Submission by Türkiye On the Topics for the 2025 Global Dialogues within the Scope of the Sharm El-Sheikh Mitigation Ambition and Implementation Work Programme February 2025

Türkiye is committed to actively contributing to the 2025 Global Dialogues within the framework of the Sharm El-Sheikh Mitigation Ambition and Implementation Work Programme (MWP). Given the urgent need to enhance global climate action, Türkiye emphasizes that the topics selected should not only support the Global Stocktake (GST) process but also provide practical solutions to accelerate emissions reductions. To ensure effectiveness, selected topics should be distinct from previous discussions, relevant to a broad range of stakeholders, and provide actionable pathways for implementation. Türkiye believes that prioritizing high-impact sectors will facilitate meaningful progress toward global mitigation efforts.

Stakeholders, including Parties, observers, and other relevant actors, are encouraged to propose potential topics for the 2025 Global Dialogues in line with decision 4/CMA.5, ensuring that each round of discussions addresses new and diverse aspects of mitigation. In this regard, Türkiye suggests concentrating on areas with substantial potential for reducing emissions while acknowledging sector-specific challenges.

The proposed topics include transforming AFOLU for climate action and zero waste practices, with a particular emphasis on innovative solutions such as sustainable food systems, climatesmart agriculture, zero-waste initiatives, and sustainable land management practices in agriculture and forestry. These approaches are essential for enhancing food security, improving food productivity, and ensuring climate resilience in the sector. Additionally, they align with the Sustainable Development Goals (SDGs), particularly in promoting responsible consumption and production, reducing environmental degradation, and fostering equitable food systems that support both economic growth and climate action.

Furthermore, Türkiye highlights the critical role of investment, technology, and international partnerships in driving these changes. Strengthening financial mechanisms and fostering collaboration between public and private stakeholders will be essential in ensuring long-term success.

The dialogues should function as a platform to facilitate knowledge exchange, overcome implementation challenges, and enhance coordination among different mitigation strategies. Türkiye advocates for a structured and action-oriented approach, incorporating dedicated discussions on investment opportunities, capacity-building initiatives, and cross-sectoral cooperation. By advancing these efforts, Türkiye remains dedicated to contributing to global climate progress.

Transforming AFOLU for Climate Action

The Agriculture, Forestry, and Other Land Use (AFOLU) sector is a major contributor to global greenhouse gas (GHG) emissions. According to the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report, the AFOLU sector accounted for approximately 13–21% of global anthropogenic GHG emissions between 2010 and 2019¹. The sector plays a

¹ IPCC, 2021. Sixth Assessment Report. <u>https://www.ipcc.ch/assessment-report/ar6/</u>

critical role in food and livelihood security, especially in developing countries, while simultaneously being a significant source of emissions.

The food system is the second-largest sector contributing to total greenhouse gas emissions, accounting for approximately one-third of total global GHG emissions. Of these emissions, 39% come from agricultural production (including fertilizers), 32% from land-use changes, and 29% from agricultural supply chains. According to the IPCC, food system emissions could increase by 60-90% between 2010 and 2050, posing a significant challenge to limit global warming, even if energy-related emissions are reduced.²

In addition to its significant contribution to emissions, the global demand for food is expected to rise substantially, driven by population growth. With the global population projected to reach 9.73 billion by 2050, the demand for food is anticipated to increase substantially. Projections indicate that agricultural production must expand by at least 50% to accommodate this rising demand, highlighting the necessity for advancements in sustainable agricultural practices and the development of resource-efficient food systems.³ Addressing these challenges requires urgent and large-scale mitigation efforts, particularly in land use and ecosystem management.

Scientific evidence highlights that climate change affects agriculture by altering yields, shortening growing seasons, reducing water availability, and impacting biodiversity and habitats⁴. Beyond climate change, demographic shifts and evolving dietary preferences further complicate the challenge of ensuring food security. The growing global population and shifting dietary patterns are increasing the demand for food.

According to the UN, 690 million people—8.9% of the global population—are currently facing hunger, a number that has increased by 60 million in the past five years. Meeting this rising demand will require innovations in food production, distribution, and sustainability to ensure global food security.

Enhancing agricultural productivity and adopting sustainable food production practices are essential to eliminating hunger and ensuring food security for a projected 10 billion people by mid-century.⁵ Such efforts not only contribute to biodiversity conservation, food security, and soil health but also enhance economic resilience, making them fundamental to sustainable development.

The AFOLU sector is not only a source of emissions but also has potential for mitigation. Sustainable agricultural and forestry management practices can enhance carbon sequestration and reduce emissions while contributing to livelihoods. According to the United Nations Environment Programme (UNEP), halting deforestation and restoring ecosystems could reduce emissions by 7. Gt annually. ⁶ By 2030, if its full potential is realized, the land sector could transition from a carbon source to a carbon sink.

² IPCC, 2019. Special Report on Climate Change and Land. <u>https://www.ipcc.ch/srccl/</u>

³ FAO. 2017. The future of food and agriculture – Trends and challenges. Rome.

⁴ European Parliament. (2020). "EU Action on Climate Change: The Way Forward." EPRS - European Parliamentary Research Service. Retrieved from: <u>https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/651922/EPRS_BRI(2020)651922_EN.pdf</u>

⁵ United Nations. (n.d.). "Goal 2: End Hunger, Achieve Food Security and Improved Nutrition, and Promote Sustainable Agriculture." Retrieved from: <u>https://www.un.org/sustainabledevelopment/hunger/</u>

⁶ UNEP Emissions Gap Report. <u>https://www.unep.org/resources/emissions-gap-report-2023</u>

New technologies and methods are gaining traction in sustainable agriculture. One prominent approach is Climate-Smart Agriculture (CSA), which takes a holistic view of managing crops, livestock, forestry, and fisheries to address food security and climate challenges. CSA has three key goals: increasing productivity to improve rural incomes, enhancing resilience to droughts and climate-related risks, and reducing emissions by cutting the carbon footprint per unit of food produced while preventing deforestation.

Agriculture not only has the potential to reduce emissions but also to remove carbon in a safe and cost-effective way. It can also create synergies between adaptation and mitigation efforts, allowing for climate-smart solutions that enhance resilience while cutting emissions.

Another emerging strategy is Nature-Based Solutions (NBS), which focuses on protecting, restoring, and managing ecosystems to improve biodiversity, mitigate climate impacts, and enhance human well-being. NBS can boost carbon sequestration, support climate resilience, and contribute to sustainable development goals. In the agricultural sector, this includes agroforestry, nutrient management practices, and carbon-enhancing soil conservation techniques such as biochar application.⁷

A promising innovation in agriculture is the use of digital technologies, particularly precision farming. Digital agriculture applies data-driven management techniques to optimize farming efficiency, boost productivity, and reduce environmental impact. The use of digital tools is expected to expand across all agricultural sectors and food supply chains in the coming years.

Governments, international organizations, and the private sector are working on various solutions to address climate threats in agriculture, including policy interventions and technological innovations. One global effort is the Convergence Initiative, launched by the UN Food Systems Coordination Hub, which aims to align food system transformation with climate action. This initiative encourages countries to integrate Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) into food system roadmaps, supporting national and global sustainability goals.

Türkiye is one of the pilot countries in this initiative, demonstrating its commitment to aligning sustainable food systems with climate strategies. Türkiye has taken significant steps, including the National Roadmap for Food Systems Transformation (2021), which sets a vision for sustainable food systems, and the first NDC (2023), which prioritizes agriculture and food security. Additionally, the Climate Change Mitigation Strategy and Action Plan 2030, the Climate Change Adaptation Strategy and Action Plan 2030, and the 2053 Long-Term Climate Strategy (LTS) emphasize reducing emissions, enhancing resilience, and supporting Türkiye's long-term climate commitments across all sectors, including agriculture. Türkiye's proactive approach can serve as a model for other nations seeking to align food system transformation with climate resilience. These strategies highlight the need for sustainable agricultural practices and innovative solutions to align with national and global climate goals. These efforts lay the groundwork for Türkiye's contributions to global discussions such as COP30 in Brazil and the 2025 UN Food Systems Stocktaking Moment.⁸

⁷ UNEP, IUCN, Nature-based solutions for climate change mitigation.

https://wedocs.unep.org/xmlui/bitstream/handle/20.500.11822/37318/NBSCCM.pdf

⁸ UN Food Systems Hub. (n.d.). Retrieved from: https://unfoodsystemshub.org

Mainstreaming Zero Waste Practices

The waste sector contributes 3.3% of total greenhouse gas (GHG) emissions, and its reform could significantly reduce global emissions.⁹ Implementing effective sustainable waste management systems, especially in developing countries, not only helps lower GHG emissions but also yields numerous benefits, such as improving public health, safety, and environmental quality, preventing pollution of water and soil, conserving natural resources, and promoting the use of renewable energy sources.

As waste-related emissions continue to rise, a paradigm shift is needed to perceive waste not as a burden but as a resource that can drive sustainability and economic growth. Addressing this challenge requires reducing waste generation, adopting a life cycle approach, and designing products for durability with minimal, low-impact materials. Maximizing resource recovery and reuse not only helps minimize pollution across air, land, and water but also reduces the need for extracting scarce and finite natural resources.

Zero waste is a comprehensive strategy focused on responsible production and consumption, combined with behavioral changes to accelerate the transition to a circular economy. At its seventy-seventh session, the United Nations General Assembly passed a resolution on December 14, 2022, designating March 30 as International Zero Waste Day.¹⁰

The UN Advisory Board on Zero Waste, established under General Assembly Resolution 77/161, promotes local and national zero-waste initiatives through awareness-raising and the dissemination of best practices.¹¹Encouraging zero-waste efforts worldwide supports the achievement of Sustainable Development Goals (SDGs), particularly SDGs 11 and 12, which emphasize reducing food loss, minimizing resource exploitation, and addressing waste generation, including electronic waste.

The economic impact of waste mismanagement is substantial. Global municipal solid waste generation is expected to increase from 2.1 billion tonnes in 2023 to 3.8 billion tonnes by 2050. In 2020, the direct cost of waste management was estimated at USD 252 billion, rising to USD 361 billion when accounting for hidden costs such as pollution, poor health, and climate change. Without urgent action, the annual global cost could nearly double to USD 640.3 billion by 2050. However, implementing waste prevention and management measures could limit this cost to USD 270.2 billion. Furthermore, adopting a circular economy model—decoupling waste generation from economic growth through waste avoidance, sustainable business practices, and full waste management—could generate a net annual gain of USD 108.5 billion.¹²

In alignment with global efforts, Türkiye has emerged as a key player in promoting zero-waste practices through the Zero Waste Project, initiated in 2017 under the leadership of First Lady Emine Erdoğan. This initiative has since evolved into a global movement, focusing on minimizing waste and promoting recycling processes, contributing significantly to

⁹ World Economic Forum. (2022, November). "How Waste Emissions Contribute to Methane and What Cities Can Do About It." Retrieved from: <u>https://www.weforum.org/stories/2022/11/waste-emissions-methane-cities/</u>

¹⁰ United Nations Environment Programme (UNEP). (2024). "International Day of Zero Waste 2025." Retrieved from: https://www.unep.org/events/un-day/international-day-zero-waste-2025

 ¹¹ UN-Habitat. (n.d.). "UN Advisory Board on Zero Waste Outlines Good Practices in Waste Management." Retrieved from: <u>https://unhabitat.org/un-advisory-board-on-zero-waste-outlines-good-practices-in-waste-management?utm_source=chatgpt.com</u>
¹² United Nations Environment Programme (UNEP). (2024). "Global Waste Management Outlook 2024." Retrieved from: <u>https://www.unep.org/resources/global-waste-management-outlook-2024</u>

environmental protection and sustainable development. Türkiye's approach aligns with the UN's zero waste agenda, demonstrating how national policies can translate into global impact.¹³

These developments reflect the rising momentum in zero-waste commitments worldwide, emphasizing the need for systemic policy and behavioral shifts to maximize environmental and economic benefits. The integration of zero-waste initiatives into policy frameworks can amplify emissions reductions, ensuring long-term sustainability across industries.

Türkiye is taking concrete steps to reduce emissions and strengthen climate resilience across all sectors. This commitment highlights Türkiye's role in delivering innovative solutions in zero waste and contributing to broader climate action initiatives, including the AFOLU sector.

¹³ Ministry of Environment, Urbanization and Climate Change of Turkey. (n.d.). "Sifir Atık." Retrieved from: <u>https://sifiratik.gov.tr/</u>