Prompt for breakout discussion C) for Roundtable 1: Mitigation, including response measures (RT M/RM)

Topic: Transforming land and other systems: Assessing collective progress in and enhancing mitigation efforts and preserving and enhancing greenhouse gas sinks in AFOLU, waste, and other systems

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Short summary of relevant findings from TD1.1.

Sinks have a critical role to play in meeting the long-term temperature goal of the Paris Agreement – both by avoiding the conversion of existing sinks to sources of emissions and by preserving and enhancing existing sinks. The Technical Dialogue held during SB56 (TD1.1) highlighted that the Agriculture, Forestry and Other Land Uses (AFOLU) sector, on average, currently contributes to over 20% of total global anthropogenic emissions, with nearly half of these stemming from deforestation. But participants also noted that land systems sequester around a third of total global anthropogenic emissions through the functioning of terrestrial ecosystems as natural sinks. It stressed that the rapid deployment of mitigation options in the AFOLU sector are essential in all emission pathways required to limit warming to 1.5°C, and underscored the need for system transformations in the interlinked land and food sectors.

The presentations and discussions also drew a contrast between technological carbon dioxide removal (CDR) options, which were recognised as not yet being operational at scale, and nature-based solutions, where it was highlighted that the largest economic mitigation potential of the AFOLU sector existed in reducing deforestation and in the conservation, improved management, and restoration of forests and other ecosystems (coastal wetlands, peatlands, savannas and grasslands). For agricultural systems, the role of soil carbon management, agroforestry, and sustainable livestock management to reduce CH_4 emissions was highlighted, in addition to demand-side and material substitution measures such as shifting to balanced, sustainable healthy diets, reducing food loss and waste, and using bio-materials.

The need for considering both co-benefits and risks while selecting mitigation measures in the AFOLU sector was also emphasised, noting that synergies – for example with biodiversity conservation, food and water security, and adaptation – should be maximised and trade-offs carefully managed. The importance of including those directly using or managing the land – from farmers to indigenous peoples – in decision making was particularly noted, as well as the need for strong safeguards to protect their rights. It was also recognised that while the AFOLU sector offers significant near-term mitigation potential at relatively low cost, they cannot compensate for delayed emission reductions in other sectors. The need for more robust carbon accounting in the land sector, especially to reconcile discrepancies in emissions estimates between integrated assessment models and national inventories, was also identified.

Progress in each of these areas however remains uneven to date, and encumbered by a number of barriers and challenges. This is despite most countries having incorporated several AFOLU-based mitigation measures in their NDCs and long-term strategies. The basics of 'what' needs to be done in in this sector are relatively well known now.

Prompts for discussion at TD1.2

More attention is needed to discuss the more challenging questions of 'how' and 'how to'; for example, the following:

1. How do the AFOLU, waste, and other linked systems transform in a world where the Paris global temperature goal is met? What immediate steps can we take to aid this transformation?

2. How can examples of current good practices of climate mitigation in the AFOLU sector and in waste management be effectively scaled up across different geographies? How to overcome

some of the key challenges and barriers for increasing mitigation ambition in the AFOLU and waste sectors, including to improve accounting of AFOLU emissions?

3. How can mitigation efforts within the land sector, including future NDCs, effectively take into account both risks and synergies (in relation to food and water security, Indigenous Peoples rights, biodiversity conservation, etc.)?