included in each accounting period, and should be set transparently in accordance with Decisions 2/CMP.6 and 2/CMP.7. The reference levels referred to in this Decision should be identical to those approved through the UNFCCC processes. If improvements to methodologies or data relating to the establishment of the reference level become available to a Member State, the Member State should carry out the appropriate technical corrections to include the impact of recalculations in the accounting for forest management.

The accounting rules should provide for an upper limit applicable to net removals for forest management that may be entered into accounts. In the event of developments regarding accounting rules for forest activities in the context of the relevant international processes, updating the accounting rules for forest activities in this Decision should be considered in order to ensure consistency with those developments.

- (13) The accounting rules should appropriately reflect the positive contribution of greenhouse gas storage in wood and wood-based products and should contribute to greater use of forests as a resource, within a framework of sustainable forest management, and to increased use of wood products.
- (14) According to Chapter 4.1.1 of the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry, it is good practice that countries specify the minimum width that they will apply to define forest and units of land subject to afforestation, reforestation and deforestation activities in addition to the minimum area of forest. Consistency should be ensured between the definition used by each Member State in the reporting under the UNFCCC and the Kyoto Protocol and this Decision.
- (15) The accounting rules should ensure that Member States accurately reflect in accounts the changes in the harvested wood products pool when they take place, to provide incentives for the use of harvested wood products with long life cycles. The first-order decay function applicable to emissions resulting from harvested wood products should therefore correspond to equation 12.1 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, and the relevant default half-life values should be based on Table 3a.1.3 of the 2003 IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry. Member States should have the possibility to use country-specific methodologies and half-life values instead, provided that they are in accordance with the most recently adopted IPCC Guidelines.
- (16) Since inter-annual fluctuations in greenhouse gas emissions and removals resulting from agricultural activities are much smaller than those related to forestry activities, Member States should account for greenhouse gas emissions and removals from cropland management and grazing land management activities relative to its base year or period.
- (17) Wetland drainage and rewetting cover emissions from peatlands which store very large amounts of carbon. Emissions from degrading and draining peatlands correspond to approximately 5 % of global greenhouse gas emissions and represented between 3,5 and 4 % of the Union's emissions in 2010. Therefore, as soon as relevant IPCC guidelines are internationally agreed, the Union should endeavour to advance the issue at the international level with a view to reaching an agreement within the bodies of the UNFCCC or of the Kyoto Protocol on the obligation to prepare and maintain annual accounts of emissions and removals from activities falling within the categories of wetland drainage and rewetting and with a view to including this obligation in the global climate agreement to be concluded no later than 2015.
- (18) Natural disturbances, such as wildfires, insect and disease infestations, extreme weather events and geological disturbances that are beyond the control of, and not materially influenced by, a Member State, may result in greenhouse gas emissions of a temporary nature in the LULUCF sector, or may cause the reversal of previous removals. As reversal can also be the result of management decisions, such as decisions to harvest or plant trees, this Decision should ensure that human-induced reversals of removals are always accurately reflected in LULUCF accounts. Moreover, this Decision should provide Member States with a limited possibility to exclude emissions resulting from disturbances in afforestation, reforestation and forest management that are beyond their control from their LULUCF accounts through the use of background levels and margins in accordance with Decision 2/CMP.7. However, the manner in which Member States apply those provisions should not lead to undue under-accounting.

- (19) Reporting rules on greenhouse gas emissions and other information relevant to climate change, including information on the LULUCF sector, fall within the scope of Regulation (EU) No 525/2013 of the European Parliament and of the Council of 21 May 2013 on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change⁽¹⁾, and therefore are not within the scope of this Decision. Member States should comply with those monitoring and reporting rules in view of their accounting obligations set out in this Decision.
- (20) Completing LULUCF accounts on an annual basis would make those accounts inaccurate and unreliable due to inter-annual fluctuations in emissions and removals, the frequent need to recalculate certain reported data, and the long time required for changed management practices in agriculture and forestry to have an effect on the quantity of carbon stored in vegetation and soils. This Decision should therefore provide for accounting on the basis of a longer period.
- (21) Member States should provide information on their current and future LULUCF actions, setting out nationally appropriate measures to limit or reduce emissions and to maintain or increase removals from the LULUCF sector. This information should contain certain elements as specified in this Decision. Moreover, to promote best practice and synergies with other policies and measures relating to forests and agriculture, an indicative list of measures that may also be included in the information provided should be set out in an Annex to this Decision. The Commission may provide guidance to facilitate the exchange of comparable information.
- (22) When drawing up or implementing their LULUCF actions, Member States can, where appropriate, examine whether there are opportunities for promoting agricultural investments.
- (23) The power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission to update the definitions laid down in this Decision in accordance with changes to definitions adopted by the bodies of the UNFCCC or the Kyoto Protocol or of agreements deriving from or succeeding them; to amend Annex I to add or amend accounting periods so as to ensure that those periods correspond to the relevant periods adopted by the bodies of the UNFCCC or the Kyoto Protocol or of agreements deriving from or succeeding them, and are consistent with the accounting periods adopted by the bodies of the UNFCCC or the Kyoto Protocol or of agreements deriving from or succeeding them which are applicable to Union emission reduction commitments in other sectors; to amend Annex II with updated reference levels pursuant to the provisions set

out in this Decision; to revise the information specified in Annex III in accordance with changes to definitions adopted by the bodies of the UNFCCC or the Kyoto Protocol or of agreements deriving from or succeeding them; to amend Annex V in accordance with changes to definitions adopted by the bodies of the UNFCCC or the Kyoto Protocol or of agreements deriving from or succeeding them; and to revise the information requirements relating to the accounting rules for natural disturbances laid down in this Decision to reflect revisions to acts adopted by the bodies of the UNFCCC or of the Kyoto Protocol. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level. The Commission, when preparing and drawing-up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and to the Council.

- (24) Since the objectives of this Decision, namely setting out the accounting rules applicable to emissions and removals resulting from LULUCF activities and the provision of information by Member States on LULUCF actions cannot be sufficiently achieved by the Member States due to their very nature, and can therefore by reason of scale and effects of the action be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In doing so, the Union should respect the competences of Member States as regards forest policy. In accordance with the principle of proportionality, as set out in that Article, this Decision does not go beyond what is necessary in order to achieve those objectives,

HAVE ADOPTED THIS DECISION:

Article 1

Subject matter and scope

This Decision sets out accounting rules applicable to emissions and removals of greenhouse gases resulting from land use, land-use change and forestry ('LULUCF') activities, as a first step towards the inclusion of those activities in the Union's emission reduction commitment, when appropriate. It does not lay down any accounting or reporting obligations for private parties. It sets out the obligation for Member States to provide information on their LULUCF actions to limit or reduce emissions and to maintain or increase removals.

Article 2

Definitions

1. For the purposes of this Decision, the following definitions shall apply:

- (a) 'emissions' means anthropogenic emissions of greenhouse gases into the atmosphere by sources;

⁽¹⁾ See page 13 of this Official Journal.

- (b) 'removals' means anthropogenic removals of greenhouse gases from the atmosphere by sinks;
- (c) 'afforestation' means the direct human-induced conversion of land that has not been forest for a period of at least 50 years to forest through planting, seeding and/or the human-induced promotion of natural seed sources, where the conversion has taken place after 31 December 1989;
- (d) 'reforestation' means any direct human-induced conversion of land that is not forest to forest through planting, seeding and/or the human-induced promotion of natural seed sources, which is confined to land that was forest but ceased to be forest before 1 January 1990, and which has been reconverted to forest in the period after 31 December 1989;
- (e) 'deforestation' means the direct human-induced conversion of forest to land that is not forest, where the conversion has taken place after 31 December 1989;
- (f) 'forest management' means any activity resulting from a system of practices applicable to a forest that influences the ecological, economic or social functions of the forest;
- (g) 'cropland management' means any activity resulting from a system of practices applicable to land on which agricultural crops are grown and on land that is set aside or temporarily not being used for crop production;
- (h) 'grazing land management' means any activity resulting from a system of practices applicable to land used for livestock production and aimed at controlling or influencing the quantity and type of vegetation and livestock produced;
- (i) 'revegetation' means any direct human-induced activity intended to increase the carbon stock of any site that covers a minimum area of 0,05 hectares, through the proliferation of vegetation, where that activity does not constitute afforestation or reforestation;
- (j) 'carbon stock' means the mass of carbon stored in a carbon pool;
- (k) 'wetland drainage and rewetting' means any activity resulting from a system for draining or rewetting land which has been drained and/or rewetted after 31 December 1989, which covers a minimum area of 1 hectare and on which organic soil is present, provided the activity does not constitute any other activity for which accounts are prepared and maintained pursuant to Article 3(1), (2) and (3), and where draining is the direct human-induced lowering of the soil water table, and rewetting is the direct human-induced partial or total reversal of drainage;
- (l) 'source' means any process, activity or mechanism that releases a greenhouse gas, an aerosol or a precursor to a greenhouse gas into the atmosphere;
- (m) 'sink' means any process, activity or mechanism that removes a greenhouse gas, an aerosol, or a precursor to a greenhouse gas from the atmosphere;
- (n) 'carbon pool' means the whole or part of a biogeochemical feature or system within the territory of a Member State within which carbon, any precursor to a greenhouse gas containing carbon or any greenhouse gas containing carbon is stored;
- (o) 'precursor to a greenhouse gas' means a chemical compound that participates in the chemical reactions that produce any of the greenhouse gases listed in Article 3(4);
- (p) 'harvested wood product' means any product of wood harvesting that has left a site where wood is harvested;
- (q) 'forest' means an area of land defined by the minimum values for area size, tree crown cover or an equivalent stocking level, and potential tree height at maturity at the place of growth of the trees, as specified for each Member State in Annex V. It includes areas with trees, including groups of growing young natural trees, or plantations that have yet to reach the minimum values for tree crown cover or equivalent stocking level or minimum tree height as specified in Annex V, including any area that normally forms part of the forest area but on which there are temporarily no trees as a result of human intervention, such as harvesting, or as a result of natural causes, but which area can be expected to revert to forest;
- (r) 'crown cover' means the proportion of a fixed area that is covered by the vertical projection of the perimeter of tree crowns, expressed as a percentage;
- (s) 'stocking level' means the density of standing and growing trees on land covered by forest measured in accordance with a methodology established by the Member State;
- (t) 'natural disturbances' means any non-anthropogenic events or circumstances that cause significant emissions in forests and the occurrence of which are beyond the control of the relevant Member State provided the Member State is objectively unable to significantly limit the effect of the events or circumstances, even after their occurrence, on emissions;
- (u) 'background level' means the average emissions caused by natural disturbances in a given time period, excluding statistical outliers, calculated in accordance with Article 9(2);
- (v) 'half-life value' means the number of years it takes for the quantity of carbon stored in a harvested wood products category to decrease to one half of its initial value;

- (w) 'instantaneous oxidation' means an accounting method that assumes that the release into the atmosphere of the entire quantity of carbon stored in harvested wood products occurs at the time of harvest;
- (x) 'salvage logging' means any harvesting activity consisting of recovering timber that can still be used, at least in part, from lands affected by natural disturbances.

2. The Commission shall be empowered to adopt delegated acts in accordance with Article 12 to amend the definitions in paragraph 1 of this Article to ensure consistency between those definitions and any changes to relevant definitions adopted by the bodies of the UNFCCC or the Kyoto Protocol or of agreements deriving from or succeeding them.

3. The Commission shall be empowered to adopt delegated acts in accordance with Article 12 to amend Annex V for the purpose of updating the values listed therein in accordance with changes to definitions regarding the aspects specified in Annex V adopted by the bodies of the UNFCCC or the Kyoto Protocol or of agreements deriving from or succeeding them.

Article 3

Obligation to prepare and maintain LULUCF accounts

1. For each accounting period specified in Annex I, Member States shall prepare and maintain accounts that accurately reflect all emissions and removals resulting from the activities on their territory falling within the following categories:

- (a) afforestation;
- (b) reforestation;
- (c) deforestation;
- (d) forest management.

2. For the accounting period beginning on 1 January 2021, and thereafter, Member States shall prepare and maintain annual accounts that accurately reflect all emissions and removals resulting from the activities on their territory falling within the following categories:

- (a) cropland management;
- (b) grazing land management.

As regards the annual accounts for emissions and removals resulting from cropland management and grazing land management, for the accounting period from 1 January 2013 to 31 December 2020, the following shall apply:

- (a) From 2016 to 2018, Member States shall report to the Commission by 15 March each year on the systems in place and being developed to estimate emissions and removals from cropland management and grazing land management. Member States should report on how these systems are in accordance with IPCC methodologies and UNFCCC reporting requirements on greenhouse gas emissions and removals.
- (b) Member States shall, prior to 1 January 2022, provide and submit to the Commission by 15 March each year initial, preliminary and non-binding annual estimates of emissions and removals from cropland management and grazing land management using, where appropriate, IPCC methodologies. Member States should use at least the methodology described as Tier 1 as specified in the relevant IPCC guidelines. Member States are encouraged to use these estimates to identify key categories and develop country-specific Tier 2 and Tier 3 key methodologies for the robust and accurate estimation of emissions and removals.
- (c) Member States shall, no later than 15 March 2022, submit their final annual estimates for accounting of cropland management and grazing land management.
- (d) A Member State may request a derogation in order to delay the deadline referred to in point (c), where the determination of the final estimates for accounting of cropland management and grazing land management cannot reasonably be achieved within the timescale set out in this paragraph for at least one of the following reasons:
 - (i) the accounting required can only be achieved in phases exceeding the timescale, for reasons of technical feasibility;
 - (ii) completing the accounting within the timescale would be disproportionately expensive.

Member States wishing to benefit from the derogation shall submit a reasoned request to the Commission by 15 January 2021.

Where the Commission considers that the request is justified, it shall grant the derogation for a maximum period of three calendar years from 15 March 2022. It shall otherwise reject the request, explaining the reasons for its decision.

If necessary, the Commission may request additional information to be submitted within a reasonable time period specified.

The request for a derogation shall be deemed to have been granted where the Commission has raised no objections within six months of receiving the Member State's original request or the additional information requested.

3. For each accounting period specified in Annex I, Member States may also prepare and maintain accounts that accurately reflect emissions and removals resulting from revegetation and wetland drainage and rewetting.

4. The accounts referred to in paragraphs 1, 2 and 3 shall cover emissions and removals of the following greenhouse gases:

- (a) carbon dioxide (CO₂);
- (b) methane (CH₄);
- (c) nitrous oxide (N₂O).

5. Member States shall include in their accounts a particular activity referred to in paragraphs 1, 2 and 3, where accounts have been prepared and maintained in accordance with this Decision, as of the onset of the activity or from 1 January 2013, whichever is the later.

Article 4

General accounting rules

1. Member States shall, in their accounts referred to in Article 3(1), (2) and (3), denote emissions by a positive (+) sign and removals by a negative (-) sign.

2. In preparing and maintaining their accounts, Member States shall ensure the accuracy, completeness, consistency, comparability and transparency of relevant information when estimating emissions and removals relating to the activities referred to in Article 3(1), (2) and (3).

3. Emissions and removals resulting from any activity falling within more than one category referred to in Article 3(1), (2) and (3) shall be accounted for under only one category to prevent double counting.

4. Member States shall, on the basis of transparent and verifiable data, determine the areas of land on which an activity falling within a category referred to in Article 3(1), (2) and (3) is conducted. They shall ensure that all such areas of land are identifiable in the account for the respective category.

5. Member States shall include in their accounts referred to in Article 3(1), (2) and (3) any change in the carbon stock of the following carbon pools:

- (a) above-ground biomass;
- (b) below-ground biomass;
- (c) litter;

(d) dead wood;

(e) soil organic carbon;

(f) harvested wood products.

However, Member States may choose not to include in their accounts changes in carbon stocks for carbon pools listed under points (a) to (e) of the first subparagraph where the carbon pool is not a source. Member States shall consider that a carbon pool is not a source only where this is demonstrated on the basis of transparent and verifiable data.

6. Member States shall complete their accounts referred to in Article 3(1), (2) and (3) at the end of each accounting period listed in Annex I by specifying in those accounts the balance of total net emissions and removals during the relevant accounting period.

7. Member States shall maintain a complete and accurate record of all data used in complying with their obligations under this Decision for at least as long as this Decision is in force.

8. The Commission shall be empowered to adopt delegated acts in accordance with Article 12 to amend Annex I in order to add or amend accounting periods so as to ensure that they correspond to the relevant periods adopted by the bodies of the UNFCCC or the Kyoto Protocol or of agreements deriving from or succeeding them, and are consistent with the accounting periods adopted by the bodies of the UNFCCC or the Kyoto Protocol or of agreements deriving from or succeeding them which are applicable to Union emission reduction commitments in other sectors.

Article 5

Accounting rules for afforestation, reforestation and deforestation

1. In accounts relating to afforestation and reforestation, Member States shall reflect emissions and removals resulting only from such activities taking place on those lands that were not forest on 31 December 1989. Member States may reflect emissions from afforestation and reforestation in a single account.

2. Member States shall reflect in their accounts net emissions and removals resulting from afforestation, reforestation and deforestation activities, as the total emissions and removals for each of the years in the relevant accounting period, on the basis of transparent and verifiable data.

3. Member States shall maintain accounts for emissions and removals on lands that have been identified in accounts pursuant to Article 4(4) under the category of activity of afforestation, reforestation or deforestation even where such activity is no longer conducted on that land.

4. Each Member State shall determine the forest area using the same spatial assessment unit as specified in Annex V in calculations for the activities of afforestation, reforestation and deforestation.

Article 6

Accounting rules for forest management

1. Member States shall account for emissions and removals resulting from forest management activities, calculated as emissions and removals in each accounting period specified in Annex I, minus the value obtained by multiplying the number of years in that accounting period by their reference level specified in Annex II.

2. Where the result of the calculation referred to in paragraph 1 for an accounting period is negative, Member States shall include in their forest management accounts total emissions and removals of no more than the equivalent of 3,5 per cent of a Member State's emissions in its base year or period as specified in Annex VI, as submitted to the UNFCCC in that Member State's corresponding report adopted pursuant to relevant CMP decisions on base year or base period for the second commitment period under the Kyoto Protocol, excluding emissions and removals from activities referred to in Article 3(1), (2) and (3), multiplied by the number of years in that accounting period.

3. Member States shall ensure that the calculation methods they apply in respect of their accounts for forest management activities are in accordance with Appendix II of Decision 2/CMP.6 and are consistent with the calculation methods applied for the calculation of their reference levels specified in Annex II with regard to at least the following aspects:

- (a) carbon pools and greenhouse gases;
- (b) area under forest management;
- (c) harvested wood products;
- (d) natural disturbances.

4. No later than one year before the end of each accounting period, Member States shall communicate to the Commission revised reference levels. These reference levels shall be identical to those established by acts approved by the bodies of the UNFCCC or of the Kyoto Protocol or, in the absence of such acts, shall be calculated in accordance with the processes and methodologies set out in relevant decisions adopted by the bodies of the UNFCCC or the Kyoto Protocol or of agreements deriving from or succeeding them.

5. If there are changes to the relevant provisions of Decisions 2/CMP.6 or 2/CMP.7, the Member States shall communicate to the Commission revised reference levels reflecting those changes no later than six months after the adoption of those changes.

6. If improved methodologies relating to the data used to establish the reference level specified in Annex II become available to a Member State, or where there are significant improvements in the quality of data available to a Member State, the Member State concerned shall carry out the appropriate technical corrections to include the impact of recalculations in the accounting for forest management. Those technical corrections shall be identical to any such corrections approved in the framework of the UNFCCC review process, in accordance with Decision 2/CMP.7. The Member State concerned shall communicate those corrections to the Commission at the latest as part of its submission under Article 7(1)(d) of Regulation (EU) No 525/2013.

7. For the purposes of paragraphs 4, 5 and 6, Member States shall specify the amount of annual emissions resulting from natural disturbances which have been included in their revised reference levels and the manner in which they estimated that amount.

8. The Commission shall check the information regarding the revised reference levels referred to in paragraphs 4 and 5 and the technical corrections referred to in paragraph 6 in order to ensure consistency between the information sent to the UNFCCC and the information communicated to the Commission by the Member States.

9. The Commission shall be empowered to adopt delegated acts in accordance with Article 12 to update the reference levels in Annex II where a Member State modifies its reference level pursuant to paragraphs 4 and 5 and this is approved through the UNFCCC processes.

10. Member States shall reflect in their accounts for forest management the impact of any amendment to Annex II in respect of the entire accounting period concerned.

Article 7

Accounting rules for harvested wood products

1. Each Member State shall reflect in its accounts pursuant to Article 3(1), (2) and (3) emissions and removals resulting from changes in the pool of harvested wood products, including emissions from harvested wood products removed from its forests prior to 1 January 2013. Emissions from harvested wood products already accounted for under the Kyoto Protocol during the period from 2008 to 2012 on the basis of instantaneous oxidation shall be excluded.

2. In accounts pursuant to Article 3(1), (2) and (3) relating to harvested wood products, Member States shall reflect emissions and removals resulting from changes in the pool of harvested wood products falling within the following categories using the first order decay function and the default half-life values specified in Annex III:

- (a) paper;
- (b) wood panels;
- (c) sawn wood.

Member States may supplement those categories with information on bark, provided that the available data is transparent and verifiable. Member States may also use country-specific sub-categories of any of those categories. Member States may use country-specific methodologies and half-life values instead of the methodologies and default half-life values specified in Annex III provided that those methodologies and values are determined on the basis of transparent and verifiable data and that the methods used are at least as detailed and accurate as those specified in Annex III.

For exported harvested wood products, country-specific data refers to country-specific half-life values and harvested wood products usage in the importing country.

Member States shall not use country-specific half-life values for harvested wood products placed on the market in the Union that deviate from those used by the importing Member State in their accounts pursuant to Article 3(1), (2) and (3).

Harvested wood products resulting from deforestation shall be accounted for on the basis of instantaneous oxidation.

3. Where Member States reflect in their accounts pursuant to Article 3(1), (2) and (3) carbon dioxide (CO₂) emissions from harvested wood products in solid waste disposal sites, accounting shall be on the basis of instantaneous oxidation.

4. Where Member States reflect in their accounts emissions resulting from harvested wood products that were harvested for energy purposes, they shall do so also on the basis of instantaneous oxidation.

Member States may, for information purposes only, provide in their submission data on the share of wood used for energy purposes that was imported from outside the Union, and the countries of origin for such wood.

5. Imported harvested wood products, irrespective of their origin, shall not be accounted for by the importing Member State. Member States shall therefore reflect emissions and removals from harvested wood products in their accounts

only where those emissions and removals result from harvested wood products removed from lands included in their accounts pursuant to Article 3(1), (2) and (3).

6. The Commission shall be empowered to adopt delegated acts in accordance with Article 12 to revise the information specified in Annex III in order to reflect changes in acts adopted by the bodies of the UNFCCC or the Kyoto Protocol or of agreements deriving from or succeeding them.

Article 8

Accounting rules for cropland management, grazing land management, revegetation, and wetland drainage and rewetting

1. In accounts relating to cropland management and grazing land management, each Member State shall reflect emissions and removals resulting from those activities, calculated as emissions and removals in each accounting period specified in Annex I, minus the value obtained by multiplying the number of years in that accounting period by that Member State's emissions and removals resulting from those activities in its base year, as specified in Annex VI.

2. Where a Member State elects to prepare and maintain accounts for revegetation, and/or wetland drainage and rewetting, it shall apply the calculation method specified in paragraph 1.

Article 9

Accounting rules for natural disturbances

1. Where the conditions set out in paragraphs 2 and 5 of this Article are met, Member States may exclude non-anthropogenic greenhouse gas emissions by sources resulting from natural disturbances from calculations relevant to their accounting obligations pursuant to points (a), (b) and (d) of Article 3(1).

2. Where Member States apply paragraph 1 of this Article, they shall calculate, in accordance with the methodology specified in Annex VII, a background level for each of the activities referred to in points (a), (b) and (d) of Article 3(1). Points (a) and (b) of Article 3(1) shall have a common background level. Alternatively, Member States may apply a transparent and comparable country-specific methodology using a consistent and initially complete time series of data, including for the period from 1990 to 2009.

3. Member States may exclude from their LULUCF accounts, either annually or at the end of the respective accounting period, the non-anthropogenic greenhouse gas emissions by sources exceeding the background level as calculated in accordance with paragraph 2 where:

- (a) the emissions in a particular year of the accounting period exceed the background level plus a margin. Where the background level is calculated in accordance with the method specified in Annex VII, that margin shall be equal to twice the standard deviation of the time series used to calculate

the background level. Where the background level is calculated using a country-specific methodology, Member States shall describe the manner in which the margin has been established, in cases where such a margin is needed. Any methodology used shall avoid the expectation of net credits during the accounting period;

- (b) the information requirements in paragraph 5 are met and reported by the Member States.

4. Every Member State which excludes non-anthropogenic greenhouse gas emissions by sources from natural disturbances in a particular year of the accounting period shall:

- (a) exclude from accounting for the rest of the accounting period all subsequent removals on lands affected by natural disturbances and on which the emissions referred to in paragraph 3 have occurred;
- (b) not exclude emissions resulting from harvesting and salvage logging activities that took place on those lands following the occurrence of the natural disturbances;
- (c) not exclude emissions resulting from prescribed burning that took place on those lands in that particular year of the accounting period;
- (d) not exclude emissions on lands that were subject to deforestation following the occurrence of natural disturbances.

5. Member States may exclude non-anthropogenic greenhouse gas emissions by sources from natural disturbances only if they provide transparent information demonstrating:

- (a) that all land areas affected by natural disturbances in that particular reporting year have been identified, including their geographical location, year and types of natural disturbances;
- (b) that no deforestation has occurred during the rest of the respective accounting period on lands that were affected by natural disturbances and in respect of which emissions were excluded from accounting;
- (c) which verifiable methods and criteria will be used to identify deforestation on those lands in the subsequent years of the accounting period;
- (d) where practicable, which measures the Member State undertook to manage or control the impact of those natural disturbances;
- (e) where possible, which measures the Member State undertook to rehabilitate the lands affected by those natural disturbances.

6. The Commission shall be empowered to adopt delegated acts in accordance with Article 12 to revise the information requirements referred to in paragraph 5 of this Article in order to reflect revisions to acts adopted by the bodies of the UNFCCC or of the Kyoto Protocol.

Article 10

Information on LULUCF actions

1. No later than 18 months after the beginning of each accounting period specified in Annex I, Member States shall draw up and transmit to the Commission information on their current and future LULUCF actions to limit or reduce emissions and maintain or increase removals resulting from the activities referred to in Article 3(1), (2) and (3) of this Decision, as a separate document or as a clearly identifiable part of their national low-carbon development strategies referred to in Article 4 of Regulation (EU) No 525/2013, or of other national strategies or plans related to LULUCF. Member States shall ensure that a broad range of stakeholders are consulted. Where a Member State submits such information as part of the low-carbon development strategies under Regulation (EU) No 525/2013, the relevant timetable specified in that Regulation shall apply.

The information on LULUCF actions shall cover the duration of the relevant accounting period specified in Annex I.

2. Member States shall include in their information on LULUCF actions, as a minimum, the following information relating to each of the activities referred to in Article 3(1), (2) and (3):

- (a) a description of past trends of emissions and removals including, where possible, historic trends, to the extent that they can reasonably be reconstructed;
- (b) projections for emissions and removals for the accounting period;
- (c) an analysis of the potential to limit or reduce emissions and to maintain or increase removals;
- (d) a list of the most appropriate measures to take into account national circumstances, including, as appropriate, but not limited to the indicative measures specified in Annex IV, that the Member State is planning or that are to be implemented in order to pursue the mitigation potential, where identified in accordance with the analysis referred to in point (c);
- (e) existing and planned policies to implement the measures referred to in point (d), including a quantitative or qualitative description of the expected effect of those measures on emissions and removals, taking into account other policies and measures relating to the LULUCF sector;

(f) indicative timetables for the adoption and implementation of the measures referred to in point (d).

3. The Commission may provide guidance and technical assistance to Member States to facilitate the exchange of information.

The Commission may, in consultation with the Member States, synthesise its findings from all Member States' information on LULUCF actions with a view to facilitating the exchange of knowledge and best practices among Member States.

4. Member States shall submit to the Commission, by the date halfway through each accounting period, and by the end of each accounting period specified in Annex I, a report describing the progress in the implementation of their LULUCF actions.

The Commission may publish a synthesis report on the basis of the reports referred to in the first subparagraph.

Member States shall make available to the public the information on their LULUCF actions and the reports referred to in the first subparagraph within three months of submitting them to the Commission.

Article 11

Review

The Commission shall review the accounting rules in this Decision in accordance with relevant decisions adopted by bodies of the UNFCCC or of the Kyoto Protocol, or other Union law or, in the absence of such decisions, by 30 June 2017, and submit, if appropriate, a proposal to the European Parliament and the Council.

Article 12

Exercise of the delegation

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.

2. The power to adopt delegated acts referred to in Articles 2(2), 2(3), 4(8), 6(9), 7(6) and 9(6) shall be conferred on the Commission for a period of eight years from 8 July 2013. The Commission shall draw up a report in respect of the delegation of power not later than nine months before the end of the eight

year period. The delegation of power shall be tacitly extended for periods of an identical duration, unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.

3. The delegation of power referred to in Articles 2(2), 2(3), 4(8), 6(9), 7(6) and 9(6) may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

4. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

5. A delegated act adopted pursuant to Articles 2(2), 2(3), 4(8), 6(9), 7(6) and 9(6) shall enter into force only if no objection has been expressed either by the European Parliament or the Council within a period of two months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or the Council.

Article 13

Entry into force

This Decision shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Article 14

This Decision is addressed to the Member States.

Done at Strasbourg, 21 May 2013.

For the European Parliament
The President
M. SCHULZ

For the Council
The President
L. CREIGHTON

ANNEX I

ACCOUNTING PERIODS REFERRED TO IN ARTICLE 3(1)

Accounting period	Years
First accounting period	From 1 January 2013 to 31 December 2020

ANNEX II

MEMBER STATE REFERENCE LEVELS REFERRED TO IN ARTICLE 6

Member State	Gg carbon dioxide (CO ₂) equivalents per year
Belgium	- 2 499
Bulgaria	- 7 950
Czech Republic	- 4 686
Denmark	409
Germany	- 22 418
Estonia	- 2 741
Ireland	- 142
Greece	- 1 830
Spain	- 23 100
France	- 67 410
Italy	- 22 166
Cyprus	- 157
Latvia	- 16 302
Lithuania	- 4 552
Luxembourg	- 418
Hungary	- 1 000
Malta	- 49
Netherlands	- 1 425
Austria	- 6 516
Poland	- 27 133
Portugal	- 6 830
Romania	- 15 793
Slovenia	- 3 171
Slovakia	- 1 084
Finland	- 20 466
Sweden	- 41 336
United Kingdom	- 8 268

ANNEX III

FIRST ORDER DECAY FUNCTION AND DEFAULT HALF-LIFE VALUES REFERRED TO IN ARTICLE 7

First order decay function starting with $i = 1900$ and continuing to present year:

$$(A) C(i + 1) = e^{-k} \cdot C(i) + \left[\left(\frac{1 - e^{-k}}{k} \right) \right] \cdot Inflow(i)$$

with $C(1900) = 0.0$

$$(B) \Delta C(i) = C(i + 1) - C(i)$$

where:

i = year

$C(i)$ = the carbon stock of the harvested wood products pool in the beginning of year i , Gg C

k = decay constant of first-order decay given in units of year-1 ($k = \ln(2)/HL$, where HL is half-life of the harvested wood products pool in years.)

$Inflow(i)$ = the inflow to the harvested wood products pool during year i , Gg C year-1

$\Delta C(i)$ = carbon stock change of the harvested wood products pool during year i , Gg C year-1,

Default half-life values (HL):

2 years for paper

25 years for wood panels

35 years for sawn wood.

ANNEX IV

**INDICATIVE MEASURES THAT MAY BE INCLUDED IN THE INFORMATION ON LULUCF ACTIONS
SUBMITTED PURSUANT TO ARTICLE 10(2)(d)**

- (a) Measures related to cropland management such as:
 - improving agronomic practices by selecting better crop varieties,
 - extending crop rotations and avoiding or reducing the use of bare fallow,
 - improving nutrient management, tillage/residue management and water management,
 - stimulating agro-forestry practices and potential for land cover/use change.
 - (b) Measures related to grazing land management and pasture improvement such as:
 - preventing the conversion of grassland to cropland and the reversion of cropland to native vegetation,
 - improving grazing land management by including changes to the intensity and timing of grazing,
 - increasing productivity,
 - improving nutrient management,
 - improving fire management,
 - introducing more appropriate species and in particular deep rooted species.
 - (c) Measures to improve the management of agricultural organic soils, in particular, peat lands, such as:
 - incentivising sustainable paludicultural practices,
 - incentivising adapted agricultural practices, such as minimising soil disturbance or extensive practices.
 - (d) Measures to prevent drainage and to incentivise rewetting of wetlands.
 - (e) Measures related to existing or partly drained mires, such as:
 - preventing further drainage,
 - incentivising rewetting and restoration of mires,
 - preventing bog fires.
 - (f) Restoration of degraded lands.
 - (g) Measures related to forestry activities such as:
 - afforestation and reforestation,
 - conservation of carbon in existing forests,
 - enhancing production in existing forests,
 - increasing the harvested wood products pool,
 - enhancing forest management, including through optimised species composition, tending and thinning, and soil conservation.
 - (h) Preventing deforestation.
 - (i) Strengthening protection against natural disturbances such as fire, pests, and storms.
 - (j) Measures to substitute greenhouse gas intensive energy feedstocks and materials with harvested wood products.
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ANNEX V

MINIMUM VALUES FOR AREA SIZE, TREE CROWN COVER AND TREE HEIGHT AS SPECIFIED BY THE MEMBER STATE FOR THE DEFINITION OF FOREST

Member State	Area (ha)	Tree crown cover (%)	Tree height (m)
Belgium	0,5	20	5
Bulgaria	0,1	10	5
Czech Republic	0,05	30	2
Denmark	0,5	10	5
Germany	0,1	10	5
Estonia	0,5	30	2
Ireland	0,1	20	5
Greece	0,3	25	2
Spain	1,0	20	3
France	0,5	10	5
Italy	0,5	10	5
Cyprus			
Latvia	0,1	20	5
Lithuania	0,1	30	5
Luxembourg	0,5	10	5
Hungary	0,5	30	5
Malta			
Netherlands	0,5	20	5
Austria	0,05	30	2
Poland	0,1	10	2
Portugal	1,0	10	5
Romania	0,25	10	5
Slovenia	0,25	30	2
Slovakia	0,3	20	5
Finland	0,5	10	5
Sweden	0,5	10	5
United Kingdom	0,1	20	2

ANNEX VI

BASE YEAR OR PERIOD

Member State	Base Year
Belgium	1990
Bulgaria	1988
Czech Republic	1990
Denmark	1990
Germany	1990
Estonia	1990
Ireland	1990
Greece	1990
Spain	1990
France	1990
Italy	1990
Cyprus	
Latvia	1990
Lithuania	1990
Luxembourg	1990
Hungary	1985-87
Malta	
Netherlands	1990
Austria	1990
Poland	1988
Portugal	1990
Romania	1989
Slovenia	1986
Slovakia	1990
Finland	1990
Sweden	1990
United Kingdom	1990

ANNEX VII

CALCULATION OF BACKGROUND LEVEL OF NATURAL DISTURBANCES

1. For the calculation of the background level Member States shall provide information on historic levels of emissions caused by natural disturbances. In doing this, Member States shall:
 - (a) provide information on the type(s) of natural disturbance included in the estimation;
 - (b) include total annual emissions estimations for those natural disturbance types for the period 1990-2009, listed by activities referred to in Article 3(1);
 - (c) demonstrate that time series consistency is guaranteed in all relevant parameters, including minimum area, emission estimation methodologies, coverages of pools and gases.
 2. The background level shall be calculated for those activities listed in Article 3(1), where the Member State intends to apply the Natural Disturbances provisions, as the average of the 1990-2009 time series excluding all years where abnormal levels of emissions were recorded, i.e. excluding all statistical outliers. The identification of statistical outliers shall be made following an iterative process described as follows:
 - (a) calculate the arithmetic average value and the standard deviation of the full time series 1990-2009;
 - (b) exclude from the time series all years where the annual emissions are outside twice the standard deviation around the average;
 - (c) calculate again the arithmetic average value and the standard deviation of the time series 1990-2009 minus the years excluded in (b);
 - (d) repeat (b) and (c) until no outliers can be identified.
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