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3rd September 2021

Dear Minister,

RE: Advice on a suitable approach carbon budgets and sector emissions ceilings to inform preparation of drafting of regulation under the Climate Action and Low Carbon Development (Amendment) Act 2021

The Climate Change Advisory Council would like to congratulate you on the signing in to law of the Climate Action and Low Carbon Development (Amendment) Act 2021. The Council looks forward to carrying out its new mandate under the legislation, particularly with respect to carbon budgets. The Council welcomes your invitation, received 29th July 2021, to provide advice to inform preparation of drafting of proposed regulation. The regulation should clarify the treatment of accounting of greenhouse gas emissions and removals in the land use sector, thus providing a clear and solid foundation for the carbon budget proposals of the Council.

Introductory remarks

The Council considers its mandate is to propose one Carbon Budget for each of the periods 2021-2025, 2026-2030 and 2031-2035 (provisional) which encompasses all emissions and removals. The Council understands that the carbon budget for each period would then be allocated (ceilings or targets) across sectors and/or groups. For the purposes of the regulation, it is recommended that the terminology for sectors/groups be harmonised.

The Council welcomes the determination, evident in your proposals, to include Land Use, Land Use Change and Forestry (LULUCF) in carbon budgeting. This is scientifically robust as management of removals is a requisite element in addressing climate change and it also provides appropriate incentives for action. Dealing with emissions and removals from LULUCF in an appropriate manner is a complex but necessary task. Significant changes to land management and trends in land use, including afforestation, are required to achieve the national climate objective. Overall LULUCF is a significant source of emissions. Projections for the sector see an increase in these emissions over the next decade, largely due the impact of historic patterns of afforestation and consequent age profile of the national forest.

It is important to acknowledge that the biological nature of the emissions and removals from LULUCF introduces high levels of uncertainty into the assessment of progress towards targets which are not seen with sources in other sectors. In order to ensure policy and implementation can respond appropriately to improved understanding, the Council recommends that the proposed regulation should be flexible to allow review on the basis of updates to the science.

Recent IPCC reports highlight the role land use and land management can play in tackling climate change. However, the reports also sound a strong note of caution with respect to the potential for unintended adverse impacts of changes in land use on biodiversity, water quality and other ecosystem services. It is critical that any actions, initiated to reduce emissions from land use, or to enhance removals, avoid the potential unintended adverse outcomes. The Council notes the commitment in the Programme for Government to undertake a national land use review including farmland, forests, and peatlands, so that optimal land use options inform all relevant government decisions. This will be a critical in planning for appropriate development of policies for land use and land use management.

Regulation required for Council's deliberations on Carbon Budget

The Council considers the following to be important elements that are required in the regulation to enable the Council fulfil its mandate under the legislation with regard to proposals for carbon budgets.

The Minister raised ten questions in his letter to the Council. This sections addresses questions i), ii), iii) and viii).

(i) **Metrics**: Use of GWP_{100} values from the IPCC AR5 is consistent with EU reporting requirements. In this regard, the Council considers that consistency with the EU approach is appropriate. Provision should be made in the regulations for review and adjustment of carbon budgets and sectoral emissions ceilings if and when EU reporting requirements are revised based on best available science, particularly with regard to the impact of short-lived greenhouse gases such as methane.

(ii) **Base Year**: The proposal to base carbon budgets on the 2018 emissions and removals values reported by the EPA is consistent with the legislation for Group 1 emissions and removals. For Groups 2 and 3, the Act provides that the Regulation establishes the base year to be applied, please see (ix) a) for our comment.

(iii) **Three Groups**: The Council is neutral on the merit of accounting for emissions and removals in three different groups, as this does not impact on Council's mandate to propose carbon budgets for the whole economy (see (viii). In this context, the Council suggests that the regulation should confirm the provision of the Act covering all gases, as per paragraph 6.A.(5). It would be important in adopting the group approach that the combined targets set are consistent with the overarching mandate from the legislation: a 51% emissions reduction of greenhouse gases by 2030.

(viii) **Separate Carbon Budgets:** The Council considers its mandate is to propose one Carbon Budget for each period which encompasses all emissions and removals i.e. Groups 1, 2 and 3 combined. For the purposes of the regulation, it is recommended that the terminology for targets and emissions ceilings for sectors/groups be harmonised. This reflects concerns already noted for (iii). The Council advises that targets for Group 2 and Group 3 should be set under the same process as the sectoral emissions ceilings, i.e. by the government, consistent with the legislation.

Considerations on Sector Emissions Targets

This section considers the remaining questions raised in the letter from the Minister.

The following advice pertains to considerations which are not strict requirements for Council to fulfil its specific mandate with respect to the proposals for carbon budgets, but rather relate to the government's task in setting and accounting of sectoral and group emissions and removals targets. The advice in the remaining sections of this letter assume the Council advice on (viii) is taken, and Groups are treated under the same processes as sectoral emissions ceilings.

Group 1 emissions accounting

(iv) Setting a 51% target for Group 1 is consistent with the overall 2030 emissions reduction target. However, it reduces the flexibility for target setting in Group 2 and 3, if these are based on emissions and removals targets. In accounting achievement of targets, there should be flexibility in the approach if any group is able to achieve mitigation or removal more easily or at a lower cost than the others; whilst no group should be required to compensate for under achievement in another group, as this could have an adverse impact on employment, competitiveness and attractiveness of the State for investment.

Group 2 and Group 3 emissions accounting

Emissions and removals in both these groups can be subject to a time lag between action and emissions/removals outcome and also there is continued development of the understanding and quantification of those emissions outcomes. The Council therefore advises that targets framed in terms of absolute activity levels (e.g. acreage of afforestation or rewetting of organic soils), rather than emissions, may provide improved incentives and certainty for landowners and investors to act. The setting of such activity targets should be calculated based on required mitigation to achieve the national climate objective by 2050, and consistent with the National Biodiversity Action Plan. With this framing, the regulation and targets should provide increased certainty to encourage investment within the sector.

(v) **Group 2**: The land use categories proposed for inclusion in Group 2 are coherent and constitute the primary sources of emissions associated with the LULUCF sector.

Improved mapping of land management practices in Group 2 and improved understanding of the impact on greenhouse gas emissions and removals is required to reduce the uncertainty in potential for emissions reductions and enhanced removals within this Group.

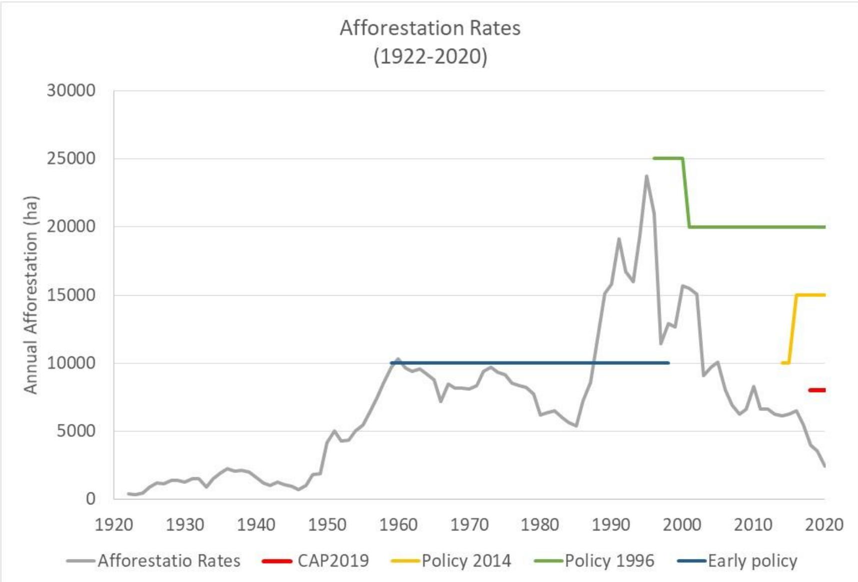
The setting and accounting for targets for Group 2 in the period to 2030 should take account of the unavoidable delay between actions and outcomes in terms of actual reduction in emissions or enhanced removals, with the understanding that many of the actions taken will bear fruit in the post 2030 period. In order to incentivise activity, provision could be made in regulation to account for the committed emissions savings in a shorter time frame, while avoiding double counting.

It would be important to consult with the EPA in the drafting of the regulation, on the most appropriate methodology for assessing emissions and removals within this group.

(vi) **Group 3**: The Council considers that Group 3 includes the Forest Land and Harvested Wood Products categories defined under EU and United Nations Framework Convention on Climate Change (UNFCCC) reporting. Forestry and sustainable wood products are essential to delivering on the national climate objective by 2050.

Activities within Group 3 have provided consistent removal of carbon dioxide from the atmosphere. However, the latest EPA projections are that our forest sink will be degraded by 2030 with a high risk of becoming a source of emissions in this decade, with a consequent impact on the feasibility of meeting the overall target. These projections are based on historic rates of afforestation, the age structure of the national forest and the fall off in the afforestation rates in recent years.

Please see graph below which illustrates the forestry planting rates since the formation of the State and highlights the distance between current afforestation rates and the targets of between 8,000 ha and 15,000 ha articulated in recent policies.



The setting and accounting for targets for Group 3 in the period to 2030 should take account of the unavoidable delay between actions and outcomes in terms of actual removals, with the understanding that many of the actions taken will bear fruit in the post 2030 period. For example, planting a hectare of forest today, will remove carbon dioxide from the atmosphere as the trees grow, but will deliver most of its sequestration potential in the period after 2030. The inventory reflects the gradual accumulation of carbon into the trees, which in younger and mature trees is limited. In order to incentivise activity, provision could be made in regulation to account for the committed removal in a shorter time frame, while avoiding double counting.

Preliminary modelling suggests that consistent afforestation rates of between 13kha and 16kha will be necessary to ensure sufficient removals to balance residual emissions in an optimistic scenario by 2050. The rate of afforestation required is determined by the level of success of reducing residual emissions from other land uses and in Group 1. For the period up to 2030 this would imply an immediate and significant increase in planting rates. Coincidently, afforestation rates of this magnitude are also consistent with the national target of 18% forest cover by 2050. It should be noted that afforestation at such a scale should meet the highest environmental standards with “the right tree in the right place” and be compatible with the objectives of the National Biodiversity Action Plan.

(vii) **Actual Emissions and Gross-net Accounting:** The Council considers “actual emissions and removals” refers to the values reported in the CRF tables under UNFCCC reporting guidelines. Accounting on the basis of these values would be commonly termed gross-net accounting. This differs from the net-net, or reference level, accounting approach adopted under the Kyoto Protocol and current EU regulation (Regulation 841/2018/EU).

The Council welcomes the focus on actual emissions and removals, that is gross-net accounting, as it encourages policy coherence over the first two carbon budget periods, takes account of all land use categories, reflects all activities that will influence the climate, and would enable setting targets on the basis of those activities.

The Council notes the consistency with the direction of travel proposed by the EU Commission under the Fit for ’55 package, which was recently published. However, implementation of the proposal would see adoption of the gross-net approach before the EU. For the first carbon budget period, 2021-2025, this would imply that there would be two accounting systems in effect, with national targets assessed and reported on the basis of gross-net accounting, while progress on EU targets for the first budget period be assessed and reported on the basis of net-net accounting. This would need to be addressed by both the Department and the EPA. Post 2025, EU targets would be set based on gross-net accounting.

(ix) **Accounting rules for targets for Group 2 and 3:** Noting the Council's advice in (viii) with respect to separate carbon budgets for the proposed groups the Council has the following specific comments on (ix)

a. **2018 Base year:** Given the natural variability in emissions and removals associated with LULUCF, when choosing a base period for emissions, there is merit in considering an average of 3-5 years centred on the base year for Group 2 and Group 3. This approach is used in EU legislation governing emissions and removals from land use activities (Regulation 841/2018/EU and Fit for '55 package).

b. **Ambitious yet achievable:** Council agrees that the emissions and removal targets set for Group 2 and 3 should be ambitious and achievable. These targets should be consistent with a reduction in the existing level of gross emissions and the delivery of an additional sequestration and storage of carbon within national soils and biomass and achieving climate neutrality by 2050. This approach shifts the focus towards the long-term objectives for LULUCF.

c. **No transfer before targets are reached:** This would be a sensible approach, where Group 2 and Group 3 must achieve their own targets in the first instance, before transfer of removals to Group 1. The Council also notes that projections for forest land indicate that the volume of removals credits generated under the current EU LULUCF regulation may be very limited, and furthermore, there is a significant risk that the sector may not fulfil the conditions under the "no debit rule" under the EU LULUCF regulations, particularly in the period 2026-2030.

d. **Transfer of emissions savings beyond targets:** The Council agrees this would be a sensible approach for enabling transfers to Group 1 provided it does not put in question the overall objective to achieve a 51% reduction across all sectors and all gases.

Emissions accounting from 2031 onwards

(x) The Council's understanding is that the proposals for regulation in the period to 2030 already largely constitute accounting on the basis of gross-net emissions and removals. The innovation that the EU Commission proposes from 2031 onwards is the integration of LULUCF with Agriculture into a specific Agriculture Forestry and Other Land Uses (AFOLU) sector. Therefore, post 2031, the relevant sector emissions ceiling should be set for the integrated AFOLU sector. This will reduce complexity in policy design and development.

Following the findings from the recent IPCC AR6 WG1 report, the Council advises that it is crucially important that emissions of CO_2 and other long-lived greenhouse gases in Ireland reach net zero emissions by 2050, while significant reductions in short-lived greenhouse gases are also required. Negative emissions will be important for this, and in-development technological solutions should not be neglected. It is important that Ireland have in place the appropriate planning and regulatory structures to ensure timely deployment of these technologies if and when they mature and are proven to be safe, reliable and secure, at scale.

Should you wish to clarify any of the points above, please contact myself directly or the Climate Change Advisory Council Secretariat info@climatecouncil.ie.

Kind Regards

Marie C. Donnelly

Chair

Climate Change Advisory Council