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**United Nations Environment Assembly of the
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Item 5 of the provisional agenda**

International environmental policy and governance issues

**Progress in the implementation of resolution 4/2 on promoting
sustainable practices and innovative solutions for curbing food
loss and waste**

Note by the secretariat

1. In its resolution 4/2 on promoting sustainable practices and innovative solutions for curbing food loss and waste, the United Nations Environment Assembly of the United Nations Environment Programme (UNEP) requested the Executive Director of UNEP to provide technical support to assist Member States in implementing the resolution; to foster regional and global cooperation and facilitate the exchange of experience and knowledge, research and best practice between Member States and other food-system stakeholders; and to continue to participate in ongoing international initiatives to support the transfer of innovative solutions and practices that can curb food loss and waste; to promote food loss and waste reduction and support countries, especially developing countries, upon their request, in exploring opportunities to collaborate with United Nations organizations and international financial institutions in line with their existing mandates and budgets; and to report to the United Nations Environment Assembly at its fifth session on progress made in implementing the relevant provisions of the resolution.
2. Relevant milestones comprise the launch of the *UNEP Food Waste Index Report 2021*, which provides a common methodology for countries to measure and report national food waste data under target 3 (by 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses) of Sustainable Development Goal 12. It also presents new data and analysis which indicates that food waste is a greater challenge than previously estimated and is significant beyond only high-income countries. UNEP provides support on food waste measurement and reduction through regional food waste working groups in Africa, Asia and the Pacific, Latin America and the Caribbean, and West Asia.
3. With eight years left to deliver target 3 of Goal 12, too few countries and companies have measured their food waste baselines, and too many are lacking the financial means and institutional capacity to measure and act to harness the environmental, social and economic benefits of addressing

* In accordance with the decisions taken by the Bureau of the United Nations Environment Assembly at its meeting held on 8 October 2020 and by the bureaux of the United Nations Environment Assembly and the Committee of Permanent Representatives at their joint meeting held on 1 December 2020, the fifth session of the Environment Assembly was adjourned on 23 February 2021 and is expected to resume as an in-person meeting in February 2022.

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food waste. The UNEP and Climate and Clean Air Coalition Global Methane Assessment, on the benefits and costs of mitigating methane emissions, indicates that rapid climate gains can be made over the current decade by addressing methane in the waste sector.

4. The Environment Assembly at its resumed fifth session may wish to recognize the importance of rapidly addressing food loss and waste and consider joining the Global Methane Pledge, launched at the twenty-sixth session of the Conference of the Parties to the Framework Convention on Climate Change, and the “Food is Never Waste Coalition”, which emerged from the Food Systems Summit, both of which are vehicles for scaling up action and spurring on cooperation on food waste.

5. The annex to the present note, which is presented without formal editing, sets out a report on progress in the implementation of resolution 4/2.

Annex*

I. Progress in the implementation of resolution 4/2

Summarized key achievements and progress made on planned implementation

1. The present report highlights activities contributing to expected accomplishments 3b, 2b and 6a of the UNEP programme of work for the biennium 2020–2021. The work described in the report also complements UNEP work on food waste measurement under output 2 of project document 617.1, “Transitioning to sustainable food systems for better lifestyles and food security and nutrition”.
2. Resources for the implementation of resolution 4/2 in 2021 have included a dedicated food waste expert, allocation of \$108,771 from the Environment Fund and close to \$1,300,000 mobilized from Germany, Norway, Switzerland and the United States of America, the One Planet Multi-Partner Trust Fund for Sustainable Development Goal 12 and the Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants trust fund; a dedicated cold chain expert and \$1,650,000 for cold chain work in India from the ClimateWorks Foundation, Tabreed, and allocations from Norway, Sweden and Denmark, as well as \$3,500,000 for cold chain work in Africa from the Department for Environment, Food and Rural Affairs of the United Kingdom of Great Britain and Northern Ireland.

1. Technical support to Member States

6. As custodian of SDG Indicator 12.3.1(b), UNEP published the Food Waste Index Report in March 2021, providing (1) a common methodology for countries to measure and report national food waste data under SDG 12.3, and (2) the most extensive global food waste data collection and analysis to date, used to develop new food waste estimates at global and country-level. The report was covered by 1600+ online and print news articles in 91 countries and 40 languages. Given the respective responsibilities for the Food Loss and Food Waste Indices, further joint work is underway with FAO to combine the food loss and food waste data in a single estimate.
7. In October 2021, UNEP launched Regional Food Waste Working Groups in Africa, Asia Pacific, Latin America and the Caribbean, and West Asia, working with 25 member states to build food waste measurement capacity, support development of national food waste prevention strategies, and facilitate peer-to-peer learning to accelerate progress towards SDG 12.3.
8. UNEP’s support to individual Member States includes, at sub-national level, support to developing food waste baselines and strategies, in West Java, Indonesia; Belgrade, Serbia; Doha, Qatar; Kampala, Uganda; and Rio de Janeiro, Brazil, as well as guidance on leveraging green technologies for consumer food waste prevention. At the national level, UNEP is conducting feasibility studies for the development of public-private partnerships on food waste in Brazil and Colombia.
9. A report was released on digital technologies supporting avoidance of food waste.
10. Regarding sustainable cooling and cold chains, UNEP’s Ozone Secretariat is the custodian of the Rome Declaration on the Contribution of the Montreal Protocol to Food Loss Reduction through Sustainable Cold Chain Development. Together with the Global Food Cold Chain Council, UNEP is piloting a database model to map cold chain capacity and needs at country level. The International Institute of Refrigeration and UNEP published Technology Briefs on Cold Chain technologies, refrigerant options, trends, prospects and challenges, covering key sub-sectors including Production & Processing, Cold Storage, Transport Refrigeration, Commercial & Domestic, and Fishing Vessels. Furthermore, the UNEP-led Cool Coalition is implementing an integrated rural cold chain program in India. Globally, Cool Coalition in collaboration with FAO, Ozone Secretariat, OzonAction and CCAC are developing a status report on global food cold chain policy, business models and technologies that will support capacity building efforts in 2022. Market-based financial mechanisms were launched by UNEP’s programme United for Efficiency (U4E) and the Governments of Ghana and Senegal to increase access to energy-efficient and climate-friendly refrigerators and recycle outdated refrigerators. U4E also developed, with 50 volunteer experts, Model Regulation Guidelines for Commercial Refrigeration Equipment with initial use anticipated in Brazil and Chile.

* The annex has not been formally edited.

11. CCAC is supporting the city of Buenos Aires, Argentina to develop an organic waste management strategy, including recommendations of targets for the diversion of organic waste in the city and appropriate treatment technologies and facilities, as well as quantification of the methane mitigation potential and an evaluation of a associated cost. Results will inform the CCAC Waste Hub, in implementation of the Methane Flagship and 2030 Strategy adopted at the Climate and Clean Air Ministerial at COP26.

2. Regional and global cooperation

12. UNEP played an active role in the UN Food Systems Summit (UNFSS): the UNEP Executive Director, as Chair of the Summit's United Nations Task Force, took part in the Summit's Advisory Committee; UNEP engaged in several Summit's Action Tracks and cross-cutting thematic areas; and provided direct support to the Summit Secretariat. UNEP hosted a Global Food Systems Dialogue in support of UNFSS, including a stakeholder dialogue on food loss and waste and circularity. UNEP was part of the core team that developed the 'Food is Never Waste' Coalition, launched at the UNFSS, with 12 member states, the C40 Cities Group and diverse stakeholders across the food system. With partners, UNEP is now building components of the Coalition on food waste measurement, consumer behaviour change, public-private partnerships, and circular food systems (including urban and peri-urban farming).

13. UNEP hosted two meetings in the context of the G20 Resource Efficiency Dialogue, in June and October 2021, where participating countries emphasized their interest in regular exchanges to share experience, complemented by deep dives on selected topics. In response, UNEP is exploring the development of a G20 food waste working group.

14. UNEP hosted two webinars on tackling the food waste funding gap, which brought together the Green Climate Fund, the World Bank, Rabobank, the NAMA Facility, and philanthropies. As a follow up, UNEP is developing a multi-country funding proposal to support rapid scale-up of a action.

15. Supporting the transfer of innovative solutions and practices to curb food loss and waste, the Africa Center of Excellence for Sustainable Cooling and Cold Chain (ACES) established an Academic and Research Learning Committee bringing together top university researchers in this domain to advise the build-out of the Centre and its academic programmes. An industry engagement pathway has been established for companies to partner with the Centre. Rwanda's Cooling Initiative (RCOOL). Further, through U4E, UNEP is also working with 21 countries in East and Southern Africa to harmonize their policies, adapting from the same foundation as Rwanda.

16. The UNEP-led Cool Coalition facilitated a global cold chain working group, led by the University of Birmingham together with the Alliance for an Energy Efficient Economy (AEEE). Cool Coalition has been driving a global advocacy campaign on cooling and cold chains in support of food security and elevated the topic including at the UNFSS, High Level Dialogue on Energy, Montreal Protocol COP/MOP and UNFCCC COP26. In the run up to these events, Cool Coalition hosted a meeting with permanent representatives in NY bringing together 25+ member states on the energy-food-climate nexus. In the context of the UNFSS, Italy and the Ozone Secretariat in collaboration with Cool Coalition, CCAC and Ozone Action hosted an Independent Dialogue on the Rome Declaration and Sustainable Cold-Chain which was followed up at the COP/MOP with Italy and the UK.

17. Likewise, UNEP continues to participate in international initiatives to foster international cooperation, facilitate exchange of experiences, knowledge, research and best practices, and support the transfer of innovative solutions and practices. Such initiatives including UNEP's role as a founding member of the high-level food loss and waste coalition Champions 12.3, its membership on the Advisory Board of ONE/THIRD, and its membership in the EU Platform on Food Loss and Waste and its measurement subgroup.

18. Finally, UNEP co-convened the second International Day of Awareness on Food Loss and Waste (IDAFLOW) with FAO on September 29th, 2021, involving the UNEP ED and UNEP Goodwill Ambassador Massimo Bottura. This was complemented by a joint social media campaign.

II. Recommendations and Suggested Actions

A. Lessons learnt

19. Lessons learnt derived from the activities described in this report and reported to UNEA 5.1 are still valid: First, Measurement has proven to be a critical first step, enabling countries to understand the scale of the problem, target hotspots and track progress towards 2030 and allows to set the baseline and define concrete actions. Second, policies, where complemented by public-private partnerships and

comprehensive consumer education campaigns are effective to drive supply chain collaboration and drive the behavioural shifts needed to achieve SDG 12.3. Third, most countries and companies are still lacking a baseline and national strategy on food loss and waste. Generating 8% of greenhouse gas emissions, food loss and waste presents a significant opportunity for climate change mitigation and adaptation. Currently, only 11 countries have included food loss in their nationally determined contributions (NDCs) and none have yet included food waste.

20. The Food Waste Index Report provided much-needed new data, demonstrating that food waste is significant also in developing countries. Measurements have shown that household food waste is one of the largest fractions of food loss and waste. Yet, lack of data remains a persistent challenge, with the relatively modest cost of national baseline setting inhibiting countries from making a strong case for action. Member states have called for and welcomed greater regional cooperation on food waste measurement and reduction, via high turnout in UNEP's Regional Food Waste Working Groups, interest in closer G20 collaboration, and progressive efforts to build the global 'Food is Never Waste' Coalition, which is seen as key in scaling effective approaches, and in identifying new innovations around the globe.

21. UNEP U4E's Model Regulation Guidelines for refrigerating appliances and commercial refrigeration equipment are a tool to help reduce environmental impacts (e.g., pollution and climate change due to the emissions from energy use and the use of ozone-depleting and high-global warming refrigerants) of available cold chain technologies while reducing food loss, improving food security and farmer incomes. Policy measures consistent with these guidelines need to be adopted and enforced widely, lack of capacity and business models being the primary barriers to scale-up of sound solutions.

22. The Resolution's invitation to Member States to use or repurpose excess food production, using sustainable practices and innovative technologies, merits greater attention, including through initiatives to support more circular food systems. The COVID-19 pandemic has brought to the fore additional lessons shedding light on the fragility of complex global value chains, including greater urban-rural divide and distance to markets. Several cities across all regions are setting measures that help to create resilient and sustainable food supply chains for urban areas and to reduce waste burden. This includes promotion of urban and peri-urban farming as a way to harness circular economy in the food sector using urban organic waste as an input, thereby optimizing material flows, and fostering new social practices that reinforce food waste prevention behaviours while also improving livelihoods and food and nutrition security.

B. Recommendations and suggested actions

23. The UNEP Emissions Gap Report highlighted the need to halve global GHG emissions in the next eight years, and the UNEP/CCAC Global Methane Assessment pointed to rapid climate gains this decade by addressing methane in the waste sector. Making FLW more visible in the updates of nationally determined contributions (NDCs) could be one step to harness the sector's potential to deliver fast climate benefits at low cost and while delivering social and economic benefits.

24. With eight years left to deliver SDG 12.3, too few countries and companies have measured their baseline, and are lacking financial means and institutional capacity to harness the environmental, economic and food security benefits from addressing FLW. Consider the following concrete measures: (1) adopt SDG 12.3 as a national target and measure food loss and waste baseline, (2) develop a national strategy on FLW through multi-stakeholder process and support voluntary agreements in the supply chain for collaborative action, (3) promote uptake of sustainable cooling and cold chain technologies including through national cooling action plans, better data and assessments, capacity building and training, institutional strengthening, (4) integrate FLW reduction in education and training programmes, (5) develop consumer behaviour change programmes, based on research, piloting and evaluating interventions, and tailored awareness campaigns, (6) optimize and simplify food donation and date marking policy, through multi-stakeholder process, and make sure it is well-understood, and (6) support more circular food systems, including by repurposing surplus food production, separate collection of food waste, and exploring measures and policies that ensure no good food goes to landfill, as part of National Food Systems Pathways.