Submission by Denmark and the European Commission on behalf of the European Union and its Member States

Copenhagen, 13/07/2025

Subject: Views on opportunities, best practices, actionable solutions, challenges and barriers relevant to the topic of the 6th Mitigation Work Programme Global Dialogue and Investment Focused Event

Key messages:

- The EU suggests agriculture, waste and circular economy as subtopics for discussion at the sixth Mitigation Work Programme (MWP) Global Dialogue (GD) and Investment Focused Event (IFE).
- We refer to our previous submission regarding our overall views on and expectations for the MWP, but have included here a section with some improvements of the modalities of the MWP based on recent developments.
- An overview of EU policies related to the subtopics are included in the annex.

1. Introduction

The EU welcomes the opportunity to share our view with regards to the sixth MWP GD and IFE.

The EU regrets that the agriculture sector was not addressed under the 5th MWP GD and IFE focused on AFOLU, and recalls its mandate (as per 4/CMA.4) that the scope of the work programme should include all sectors covered in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories of the Intergovernmental Panel on Climate Change. With the agriculture sector and food systems being major emission drivers, besides fossil fuels production and consumption, it is our view that these topics must be addressed within the MWP.

The EU therefore stands ready to discuss agriculture and waste sectors as well as circular economy during the 6th MWP GD & IFE, remaining flexible to a potential calendar adjustment of the topics between 2025 and 2026, noting that industry (Industrial Processes and Product Use) is initially foreseen for 2026.

This submission reflects the EU's views on opportunities, best practices, actionable solutions, challenges and barriers, and suggests some experts, potential financiers and investors, that could be invited to contribute. An overview of EU policies related to the subtopics are included in the annex.

The EU thanks Panama for organizing the 5th MWP GD and IFE, and appreciates the open discussions that were fostered on the forest sector, drawing on national and regional experience. We trust the MWP co-chairs to produce reports of the GDs reflecting in a comprehensive and balanced manner the discussions held and including a summary, key findings, opportunities and barriers relevant to the topic, in a timely manner for consideration at COP30.

We refer to our earlier submission this year that includes our overall views on the MWP, its mandated events and related negotiation outcomes, in particular the annual decision, and the need to respond to the call in 1/CMA.5 §186 to integrate relevant outcomes of the first Global Stocktake (GST-1) in planning future work. It also includes some suggestions for improvement of the modalities for the MWP GDs and IFEs. We emphasize the importance of ensuring accessible and inclusive participation, particularly by maintaining a robust online option.

2. Overview of suggested subtopics for 6th GD and IFE: Agriculture, waste and circular economy

<u>Agriculture and food systems</u>

Agriculture is a major and increasing source of anthropogenic greenhouse gas (GHG) emissions, particularly methane and nitrous oxide. Agrifood systems account for about one-third of total anthropogenic GHG emissions. They are generated within the farm gate, from crop and livestock production activities and in pre- and post-production processes, comprising the supply chain including the production, processing, distribution, preparation and consumption of food, thus also encompassing food loss and waste. Furthermore, expansion of agricultural lands is a main driver of land use change emissions (caused by i.e. deforestation, biomass fires and peatland degradation processes).

Food loss and waste are estimated to account for 8-10% of annual GHG emissions – nearly five times the total emissions from the aviation sector – and contribute to substantial biodiversity loss, using up almost a third of the world's agricultural land. In 2022, according to UNEP, 19% of food available to consumers was wasted at the retail, food service, and household level, in addition to the 13% of the world's food lost in the supply chain, as estimated by FAO. Reducing food waste offers wide-reaching benefits; from cutting emissions and improving resource efficiency to ensuring that more food reaches those in need, thus strengthening food security.

The UN Sustainable Development Goals (SDGs) Target 12.3 is to halve global per capita food waste by 2030. As an example on how public policies can help to achieve this target, the EU in February 2025 agreed legally binding food waste reduction targets to be achieved by EU Member States by 2030 as part of the revision of the Waste Framework Directive. Many EU Member States have already developed their own policies and roadmaps towards achieving these targets with some key areas of focus including improved food waste measurement and reporting, encouraging food supply chain business to make food waste reduction commitments and surplus food donation and redistribution measures.

Waste

The global trends in material consumption and waste generation are accelerating at an unprecedented rate, posing significant environmental challenges and going against a sustainable development. Addressing and reducing them is necessary also for reducing GHG emissions. Raw materials extraction and processing, including fossil fuels, are currently responsible for half of total GHG emissions, has more than tripled since 1970 and could increase by almost 60% from 2020 levels by 2060 if current practices continue. This surge inevitably leads to increased waste generation.

The emissions from waste management are estimated to have risen globally by 56% in 2023 from 1990 levels (IPCC category 5). Therefore, significant mitigation potential remains to be explored and implemented in order to successfully tackle global emissions from waste.

Circular economy

The IPCC Sixth Assessment Report (AR6) Synthesis Report (2023) highlights the role of the circular economy for climate change mitigation. The most recent report from the International Resource Panel (IRP), the Global Resources Outlook 2024, underscores that without urgent and systemic changes, global resource extraction could increase by 60% by 2060 compared to 2020 levels. This would significantly exacerbate climate change and environmental degradation, given that the extraction and processing of material resources account for over 55% of GHG emissions.

A circular economy, which retains the value of products and materials in use for as long as possible, reduces the demand for raw materials and the GHG emissions associated with their extraction and processing, and while not being a sector itself, it is an important approach for reducing emissions in all sectors and with relevant synergies to biodiversity, health, sustainable development and poverty eradication. Circular economy represents a strategic and systemic approach to climate change mitigation by redefining the conventional linear model of production and consumption. It promotes a transition toward regenerative systems that prioritise reduction, reuse, high-quality recycling, and remanufacturing of products and materials, thereby minimising the extraction of raw materials and consequently GHG emissions. The IRP estimates that implementing circular economy strategies—such as material efficiency, reuse, recycling, and product life extension—could reduce global GHG emissions from material production by up to 40% by 2060.

The experience of the EU in tackling waste sector emissions has led to the clear understanding that improving material efficiency is equally important for GHG emission mitigation.

3. Proposed sub-topics

Sub-topic 1: Agriculture

The IPCC is clear that agriculture provides the second largest share of the mitigation potential. If managed sustainably, agriculture can enhance soil organic carbon sequestration, improve soil health and support climate resilience.

Although the IPCC states that on the way to net-zero emissions, some non-CO2 emissions, such as methane and nitrous oxide from agriculture, cannot be fully eliminated, many promising measures exist to lever the mitigation potential also in the agricultural sector.

- Demand-side measures to shift food consumption habits could reduce emissions from the sector by up to 44% by 2050. This would yield both significant gains for

climate mitigation and other environmental co-benefits, including on human health.

- Agroecology emphasizes ecological processes, biodiversity, and local knowledge to create resilient agricultural systems. Agroecological approaches with an emphasis on ecological processes, biodiversity, and local knowledge, can contribute to mitigation by enhancing soil carbon, reducing input use, and supporting adaptation and food security. Sustainable intensification can contribute to reducing methane and nitrous oxide emissions from agriculture without expanding agricultural land.
- There are increasing options for reducing methane emissions, including sustainable livestock management, improved manure management, and new breeding options, which warrant exploration.
- The increasing global emission of nitrous oxide is the result of the inefficient use of costly artificial mineral fertilizer. This can be addressed through measures to increase nitrogen efficiency, such as precision farming, which are promising, but in other regions, measures like the cultivation of cover crops and legumes have more potential.

Increasing carbon sequestration and reducing emissions in agriculture is important not only for mitigation purposes but also provides co-benefits such as, enhancement of soil health, improvement of agricultural productivity, improvement of water quality, reduction of soil erosion, and enhancement of biodiversity, contributing to overall ecosystem health. Carbon sequestration practices are most often cost-effective and can be implemented widely, making them accessible to farmers globally.

Leveraging the achievable potential of GHG mitigation in agriculture requires regionally tailored approaches in a broader economic, cultural, scientific and institutional context, strong policy initiatives, incentives and as well as regulatory frameworks, as well as the consideration of the interdependencies and interconnections of the entire AFOLU sector.

Sub-topic 2: Waste

Transformative waste management practices offer substantial mitigation potential. Moreover, waste prevention and recycling also contribute to healthier ecosystems, public health, job creation and local development.

Waste prevention, being at the core of circular economy and material efficiency approaches, minimises material use and reduces emissions associated with extraction, pro-

duction, and disposal. High-quality recycling extends the life cycle of materials, significantly reducing the need for new resource extraction and therefore the carbon footprint of products and materials. Industries have the potential to adopt circular economy models, enhancing resource recovery, industrial symbiosis and the use of recycled materials, while minimising waste. In the context of food waste, improving supply chain management and promoting responsible consumption can significantly cut emissions.

Better waste management could cut global emissions by up to 15-25% by mid-century. Measures such as robust waste separation and separate collection systems maximise recycling efficiency. Other important measures are minimising incineration and phasing out landfilling. In such a context, extending producer responsibility, defining recycled content requirements, and improving the markets for recycled materials, have significant potential.

Source separation and separate collection (for example organic, construction, and demolition waste) are important for the quality of the recycled materials. In other areas, such as e-waste and end-of-life vehicles, dismantling and recycling technologies need to ensure high-quality of metals and other recycled materials. The diversion of organic waste from landfill provides sizeable contribution to climate mitigation. Recycling technologies such as manure treatment have multiple benefits by producing biogas and fertilizers, while reducing GHG emissions. For plastic waste, reducing the consumption of single-use products, increasing recycling rates and developing alternatives are crucial actions. Further measures are also needed for tackling increasing waste streams with significant carbon footprint such as textile and e-waste.

The feasibility and readiness of waste mitigation strategies vary globally, depending on the availability of infrastructure and regulatory frameworks that support resource efficiency, circular economy and advanced waste management practices. Barriers include insufficient policy and market signals to reduce material consumption, and the need for strong and coherent policy frameworks and implementation, significant investment, technological advancement, closing knowledge gaps, and shifting business and consumer practices.

Sub-topic 3: Circular economy

Key circularity promoting actions along the whole value chain include safe and sustainable design, sustainable production and consumption, longer and better use of products and using waste as a resource.

Circular economy strategies involve smart product use and manufacture, extend lifespan of products and its parts, and useful application of materials. The different stages are: Refuse, Rethink, Reduce, Reuse, Repair, Refurbish, Remanufacture, Repurpose, Recycle, and Recover energy.

In urban contexts, circular economy strategies contribute to the development of compact, low-emission cities through sustainable urban planning and building design, infrastructure retrofitting, and the use of sustainable construction materials. In the industrial sector, circular material flows, combined with resource efficiency improvements and sustainable sourcing, are instrumental in reducing climate and environmental pressures while fostering economic activity and employment. Key sectors include steel, aluminium, cement, chemicals, notably plastics, food and textiles. Shifts towards more sustainable consumption patterns and behavioural change further enhance the mitigation potential of circular approaches.

Effective implementation of circular economy strategies requires coordinated action across sectors, governance levels, and international boundaries. It also necessitates a paradigm shift to recognizing consumers as active users engaged in new models of service provision. While the circular economy is not a standalone solution, it constitutes a vital component of a comprehensive strategy to achieve net-zero emissions and long-term sustainability. Its success depends on systemic integration, robust policy frameworks, and a collective commitment to fostering a resilient, low-carbon future.

The circular economy also offers a range of co-benefits aligned with the SDGs, including reduced pressure on ecosystems and pollution, improved public health, enhanced energy security, and increased social equity.

However, the realisation of these benefits is contingent upon addressing several critical barriers and challenges: Chief among these is the need for reuse, remanufacturing and high-quality recycling systems capable of maintaining the value of products and materials, and for investments in the related infrastructure. Additional barriers include institutional inertia and policy and markets fragmentation. There are also knowledge gaps in terms of limited quantitative data on net effects of circular economy strategies and their mitigation potential.

4. Improvements of the modalities of the MWP

The EU has already submitted ideas and suggestions for improvements of the modalities of the MWP in the submission on topics in January 2025. In this section, we would like to

point to a few improvements worth mentioning in the light of recent developments, while we still refer to the ideas and suggestions in our submission from January 2025.

The EU think that it is important to listen to Parties voicing that the GDs have not been very relevant for them and try to address these issues by, for example, having regional or virtual dialogues focusing on a context which is more relevant for these Parties and stakeholders.

The EU remains of the view that the MWP should acknowledge the invitation (that Parties have agreed on in decision 1/CMA.5, paragraph 186) for relevant work programmes and constituted bodies under or serving the Paris Agreement to integrate relevant outcomes of GST-1 in planning their future work. For example, the topic of 5th GD and IFE is related to 1/CMA.5 paragraphs 33 and 34, and the topic of 6th GD and IFE is closely related to 1/CMA.5 paragraph 36.

With regard to the GD and IFE reports, the EU notes the mandate in 4/CMA.4 to reflect in a comprehensive and balanced manner the discussions held and including a summary, key findings, and opportunities and barriers relevant to the topic, and we see great added value in including in the annual report a section with a synthesis of the reports, noting that it will still be up to Parties to negotiate the annual decision.

We would further strongly support that reports from GDs and IFEs taking place before the Bonn session are also available before the Bonn session, as an input in Parties deliberations.

On the GDs, we think the participation of non-Party stakeholders could be further incentivised, including with the help of the high-level champions, fostering synergies between MWP and the Global Climate Action Agenda.

For the IFEs the EU would like to suggest further increasing the participation of bilateral and multilateral development finance institutions, credit rating agencies, public and private sector finance institutions and philanthropist organizations, in order to be able to have discussions on approaches to unlocking finance required to achieve mitigation objectives by making use of existing and innovative sources of funding. We think the IFE should make a difference at a more structural level, by facilitating access to information and by removing barriers, rather than looking into individual projects.

For the purpose of having a focused exchange of views during the GDs and IFEs, we think it is important that the subject of each of the activities should be well defined and not be too broad, and that Parties are provided with a technical information note with underpinning facts, data and clear questions for the activities. This would enable participants to prepare for a focused and interactive debate after some tailormade scene-setting

presentations and/or panel exchanges based on the best available science. This can be supported by case studies of scalable solutions, exportable projects, sectoral standards and benchmarks, and policy frameworks. The aim is to avoid a sequence of unrelated prepared statements and encourage Parties to truly engage with one another.

ANNEX: EU's perspective on agriculture and waste emission reduction, and circular economy

Main EU policies impacting GHG emissions reductions in the agriculture sector

European Climate Law and Effort Sharing Regulation

- The European Climate Law (ECL) sets the legally binding target for the EU to achieve climate neutrality by 2050 and to reduce net GHG emissions by at least 55% by 2030 compared to 1990 levels.
- The ECL provides the overarching framework for all climate-related policies, including those targeting agriculture.
- The Effort Sharing Regulation (ESR) covers non-ETS sectors including agriculture, setting annual national emission reduction targets for EU Member States for 2021–2030. The ESR does not set sector-specific caps for agriculture but requires EU Member States to achieve their overall targets, encouraging reductions in agricultural emissions.

Common Agricultural Policy (CAP) – 2023 Reform

- It integrates climate and environmental objectives, requiring farmers to adopt sustainable practices as a condition for receiving direct payments ("conditionality").
- It introduces "eco-schemes," allocating at least 25% of direct payments (€48.5 billion) to reward farmers who go beyond mandatory environmental requirements, such as protecting peatlands, crop rotation, and soil cover.
- It provides additional support through rural development programs for climate-friendly agricultural practices and carbon farming.

LULUCF Regulation (Land Use, Land-Use Change and Forestry)

- The regulation sets binding targets for carbon removals and emissions from land use, including agricultural soils and forestry.
- It was revised under the "Fit for 55" package to align with the 2030 climate target, strengthening requirements for carbon sequestration and land restoration.

Nature Restoration Regulation – 2024

- It requires EU Member States to restore 30% of drained peatlands under agricultural use by 2030 and 50% by 2050, with flexibility for heavily affected countries.
- It mandates measures to enhance carbon stocks in mineral soils and increase landscape features that support biodiversity and carbon sequestration.

EU Methane Strategy – 2020

- Targets methane emissions from waste, agriculture, and energy, with specific measures to improve landfill gas management, promote separate collection, and encourage composting, biogas, and biomechanical treatment.
- Supports the EU's commitment to the Global Methane Pledge and strengthens cross-sectoral methane reduction efforts.

Cross-cutting and supporting policies

- The "Fit for 55" package revises key regulations (ESR, LULUCF, CAP) to align with the 2030 and 2050 climate targets, increasing ambition and integration across sectors.
- Policies also promote sustainable food systems, reduce food loss and waste, and encourage dietary shifts to lower-emission foods.

<u>Main EU policies impacting GHG emission reductions in the waste sector</u>

ECL and ESR

- The European Climate Law establishes a legally binding target for climate neutrality by 2050 and at least a 55% reduction in net GHG emissions by 2030 compared to 1990, guiding all sectoral climate actions, including waste.
- The ESR sets binding national GHG reduction targets for EU Member States in sectors not covered by the Emissions Trading System (ETS), including waste management.
- EU Member States are responsible for implementing measures to achieve these targets, with waste sector actions being a key component.

Waste Framework Directive

- Requires EU Member States to prioritize waste prevention, reuse, recycling, and recovery, following the waste hierarchy to minimize landfill disposal and associated emissions.
- Mandates separate collection of biodegradable waste by 2024 and sets a landfill limit of 10% of municipal waste by 2035, greatly reducing methane emissions from landfills.

Landfill Directive

- Obligates EU Member States to reduce biodegradable municipal waste landfilled to 35% of 1995 levels by 2016 (with some derogations until 2020), and further restricts municipal waste landfilling to 10% by 2035.
- Requires landfill operators to manage landfill gas through energy recovery or flaring, directly targeting methane emissions.

EU Methane Strategy – 2020

See under agriculture heading.

<u>Main EU policies impacting GHG emission reductions in the circular economy</u>

European Green Deal

- Provides the overarching framework for sustainable growth and climate action, with circular economy at its core.
- Sets the goal of decoupling economic growth from resource use and achieving net-zero GHG emissions by 2050.
- Many Green Deal actions (ecodesign, waste prevention, right to repair, packaging, and resource efficiency) are closely linked to circular economy objectives.

Circular Economy Action Plan (CEAP) – 2020

- Flagship policy under the European Green Deal, recognizing circularity as essential for achieving climate neutrality by 2050 and halting biodiversity loss.
- Introduces legislative and non-legislative measures across the entire product life cycle: Design, manufacturing, consumption, repair, reuse, recycling, and waste management.
- Targets sectors with high resource use and circularity potential: electronics, ICT, batteries, vehicles, packaging, plastics, textiles, construction, buildings, food, water, and nutrients.
- Aims to reduce the EU's consumption footprint, double the circular material use rate by 2030, and halve residual (non-recycled) municipal waste by 2030.
- Seeks to make sustainable products the norm, empower consumers, and lead global efforts on circular economy.
- Encourages integration of circular economy principles into climate policy, recognizing the cross-sectoral mitigation potential of using waste as a resource.

Integration with climate policy

- CEAP and related policies explicitly link circular economy actions with climate mitigation, recognizing that about 50% of global GHG emissions stem from resource extraction and processing.
- Promotes the use of renewable energy in energy-intensive circular economy processes to maximize GHG reductions.
- Encourages EU Member States to integrate circular economy in National Energy and Climate Plans and climate reporting.

Economic and social benefits

- Circular economy measures are projected to boost EU GDP by 0.5% and create around 700,000 new jobs by 2030, while saving consumers money and increasing product durability and quality.
- Reduces dependence on raw material imports and mitigates risks related to supply, price volatility, and critical materials for clean technologies.