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Inclusion of greenhouse gas emissions and removals from land use, land use change, and forestry (LULUCF) into the 2030 climate and energy framework

Impact assessment (SWD (2016) 249, SWD(2016) 246 (summary) of a Commission proposal for a regulation of the European Parliament and of the Council on the inclusion of the greenhouse gas emissions and removals from land use, land use change, and forestry into the 2030 climate and energy framework and amending Regulation No 525/2013 of the European Parliament and of the Council on a mechanism for monitoring and reporting greenhouse gas emissions and other information relevant to climate change (COM(2016) 479

Background

This note seeks to provide an initial analysis of the strengths and weaknesses of the European Commission's [Impact Assessment](#) (IA) accompanying the above [proposal](#), submitted on 20 July 2016 and referred to Parliament's Committee on the Environment, Public Health and Food Security.

The proposed regulation originates from the [October 2014 conclusions of the European Council](#) which mandated the European Commission to prepare a policy whereby land use, land use change, and forestry (LULUCF) would be integrated into the EU's climate and energy framework for 2030. The objective of this proposal is to achieve a stronger contribution from the LULUCF sector to the EU climate policy framework after 2021, when the Kyoto Protocol expires. As far as its content is concerned, the proposed regulation requires Member States to balance emissions and removals from the LULUCF sector. It also defines flexibility in this balancing (i.e. the possible exchange of removal units, credits, or debits, between or within sectors, towards the agriculture sector), sets the framework for reporting and monitoring, and seeks to streamline accounting rules.

For the European Commission, this proposal is a political priority as it is linked to the EU's commitments under the 2015 Paris Agreement on climate change¹ and the ten priorities of the current Juncker presidency. Furthermore, the proposal is a contribution towards to the achievement of the EU climate target to reduce the greenhouse gas emissions below 1990 levels by 20 % by 2020 and 40 % by 2030. In this regard, the proposal is interlinked with other legislative files currently under consideration by the European Parliament, notably the proposed effort-sharing regulation for greenhouse gas emission reductions.²

¹ http://ec.europa.eu/clima/citizens/eu_en

² For further information, see K. Eisele, Effort sharing: greenhouse gas emissions reductions for Member States (2021-2030), December 2016, available at

http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/593778/EPRS_BRI%282016%29593778_EN.pdf

and G. Erbach, Land use in the EU 2030 climate and energy framework, EPRS, September 2016, available at

http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/589799/EPRS_BRI%282016%29589799_EN.pdf

Problem definition

The IA identifies three main problems to address, namely (1) the lack of governance for LULUCF following expiry of the Kyoto protocol; (2) the inadequate accounting of current biomass emissions; and (3) the problem that existing measures are insufficient to reach the 2030 climate target.

As far as the first problem is concerned, the IA explains that the LULUCF sector is currently covered by EU [Decision 529/2013/EU](#) (the LULUCF Decision), which incorporates the provisions of the Kyoto protocol into EU legislation. These rules do not apply beyond 2020, i.e. after the expiry of the Kyoto protocol. At the same time the Paris climate agreement (the Paris Agreement) requires EU Member States to report on their LULUCF emissions and removals without providing a single set of standards. There is therefore a need to improve and streamline the rules for the LULUCF sector to extend emissions and removals accounting beyond the end of the Kyoto Protocol, to bring the rules into line with the Paris Agreement, and to fully embed the accounting rules in the EU's 2030 energy and climate framework.

The second and third problems seem to stem from the first, as the IA explains that improving the accounting rules for emissions generated by biomass in the LULUCF sector would enable Member States to use the 'untapped potential for emission reduction' in this sector (IA, p. 5.) The IA states that the current state of play regarding accounting rules is such that 'only a limited number' of removals of carbon dioxide from the atmosphere reported in the LULUCF sector can be used towards compliance with Kyoto targets (IA, p. 6).

Lastly, in line with the better regulation guidelines, in the problem section the IA analyses the baseline scenario in detail and concludes that the effects of land use on emissions and removals in the LULUCF sector are not likely to improve if the current situation remains unchanged (IA, pp. 10-11). Regarding biomass in particular, 'existing incentives and rules may undermine the historical trend of an overall sink for the EU, potentially wasting an opportunity to underpin the EU's longer commitment under the Paris Agreement' (IA, p. 11).

Objectives of the legislative proposal

The general objectives of the proposal are to 'consolidate the enabling environment for the transition to a low carbon economy', to support progress towards the EU's climate targets, in particular towards the 30 % greenhouse gas (GHG) reduction target, uphold the fairness of the overall policy framework with respect to the social and distributional effects of the measures, and reflect the EU's commitment to the long term vision for limiting temperature increase as outlined in the Paris Agreement (IA, p. 23).

The specific objectives of the proposal include steps such as to maintain, streamline and improve monitoring and accounting approaches; to determine how agriculture and LULUCF will contribute to supporting emission reductions within the 2030 climate and energy framework; and to ensure there is no accounting gap relating to the use of biomass for energy in the absence of uniform international rules after the end of the Kyoto regime (IA, p. 22).

The IA presents operational objectives as follows:

- to take the specificities of the LULUCF sector (non-permanence, natural disturbances in forest management and others) into account;
- ensure consistency with related policies such as policies on sustainable forest management and protection of biodiversity;
- explore the links between LULUCF and the lower mitigation potential in Member States' agriculture sectors, including in terms of flexibilities;
- to determine the least burdensome approach with respect to administrative effort for Member States, best aligned with other policies.

As the operational and specific objectives are rather vague and partly overlap, it would have been particularly useful had the IA formulated the operational objectives with respect to the better regulation guidelines and included more specific and measurable deliverables.

Range of options considered

The proposal presents a wide range of options which were formulated taking into consideration two main parameters, or 'choices':

1. choice of an optimal improvement of accounting rules and governance of the LULUCF sector,
2. choice of degree of flexibility.

These choices are subdivided into several sub-choices. As a result, four different sets of options are assessed. The IA does not mention any options discarded at an early stage of preparation of the report, and it states that all the options were discussed during the consultations with stakeholders. The four sets of options are briefly summarised below.

With regard to the choice of optimal accounting rules, the options include:

Option B0: Status quo: the Kyoto base year, 1990,

Option B1: Applying the base period of 2005-2007.

The IA argues that changing the base year to a more recent period will increase the accuracy of the estimates, due to the more recent datasets used to compute the net emissions and removals, which is an important part of improving the accounting rules (IA, p. 39).

Another set of options pertaining to the improvement of accounting is the choice of transition period for afforested land:

Option R0: Status quo: continuation of the two concurrent systems of reporting,

Option R1: land-based UNFCCC³ reporting with 20 year transition period for afforested land,

Option R2: land-based UNFCCC reporting with 30 year transition period for afforested land.

The IA states that applying a land-based UNFCCC accounting approach with a 30-year moving window (Option R2) could potentially deliver credits of 730 million tonnes of CO₂ from the LULUCF sector. According to the European Commission, 'these rule changes would enhance the environmental integrity of the LULUCF credits generated because they improve accuracy of accounting'. However, 'much will depend on the commitment of Member States to deliver additional measures and programmes, in support of mitigation action related to afforestation and agricultural land' (IA, p. 43).

With regard to the need for flexibility for agriculture, the IA assesses the three flexibility options below:

Option F0: Self-standing pillar for LULUCF with no flexibility credits (status quo),

Option F1: Self-standing pillar with low flexibility: around half of the assumed agricultural emission reduction effort could be undertaken in the LULUCF sector,

³ United Nations Framework Convention on Climate Change (UNFCCC).

Option F2: Self-standing pillar with medium flexibility: up to two thirds of the emission reductions could be undertaken in the LULUCF sector,

Option F3: High flexibility: emissions reductions equivalent to a reduction of non-CO₂ agricultural emissions by -20 % could be undertaken in the LULUCF sector.

The IA shows distribution of LULUCF credit limits among Member States depending on the Member States' need for flexibility, which is in turn relative to the importance of agricultural emissions in their national emissions profile (IA, p. 47). The IA concludes that a limited degree of flexibility (Option F2) should be enabled, depending on the need derived from the agricultural sector share for each Member State.

With regard to governance, there are three main options:

Option G0: Status quo: An independent body that checks the forest reference levels submitted by Member States,

Option G1: In this option, the European Commission checks and reviews the levels submitted by Member States with the support of experts from Member States,

Option G2: In this option, the European Commission alone checks and reviews the data submitted by Member States.

The IA explains that Option G1 is the preferred option, because it provides the advantage of 'using wider expertise, providing additional transparency and facilitating knowledge-sharing and capacity-building between Member States' experts' (IA, p. 46).

According to the European Commission, a stand-alone LULUCF policy pillar, with a limited degree of flexibility was identified as the preferred option, therefore including options B1, R2, G1, and F2 (IA, p. 62). As the IA states, 'such hybrid option would limit changes of the overall architecture and would thereby minimise administrative burden and red tape while maximising the contributions to the overall achievement of the EU's 2030 targets. The inclusion of LULUCF on the basis of such a hybrid option would also incentivise additional mitigation action in the land and forestry sector and hence be fully compliant with the long term vision for limiting temperature increase as outlined in the Paris Agreement' (IA, p. 62). A limited degree of flexibility between LULUCF and the non-ETS sectors would be enabled, depending on the need derived from the lower mitigation potential of agriculture and the share of the agriculture sector for each Member State. This option would be compatible with food security and biodiversity objectives and would not result in negative employment effects.

Overall the range of options appears well presented, albeit somewhat limited to two viable options in each set, and one option in the case of the choice of the base period. One needs to bear in mind that the baseline scenario (given in each set as option 0) admittedly cannot be considered as a viable option, as it does not allow achievement of the objectives of the proposal. On the other hand, the IA offers a wider scope of options for flexibility, which seems to be the most important element to consider.

Scope of the Impact Assessment

The IA assesses the options against their environmental, social and economic impacts. Distributional impacts are also assessed together with the social impacts.

When assessing the environmental impacts, the IA focuses mostly on the flexibility options F1, F2 and F3. The IA does this by assessing the projected credit generation potential for 2021-2030 for each Member State and then aggregating it to show the overall impact on EU level using the preferred accounting rules (IA, p. 28). As a result of this assessment, the IA concludes that under the preferred medium flexibility option, Member States would have to initiate significant new afforestation action and extra sequestration on agricultural land. At the same

time, the high flexibility level would lead to very uneven distribution among Member States. Germany, Ireland, Poland, and Spain would have the absolute highest credit generation capacity whereas Belgium, Cyprus, Denmark, Finland, Ireland, Luxembourg, the Netherlands, and the United Kingdom, would have to implement additional mitigation action in the LULUCF sector. In addition, the IA assesses other environmental impacts, in particular environmental impacts on agricultural soils. In this respect, the IA recommends mitigation measures to protect or enhance soil carbon.

As regards the economic impacts, the IA looks closely at abatement costs and production impacts in the agricultural sector under the four flexibility options (F0-F3). The higher the degree of flexibility, the lower the economic costs, as they can be offset by using the LULUCF credits. On the basis of a sensitivity analysis (IA, pp. 54-55), the report concludes that 'linking use of LULUCF flexibility to the needs of the agriculture sector is a rational approach to limit potential economic impacts of reduction targets' (IA, p. 55).

For the social, distributional, and employment impacts, the IA explains in rather general terms that the concrete impacts will depend on the Member States' national mitigation measures, for example on the choice of adopting new technologies in the agricultural sectors, as well as on 'the level of competitiveness, modernisation, quality of work, and sector income' (IA, p. 57). In the same vague manner, the IA mentions that the 'overall welfare effect would be slightly negative', because it will be the task of the economic actors outside agriculture to finance these mitigation measures. Therefore, as the report notes, the degree of flexibility between LULUCF credits and agriculture would play an important role in reducing the negative agricultural employment impact.

Subsidiarity/proportionality

The legal basis of the proposal is Article 192 of the Treaty on the Functioning of the European Union. In addition, Articles 191 and 193 define the EU's competence on climate change and environment. The IA stresses the trans-border nature of climate change-derived problems (IA, p. 22). The IA points out that 'as the EU addresses climate change commitments jointly, LULUCF also needs to be addressed in a coordinated manner' (IA, p. 22). Responsibility for achieving the EU commitment to reduce emissions by 30 % up to 2030 is shared, as is already the case in the current 2020 climate and energy package, as well as the proposed effort sharing regulation. The LULUCF proposal leaves Member States to decide how emission reductions are to be achieved, 'while fully respecting the principle of subsidiarity' (IA, p. 22).

As regards proportionality of the proposed legislation, the IA states that this is 'ensured by striking the balance between the multiple objectives of the area, namely: the limited mitigation potential of agriculture, the need to ensure food security, protection of biodiversity and the long term objective of enhancing sinks on land in line with the aspirational target of balancing emissions, post-2050'. The IA however does not elaborate on the issue of proportionality in the analysis of options. The explanatory memorandum states that 'the objective of the proposal is best pursued through a regulation' (explanatory memorandum p. 4).

The Italian and Polish Senates, and the Portuguese Parliament have submitted [comments](#) on this proposal. All agree that the proposal complies with the principle of subsidiarity but have certain considerations. The Polish Senate expressed that forestry policy remains the prerogative of Member States and that compliance with the principle of subsidiarity should not limit Member States in the way they implement the EU's "effort-sharing" objective. The Italian Senate stated, among other considerations, that the first three compliance reports on the balance of total greenhouse gas emissions and removals should be submitted to the Commission by Member States every two years. The deadline for submission of national parliament opinions was 17 October 2016.

Budgetary or public finance implications

As the IA notes repeatedly, the impacts of the proposal on Member States, including budgetary and financial implications, will depend on the choice of national policies and measures for greenhouse gas emission reductions and other mitigation action in the land use sector chosen in each specific Member State. According to the European Commission, the proposal eliminates one (of the existing two) reporting frameworks, streamlining the process of accounting compared to that required under the Kyoto Protocol. This would reduce

administrative costs for Member States and the Commission. Furthermore, additional administrative impacts are expected to be minimal, as Member States are already providing annual information on the accounted emissions and removals in the LULUCF sector (IA, p. 56).

SME test/Competitiveness

The IA does not include a separate SMEs test and covers the issues pertaining to SMEs under social impacts. The report explicitly states that ‘rather than small and medium-sized enterprises which comprise the millions of farm and forestry holdings across the EU, the proposed regulation is addressed to Member States and to be implemented at national level’ (IA, p. 22). There are no direct reporting obligations for microenterprises, small and medium-sized enterprises, or other enterprises, under the current legislation. The proposal would not change this situation (explanatory memorandum, p. 5).

The IA indicates that the impact on SMEs will largely depend on the approach taken by Member States to implementing the EU climate commitments, because it is the Member States that will decide on the distribution of their overall national ambitions across sectors, including LULUCF. It could be assumed however that the degree of flexibility is another factor that will affect SMEs, although these effects are not explained in the IA in a straightforward manner. In scenarios without flexibility, employment will be driven down by a decline in agricultural production. However, the subsidies (from the common agricultural policy) would help to mitigate these negative impacts (IA, p. 57). The IA gives no further details about the role of SMEs in LULUCF and how they might be affected apart from loss of unemployment. It states that mitigation measures based on technological innovation would improve overall resource efficiency and competitiveness.

Simplification and other regulatory implications

The European Commission explains that the present proposal aims to streamline the two existing parallel reporting systems into a single system, therefore achieving a significant degree of regulatory simplification (explanatory memorandum p. 5). As stated above, the proposal is based on the rules already established by the LULUCF Decision No 529/2013/EU. The proposal is aligned with the proposal on effort sharing, as it has a similar annual mechanism for reporting and a five-year period for compliance checks. The proposal is also linked with the INSPIRE Directive (Directive 2007/2/EC) concerning digital and geographic data (explanatory memorandum, p. 5).

Quality of data, research and analysis

According to the explanatory memorandum, the quantitative assessment of future impacts in the EU is consistent with the analyses undertaken for various pieces of climate-related EU legislation, such as the 2030 Framework and the Regulation on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 for a resilient energy union, and with EU commitments under the Paris Agreement. The European Commission contracted the National Technical University of Athens, International Institute for Applied Systems Analysis, and EuroCare to model EU scenarios (explanatory memorandum, p. 4). The overall impression is that the IA is well underpinned by the existing research, which is apparent not only in the problem description but also in the way the options are weighted. In this regard, the IA makes use of various studies when conducting the sensitivity analysis of the flexibility options (Ecampa 2 and meta-review study of mainstreaming climate action). For other parts of the analysis of options, the IA used models which were specially produced under external contracts (the energy system and CO₂ emission modelling is based on the PRIMES model, the non-CO₂ GHG emission modelling is based on the GAINS model, and the CAPRI modelling framework). The modelling of LULUCF emissions related to forests was based on the GLOBIOM-G4M models (see Annex 4). The Commission explains that it used the same model suite as used for the 2030 climate and energy policy framework in preparation of this IA report. The models and their linkages are briefly described in Annex 4.

Stakeholder consultation

The European Commission conducted a 12-week open public consultation between March and June 2015. Some 128 contributions to an online questionnaire were received. Of these, 24 replies were received from public

authorities in 19 Member States. The majority of replies (47) came from business and industry associations. Environmental NGOs were represented with 35 replies. The IA notes that the range of stakeholders is wider than the LULUCF sector, as other sectors (transport, buildings, waste) will inevitably be affected by the need to reduce their emissions to compensate for the lack of progress in the LULUCF sector (IA, p. 21). Farmers and foresters are identified as key stakeholders. However, the IA explicitly points out that it addresses Member States and the agriculture sector as a whole, rather than a specific group of actors or individual stakeholders (IA, p. 22). The stakeholder consultations showed that the Member States' authorities were rather uncertain about which option to prefer. As the IA points out, all Member States that responded underlined that their preferences were preliminary and that they needed more information. The report would have been considerably stronger if the views of stakeholders were presented in more detail in the main body of the report and not simply in Annex 2.

Monitoring and evaluation

The proposal presents three main elements for monitoring and evaluation (method, content, and cycle), relying on the existing framework of monitoring and reporting under the Kyoto Protocol, the 'union inventory system'. According to this, each Member State needs to submit information on GHG emissions – GHG inventories – every year, which will be checked by technical experts. The European Commission's Joint Research Centre is responsible for quality control of the agriculture and LULUCF sectors. As to the content, the IA report points out that the new method will enhance data accuracy 'by relying on more recent datasets' in Member States (IA, p. 63). With regard to the compliance cycle, the IA proposed an alignment with the compliance cycle of the proposed effort-sharing regulation. The IA points out that the stakeholders preferred a compliance cycle which is longer than a year in order to keep the administrative burden at a lower level. The proposal is to conduct compliance assessment in two compliance cycles (1 January 2021 to 31 December 2025, and 1 January 2026 to 31 December 2030 (IA, p. 64).

Commission Regulatory Scrutiny Board

The regulatory scrutiny board (RSB) issued a positive [opinion](#) on a draft IA on 31 May 2016. The RSB made several recommendations for significant revisions of the draft with regard to three aspects: strengthening the description of the problem and clarifying the need for legislative action; better explanation of the narrow scope of the proposal and further explanation of the reasons for which the agricultural sector alone may benefit from the large mitigating potential of the LULUCF sector; further elaboration of the analysis of policy options. The final IA has addressed some of the comments of the RSB, in particular the analysis of options. The overall narrative of the report also seems well balanced, in line with the recommendations of the RSB.

Coherence between the Commission's legislative proposal and IA

The European Commission's legislative proposal seems to follow the recommendations of the IA. The preferred hybrid option of a stand-alone LULUCF pillar is included in the proposal, as are the monitoring and evaluation provisions.

Conclusions

Overall, the IA provides a well-outlined problem description, justification for new legislative action, and a solid analysis of options. Although the range of options seems somewhat limited in some cases, overall the options are well presented and weighted. The IA draws on ample research and makes use of various models, which were contracted externally. One of the shortcomings of the report appears to be a very general presentation of the stakeholders' considerations in the main body of the report. The analysis of options would have been considerably stronger, had the views of stakeholders been presented in greater detail.

This note, prepared by the Ex-Ante Impact Assessment Unit for the European Parliament's Committee on the Environment, Public Health and Food Security, analyses whether the principal criteria laid down in the European Commission's own impact assessment guidelines, as well as additional factors identified by the Parliament in its impact assessment handbook, appear to be met by the IA. It does not attempt to deal with the substance of the proposal. It is drafted for informational and background purposes to assist the relevant parliamentary committee(s) and Members more widely in their work.

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