Submission by Türkiye

On the Topics for the 2024 Global Dialogues within the Scope of the Sharm El-Sheikh Mitigation Ambition and Implementation Work Programme

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Türkiye welcomes the opportunity to provide views on topics to be selected for the 2024 Global Dialogues within the Scope of the Sharm El-Sheikh Mitigation Ambition and Implementation Work Programme (MWP) in 2024.

MWP was established by the Decision 1/CMA.3 paragraph 27, to urgently scale up mitigation ambition and implementation in this critical decade in a manner that complements the Global Stocktake. As outlined in paragraph 2 of the Decision 4/CMA.4, MWP shall be operationalized through focused exchanges of views, information and ideas taking into account the nationally determined nature of nationally determined contributions. Parties, observers, and other non-party stakeholders are invited to submit suggestions for topics for the 2024 Global Dialogues with the decision 4/CMA.5, noting that successive global dialogues should cover different topics.

In this context, the topics to be selected for 2024 should;

- have high emission reduction potential that will make a significant contribution to the achievement of the 1.5 degree target,
- focus on not only raising ambition but also the means of implementation,
- be relevant to most of the Parties,
- be different from the topics of 2023 Global Dialogues,
- be complementary with GST.

Based on these principles, Türkiye suggests the following subjects for the 2024 Global Dialogues.

1- Buildings

Global greenhouse gas (GHG) emissions from the building sector amounted to 21% of the total emissions in 2019, equivalent to 12 GtCO2-eq. These emissions comprised 57% from indirect CO_2 emissions stemming from offsite electricity and heat generation, followed by 24% from direct CO_2 emissions onsite, and 18% from the production of cement and steel utilized in building construction and/or renovation.¹

According to UNEP's Global Alliance for Buildings and Construction, in 2021, the buildings sector's operational energy-related CO₂ emissions reached an all-time high of around 10 GtCO₂, an increase that exceeds the 2020 level by around 5% and the pre-pandemic peak of 2019 by 2%. Also, in 2021, operational energy demand in buildings reached an all-time high of 135 EJ, which is an increase of around 4% from the 2020 period and has exceeded the previous peak in 2019 by over 3%.²

¹ <u>https://www.ipcc.ch/report/ar6/wg3/chapter/chapter-9/</u>

² <u>https://globalabc.org/resources/publications/2021-global-status-report-buildings-and-construction</u>

On the other hand, IEA's Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach report puts forward that sectoral emission decreases between 2022 and 2030 are 20% in industry, around 25% in transport and around 40% in buildings. This indicates that there is a huge mitigation potential in the building sector to reach net zero emissions globally.

IRENA's report of World Energy Transitions Outlook 2023: 1.5 °C Pathway shows that in the buildings sector, efficiency is the main enabler of the energy transition. Efficient appliances are to be increasingly adopted and existing buildings, rapidly renovated and refurbished. Further, heat pumps will play an important role in decarbonizing space and water heating and making space cooling more efficient. Cooking, which relies heavily on fossil fuels and traditional biomass globally, would need to rapidly adopt electricity-powered efficient stoves and sustainable biomass. Projections show that the 1.5° C-compatible path would need the share of renewables in the sector to grow to 86% by 2050, which includes highly-decarbonized electricity and district cooling/heating, bioenergy and renewables direct use (solar thermal and geothermal). The transition to net-zero buildings, as well as policies to promote the electrification and direct use of renewables for heating and new buildings.³

This issue is further strengthened by IEA's Net Zero Roadmap with making buildings zerocarbon-ready means that existing buildings need to undergo deep retrofits and that new buildings need to meet very stringent standards and be equipped with technologies that will be fully decarbonized by 2050. In the NZE Scenario, the global average retrofit rate reaches 2.5% per year by 2030 and remains at around that level through to 2050.

Energy efficiency represents more than 40% of the emissions abatement needed by 2040, according to the IEA Sustainable Development Scenario. Significance of energy efficiency was also emphasized in the COP 28 GST outcome by recognizing that "doubling the global average annual rate of energy efficiency improvements by 2030".⁴

With all these considered together, realizing the mitigation potential of the building sector will help towards reaching the ambition in mitigation action. Hence, building sector with its components is a strong candidate to be the focus of the First Global Dialogue of 2024 for MWP.

2. Zero and Low Emission Technologies

Climate technologies encompass a range of innovations engineered to mitigate or adapt to climate change and its impacts. Technologies focused on reducing greenhouse gas emissions through the use of renewable energy, energy storage, and energy efficiency, carbon capture and storage technologies, sustainable agricultural practices to increase resilience to climate risks, climate-resilient infrastructure, prediction, and early warning systems are included in this classification. Climate technologies play a significant role in transitioning to a low-carbon economy and addressing the challenges posed by climate change, contributing to the creation of a more sustainable and resilient future for both people and the planet.

In the Net Zero Roadmap report prepared by the International Energy Agency, it is stated that approximately 80% of the targeted emission reductions by 2030 can be achieved through existing technologies focused on renewable energy, energy efficiency, methane emissions

³ https://www.irena.org/Digital-Report/World-Energy-Transitions-Outlook-

^{2023#:~:}text=This%20first%20volume%20of%20the,investment%20and%20energy%20transition%20solutions. ⁴ <u>https://www.iea.org/reports/clean-energy-innovation/innovation-needs-in-the-sustainable-development-scenario</u>

reduction, and electrification, aiming to keep the 1.5°C target. However, it is mentioned that only about 35% of the technologies required to achieve net zero by 2050 are currently in the development stage. Within this context, the importance of innovation, particularly in sectors such as industry and long-distance transportation, is emphasized due to the current unavailability of low-emission technologies, making emission reduction challenging.⁵

Zero and Low Emission Technologies has significant role to achieve net zero emissions. For instance, Carbon Capture, Utilisation and Storage (CCUS) is an important technological option for reducing CO2 emissions in sectors and will be essential to achieving the goal of net-zero emissions. Clean hydrogen can help to decarbonise a range of sectors, including long-haul transport, chemicals, and iron and steel, where it has proven difficult to reduce emissions. In countries that choose to continue or increase their use of nuclear power, it can reduce reliance on imported fossil fuels, cut carbon dioxide emissions and enable electricity systems to integrate higher shares of solar and wind power. Also, low-emissions dispatchable thermal power plants, including nuclear plants, reservoir and pumped storage hydro, grid-connected electrolysers and long-duration hydrogen storage all play a part in the delivery of longer term and seasonal flexibility. The energy-efficient technologies can benefit multiple sectors by reducing energy demand, reducing CO2 emissions and improving energy reliability. Digitalization has the potential to significantly increase energy efficiency in the building, transportation, and industrial sectors. Electrification is one of the most significant techniques for decreasing CO2 emissions from energy consumption.

Türkiye suggests "Zero and Low Emission Technologies" as a topic for the MWP in 2024. COP 28 GST decision includes recognizing the need to accelerate zero and low emission technologies, including renewable energy, nuclear, mitigation and removal technologies such as CCSU particularly in hard-to-abate sectors, and low-carbon hydrogen production, in order to deliver contributions within national circumstances in line with the 1.5 °C pathway for greenhouse gas emissions. Focusing on clean technologies in this year's Global Dialogues will contribute to the exchange of experience and knowledge among Parties, enabling them to analyse existing clean technology systems and develop appropriate approaches.

3. Mainstreaming Zero Waste Practices

Between 2.1 billion and 2.3 billion tons of municipal solid waste, ranging from packaging and electronics to plastics and food, are produced annually. The amount of municipal solid waste treated in facilities is just 61–62 percent, and 2.7 billion people lack access to solid waste collection services.⁶ On the other hand, waste sector is one of the fastest-growing sub-sector in terms of GHG emission, which is 1.7 times larger in 2009–2018 compared to 1970–1979.⁷

A key element of sustainable development is the implementation of effective sustainable waste management systems in developing countries. It should also be emphasized that efficient waste management techniques have a number of positive effects on public health, safety, and the environment in addition to lowering greenhouse gas emissions, enhancing quality of life,

⁵ https://iea.blob.core.windows.net/assets/9a698da4-4002-4e53-8ef3-

⁶³¹d8971bf84/NetZeroRoadmap AGlobalPathwaytoKeepthe1.5CGoalinReach-2023Update.pdf

⁶ <u>https://www.un.org/en/observances/zero-waste-day</u>

⁷ <u>Minx, J et al. (2021). A comprehensive and synthetic dataset for global, regional, and national greenhouse gas</u> emissions by sector 1970-2018 with an extension to 2019. Earth System Science Data, 13(11). <u>https://doi.org/10.5194/essd-13-5213-2021</u>

preventing pollution of water and soil, conserving natural resources, and promoting the use of renewable energy sources.

In order to address this problem, waste must be seen as a resource. Reducing waste generation and using a life cycle approach are necessary. Products should be made with durability in mind, using minimal and low-impact materials, and resources should be recovered or reused as much as feasible. These upstream methods can lessen pollution of the air, land, and water while also minimizing the extraction of precious and finite natural resources.

Zero waste is a strategy that focuses on responsible production and consumption, together with behavioral changes to hasten the shift to a circular economy. At its seventy-seventh session, the United Nations General Assembly passed a resolution on December 14, 2022, designating March 30, 2022, as International Zero Waste Day.⁸

Encouraging zero-waste efforts worldwide might contribute to the achievement of Sustainable Development Goals, especially 11 and 12. These goals cover the loss and waste of food, the exploitation of natural resources, and waste in general, including waste from electronics.

In this regard, Zero Waste Practices have significant potential for accelerating both the direct reduction of GHG emissions from waste as well as extended implications for indirect reductions within other sectors.

⁸ https://www.un.org/en/observances/zero-waste-day