Committee Guide

UNEP

Developing Sustainable and Inclusive Global Waste Management Systems to Combat Environmental Degradation

OLMUN 2026
25th International Session

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1. Welcome & Personal introduction

1.1. Welcome

Dear Delegates,
It is with great enthusiasm that we welcome you to OLMUN 2026. We are looking forward to chairing the United Nations Environment Programme with you as our amazing delegates in OLMUN's anniversary conference! In order to prepare for the conference, this committee guide will give a quick first overview of our topic and give you some ideas for furthering your research.
But before we get into all that, we want to start by briefly introducing ourselves:

1.2. Lara Hoyer

Hello everyone !
I am Lara, 18 years old and I am a student in 12th grade at the Altes Gymnasium Oldenburg. In my free time I enjoy reading, music and anything related to art. But most of my time I study for school :)
This year will be my third time participating at OLMUN, and my first time being a Chair. Thus I am very excited!
I think OLMUN is a great experience and gives everyone a chance to actively participate. It is also a great opportunity to get to know other people and find new friends!
That's all for now :)
I am very much looking forward to getting to know you soon!
Until June!

1.3. Anes Mujkić

Hey there :)
I am Anes, 18 years old, currently studying Business Administration at the Heinrich-Heine-University Düsseldorf. I love music of various kinds, as well as producing music myself and playing the acoustic guitar; otherwise I also really enjoy playing video games, or occasionally playing some football or table tennis.
This is my fifth time at OLMUN; third time to chair, after being a Delegate two years prior this wonderful chairing journey! Overall it is my eighth MUN experience. Therefore, I think it makes sense for me to say that MUNs, like OLMUN, are wonderful events to get to know people from around the world and have lots, and I mean LOTS of fun!

That's enough from me for now :P
See you in June!

2. How to use this guide

The topic for our debate will be "Developing Sustainable and Inclusive Global Waste Management Systems to Combat Environmental Degradation". To debate successfully, it is necessary for you to really understand the topic and all its side effects. To help you, we created this Committee Guide, which will give you a short overview of UNEP and the topic in general as well as break down the most important measures already taken by the UN, possible solutions and provide you with further resources for your research at the end. In order to be fully prepared we are also advising you to read the Rules of Procedure, which can be found on our website.

First, we would like to state that this guide is simply to help you to get started with your research, but it should not be your only source of information. We expect you to conduct your own in-depth research, with the focus on your country's individual point of view. Therefore, it is necessary to also do some research on your country itself e.g., its past, culture, allies, political structure, financial supporters, …. Please look into the OLMUN Handbook for help. Furthermore, for the sake of an interesting debate, it is necessary that you stick to your country's policy, even though it might not align with your own personal point of view. Please also note to limit your documents to the topic at hand; don't add more information outside of this frame, as we have a tight time schedule, and it also assures that all Delegations are on the same page.

At last, it is important to note that we do not tolerate your Policy Statement and Draft Resolutions to be fully AI-generated! You may use AI as a tool to find some useful information before going in-depth, as well as a tool to correct your grammar; but not more! A violation of this rule will result in a warning, and in a punishment at further violation.

With that said, please prepare well for the week. For all the first timers: get out of your comfort zone, the conference is much more fun by actively helping to develop a superb resolution. If you have any questions or concerns don't hesitate to reach out to one of us, we're happy to support you anytime.

3. About UNEP

In order to understand your tasks and the spirit of UNEP, we will provide you with a summary regarding the establishment of UNEP and the main concerns it targets. The United Nations Environment Programme (UNEP), was established in 1972 in Nairobi, Kenia and is tasked to ensure the environmental aspects of the Sustainable Development Goals. It is the only UN-institution solely concerning environmental issues. Its focus is on dealing with the three planetary crises of climate change, nature and biodiversity loss, and pollution and waste. In this context, UNEP has a leading position as well as an advisory and educational one. Generally, UNEP's goals can be summarized in the following quote:

"UNEP's mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations."

More in depth that includes several aspects in particular:

- Making and sharing technological and financial progress in order to raise further public awareness, help understand climate science and to lessen the effects and causes of climate change. This includes supporting efforts to improve eco-friendliness by e.g. companies and institutions.

- Reducing the risk of crisis in areas prone to environmental disasters by providing guidance towards environment-friendly societal outlines (legislative and institutional) in affected countries.

- Promoting the protection and restoration of negatively affected ecosystems in accordance with the SDGs.

- Helping governments establish, implement and strengthen laws, programs etc., while focussing not only on global or country wide measures, but also regional ones. This improves sustainable development. UNEP also creates platforms where most of today's valid international contracts concerning our environment have been signed.

- Restricting harmful substances and hazardous waste to improve life for humans and nature and concentrating on the environmentally efficient use of resources in general.

Therefore, UNEP is of great importance to further the discussion and conversation around climate change and environmental problems. The programme's tasks are very vast and far-reaching. Thus it is not a big surprise that UNEP is the leading global authority for issues regarding the environment and sets decisively the priorities of the global environmental policy, working with major parties and stakeholders in conflicts. The governing body of UNEP is the United Nations Environment Assembly (UNEA) and the successor of its Governing Council, which was composed of 58 member States. The UN Environment Assembly, with a universal membership, is now composed of 193 Member States. The UNEA is supplemented by the Committee of Permanent Representatives (CPR).
The current Under-Secretary-General of the United Nations and Executive Director of the United Nations Environment Programme is Inger Andersen.

4. About the topic

Developing sustainable and inclusive global waste management systems has become a defining challenge for environmental protection, climate action and social justice in the 21st century. The volume of waste the world produces, the way it is handled, and who benefits or suffers from current systems together show why rapid, systemic change is both urgent and economically rational.

4.1. Scope and urgency

Every year, the world generates billions of tonnes of municipal solid waste, and this volume continues to grow with urbanisation, rising incomes and changing consumption patterns. Much of this waste is still handled in ways that contaminate air, soil and water, and that undermine human health and local livelihoods instead of supporting them. A significant share of global waste never enters a formal system at all, and is instead dumped in open sites, waterways or burned in backyards and informal settlements, often close to where poorer communities live and work.

Globally, municipal waste collection has expanded, but major gaps remain. In 2022, around 82% of municipal waste was collected worldwide, suggesting that almost one fifth of generated waste was left uncollected and likely leaked into the environment or was managed informally. Within the collected portion, only about 55% was handled in controlled facilities, meaning that nearly half of what is collected is still subject to uncontrolled dumping, rudimentary landfilling or open burning, all of which drive pollution and greenhouse gas emissions.

These averages hide stark regional inequalities, where high-income regions approach universal collection and higher-quality treatment, while many low- and middle-income regions still struggle with basic service provision.

Regional disparities illustrate how waste is tightly linked to broader development divides. Sub-Saharan Africa and Oceania, for example, average under 60% collection coverage, leaving large portions of the population with no regular municipal waste service. In many rapidly growing cities in Asia and Latin America, official statistics may show relatively high collection rates, yet close inspection reveals that 70–85% collection often only applies to select neighbourhoods and formal areas. Informal settlements, peri-urban zones and rural communities are frequently excluded, reinforcing spatial inequality and exposing marginalised groups to disproportionate environmental and health risks. This uneven geography of service provision makes clear that global progress cannot be measured by averages alone; it requires universal, safe waste services that reach every community.

The environmental stakes are high. When waste is dumped or openly burned, plastics fragment into microplastics, organic waste emits methane as it decomposes, and mixed waste releases a mixture of toxins, including dioxins, heavy metals and particulate matter. These pollutants degrade ecosystems, poison food chains and contribute to climate change. Open burning and poorly designed landfills also undermine efforts to meet climate targets by releasing greenhouse gases that could have been prevented through waste reduction, composting, recycling or energy recovery under tightly controlled conditions. The scale of the problem demands not incremental improvements but a push towards universal, safe services and policies that prioritise waste prevention and safer handling across all sectors of the economy.

4.2. Economic and health costs of inaction

The visible waste on streets and dumpsites is only the tip of the iceberg; the hidden economic and health costs are far larger. Unmanaged or poorly managed waste imposes heavy externalities on societies: higher healthcare expenditures, lost productivity due to illness, reduced tourism and property values, damage to fisheries and agriculture, flood risks when drains clog with solid waste, and long-term environmental remediation needs. These burdens are often borne by local governments with limited budgets, as well as by low-income communities living near dumps or working in informal recycling, who face chronic exposure to hazardous materials.

Quantitative estimates highlight how large these externalities have already become. In 2020, the external costs associated with unmanaged waste were estimated at around US$243.3 billion, effectively doubling the reported direct costs of waste management that year. If current trends continue and structural reforms are delayed, the total global cost of municipal solid waste in 2050 could reach approximately US$640.3 billion, of which about US$443 billion would be externalities rather than planned, productive investment. This scenario reflects an unsustainable drain on public resources, as governments and communities are forced to pay repeatedly for the same problem through health crises, disaster response, and environmental clean-ups.

By contrast, modelling of alternative pathways shows that proactive investment pays off. Investing in both upstream and downstream actions—reducing waste generation, redesigning products and systems, expanding collection and treatment, and improving recycling efficiency—could cap externalities at about US$263.6 billion by 2050 instead of letting them spiral much higher. When the principles of a Circular Economy are adopted more comprehensively—designing out waste, keeping materials in circulation and regenerating natural systems—the overall picture becomes even more attractive. Under such a scenario, global municipal solid waste management could deliver a net annual economic gain of around US$108.5 billion, once savings from avoided externalities and the value of recovered materials and new jobs are considered.

The economic figures underscore that inaction is far more expensive than transformation. Continuing with business-as-usual means paying for health impacts, climate damages and environmental degradation many times over, while foregoing opportunities in recycling, repair, remanufacturing and service-based business models. Rapid, comprehensive reform of waste systems is not merely a matter of environmental ethics; it is a rational economic choice that can free up resources for broader development priorities and generate new livelihoods, especially in lower-income countries.

4.3. Policy and investment pathways

Transforming waste management from a fragmented, end-of-pipe activity into a sustainable, inclusive system requires coordinated action along both upstream and downstream pathways. Upstream, governments, businesses and communities must focus on preventing waste generation in the first place by rethinking product design, packaging, consumption patterns and service models. Downstream, they must ensure that whatever waste remains is collected safely and treated through systems that maximise resource recovery while minimising environmental and health impacts. The well-established waste hierarchy—prioritis-

ing prevention, followed by reuse, recycling and recovery, with disposal as a last resort—provides a clear guide to setting priorities and allocating resources.

Because countries differ in income levels, infrastructure, urbanisation and institutional capacity, solutions must be tailored to national and local contexts rather than copied wholesale from elsewhere. In some settings, simple measures such as improving door-to-door collection, separating organic waste for composting, and upgrading open dumpsites to controlled landfills can deliver large gains in a short time. In others, the focus may be on scaling up separate collection systems for recyclables, building materials recovery facilities, or creating incentives for eco-design and extended producer responsibility schemes. Across all contexts, success depends on engaging multiple sectors—urban planning, health, industry, agriculture, climate policy and social protection—because waste touches each of them.

Climate policy offers an important lever to accelerate investment. Embedding waste reduction and circular economy interventions in countries' Nationally Determined Contributions (NDCs) under the Paris Agreement is critical for accessing climate finance and integrating waste into broader mitigation and adaptation strategies. Methane reduction from organic waste management, for instance, is one of the fastest ways to cut near-term warming and can be supported through international climate funds. However, current finance flows for waste and circular economy measures remain too small relative to the challenge, and scaling them will require stronger governance, greater transparency and more predictable, long-term funding frameworks at both national and international levels.

Cross-border cooperation and partnerships under the Sustainable Development Goals framework are essential for filling knowledge gaps, harmonising standards and mobilising investment. International partnerships can support technology transfer, capacity building in local governments, and the development of regional markets for secondary materials so that recycling becomes economically viable at scale. Far higher investments are needed to meet SDG targets related to cities, health, water, climate and responsible consumption and production, all of which intersect with waste management. Aligning donor support, development bank lending, and private capital with these goals can help unlock the resources required.

4.4. Inclusion, livelihoods and informal workers

Sustainability in waste management is not only about technologies and infrastructure; it is also about who participates in and benefits from the system. In many low- and middle-income countries, informal waste pickers play a crucial role in collecting, sorting and recycling materials, often achieving high recovery rates with minimal public support. Yet they usually

work under unsafe conditions, without legal recognition, social protection or stable income, and face stigma despite their environmental contributions. Women are heavily represented in these informal activities, particularly in sorting and low-paid stages of the recycling chain, and thus are disproportionately affected by precarious work and exposure to hazards.

Inclusive approaches place these workers and communities at the centre of reform instead of treating them as an afterthought. Formalising the informal sector—through recognition of cooperatives, provision of protective equipment, access to health and social security benefits, and involvement in the design of new systems—can significantly improve livelihoods while preserving and enhancing high recycling rates. When cities contract waste picker organisations for door-to-door collection or sorting services, for example, they can simultaneously expand service coverage, reduce municipal costs and create more dignified jobs.
Gender-sensitive policies are another key dimension of inclusive waste systems. They include ensuring women have access to training, leadership roles in cooperatives and community organisations, and fair remuneration across the value chain. They also involve taking account of how waste management decisions affect women's unpaid care responsibilities, exposure to pollution and opportunities for entrepreneurship. By recognising and addressing these dynamics, policymakers can design interventions that strengthen social cohesion and long-term resilience rather than inadvertently deepening existing inequalities.

5. What the UN has done so far

The United Nations has launched a wide range of initiatives, agreements and support programmes to move countries toward more sustainable and inclusive waste management, combining high-level political commitments with practical support on the ground. Through the 2030 Agenda, the UN embedded waste and resource efficiency into the Sustainable Development Goals, especially SDG 11 on sustainable cities, SDG 12 on responsible consumption and production, and SDG 14 on life below water, which together call for improved municipal services, reduced waste generation and action against marine litter. In 2022, UN Member States adopted a historic resolution to negotiate a legally binding global agreement to end plastic pollution across the full life cycle of plastics, a "plastics treaty" process led by UNEP that directly targets waste generation and leakage into the environment. The UN General Assembly has also proclaimed 30 March as the International Day of Zero Waste, used each year to mobilise governments, cities, civil society and businesses around zero-waste policies, circular economy approaches and the creation of inclusive waste systems.

Strategic reports and guidance documents developed by UN bodies have been central in shaping national and local waste policy. UNEP's Global Waste Management Outlooks, including the 2024 edition, provide data, scenarios and policy guidance showing how countries can move from ad-hoc dumping and burning to integrated, climate-aligned and socially inclusive waste systems. UN DESA's work on the waste crisis synthesises evidence on global waste trends, highlights policy gaps and sets out practical recommendations for Member States, such as prioritising integrated solid waste management, adopting a "waste-to-resources" mindset and explicitly recognising informal workers and vulnerable groups in policy design. Across these efforts, UN entities have promoted extended producer responsibility frameworks, in which producers bear responsibility for the end-of-life of their products, as a key instrument to shift costs away from municipalities, increase recycling rates and encourage eco-design, showcasing examples from countries that have already implemented such systems.

Capacity building and technical support for countries and cities are another major strand of UN action. The United Nations Office for Sustainable Development, under UN DESA, runs policy support initiatives that help Member States strengthen data systems, governance and evidence-based policymaking for integrated solid waste management and resource circularity, often through national-to-local diagnostics and scenario analysis. Other UN agencies, such as UNEP and UNDP, operate technical cooperation programmes that assist cities and countries in assessing their current waste systems, planning integrated collection, recycling and disposal, piloting zero-waste and circular projects, and upgrading open dumpsites toward safer, better-managed facilities. Many of these programmes are explicitly designed to be participatory and multi-stakeholder, involving local governments, private operators, informal workers' organisations, women's groups and community organisations so that solutions are both technically sound and socially inclusive.

The UN has also worked to mobilise finance, partnerships and pilot projects that demonstrate what sustainable and inclusive waste management looks like in practice. UNDP and other entities support countries in integrating waste and circular economy measures into national development plans and climate strategies, which is essential for tapping into climate finance and development bank funding for waste infrastructure, methane mitigation from landfills and circular business models. Through global and regional platforms, the UN facilitates partnerships and knowledge-sharing networks that spread good practices on inclusive recycling, extended producer responsibility, zero-waste city approaches and the digitalisation of waste data among governments, city leaders and civil society. Flagship case studies promoted by UN agencies, such as the transformation of large landfills into safer, greener sites or the nationwide roll-out of separate collection and EPR schemes, serve as concrete

models that other countries and municipalities can adapt, illustrating how technical reforms can be tied to job creation, the inclusion of informal waste pickers and visible improvements in local environments.

Inclusion and zero-waste principles run as cross-cutting themes through much of the UN's work on waste. UN guidance on moving toward zero-waste consistently stresses that informal waste pickers and other vulnerable groups must be engaged and protected, recommending the formal recognition of their role, safer working conditions, access to social protection and their participation in decision-making processes. Campaigns around the International Day of Zero Waste and related UN initiatives highlight gender equality, youth participation and community engagement, encouraging countries to collect gender-disaggregated data and to design waste systems that improve, rather than undermine, livelihoods and social equity. Taken together, these efforts show that the UN is not only promoting more sustainable technologies and policies for waste management, but also pushing for systems that are inclusive, rights-based and aligned with broader goals of environmental protection and sustainable development.

6. Possible solutions

The global waste crisis is escalating and imperiling health, biodiversity and climate stability. It is tightly linked to rapid urbanisation, rising consumption and linear production models that treat materials as disposable rather than valuable resources.

The Global Waste Management Outlook 2024 demonstrates that unmanaged waste imposes large, hidden costs and that business-as-usual patterns could overwhelm existing systems, especially in rapidly growing cities with limited infrastructure. These pressures are already visible in overflowing dumpsites, open burning and plastic leakage into rivers and oceans, which together undermine development gains and deepen inequalities. In this context, transforming how societies produce, consume and manage materials has become a core pillar of both climate and development policy.

The financial dimension underscores how unsustainable the current path is. In 2020, waste externalities reached US$243.3 billion, effectively doubling the bottom-line cost of waste management when health impacts, environmental degradation and lost productivity are taken into account. Without ambitious mitigation, total costs and externalities could soar, crowding out other public investments and locking countries into reactive crisis management. By

2050, these externalities could still reach about US$263.6 billion even under scenarios that assume some improvement, unless proactive, system-wide reforms are pursued at scale. Yet a Circular Economy pathway flips this narrative: by prioritising prevention, reuse and high-quality recycling, it could deliver a substantial net gain, estimated at roughly US$108.5 billion annually by 2050 through avoided damages, material savings and new green jobs. There is no universal blueprint for achieving this transition, but urgent, context-tailored action is non-negotiable and must account for differing capacities, governance structures and socio-economic realities.

Response pathways exist and must be scaled: upstream waste prevention and downstream circular economy actions are both essential and mutually reinforcing. On the upstream side, product redesign, eco-labelling, extended producer responsibility schemes and behaviour-change campaigns can collectively slow the growth of waste even as economies develop. Downstream, investments in collection, sorting, recycling and safe disposal ensure that remaining waste is handled in ways that minimise harm and maximise value recovery. Zero-waste strategies, supported by robust data and digital tools, can help decouple waste growth from economic expansion by identifying hotspots, tracking material flows and monitoring progress over time. When well implemented, they also encourage innovation by local businesses and communities, from refill and repair models to community-scale composting. Technical upgrades to existing infrastructure can yield immediate climate and health benefits. Where feasible, upgrading uncontrolled dumpsites to semi-aerobic landfills cuts emissions and reduces odour, leachate and fire risk, providing an important interim step while more advanced systems are developed. Evidence from Mozambique, for instance, shows about a 40% reduction in landfill gas emissions after upgrading to semi-aerobic operations, illustrating the potential of relatively low-cost interventions to lower greenhouse gases in the short to medium term. At the same time, global policy processes such as the Plastics Treaty negotiations offer a unique opportunity to drastically cut plastics entering municipal streams by addressing design, production and transboundary trade. If ambitious, this treaty could complement local efforts by reducing the volume and toxicity of plastic waste that cities must manage.

Digitalisation is emerging as a powerful enabler across the waste value chain. Waste-tracking apps, sensor-equipped bins, geospatial mapping and validated datasets help authorities understand where waste is generated, how it moves and where leakages or illegal dumping occur. This strengthens the value chain by making material flows more visible, which in turn can expand formal employment opportunities in collection, sorting and recycling. Better data improves transparency, allowing regulators and civil society to hold actors accountable and reducing opportunities for waste crime and greenwashing in claims about recycling or “car-

bon-neutral" products. For private investors, credible information on volumes, composition and trends reduces risk and can unlock financing for new facilities and business models. Policy action should begin now with national capability building and data-driven use of resources rather than waiting for perfect conditions. Governments need to systematically build waste-management and circular-economy expertise within ministries, municipalities and regulatory agencies, including skills in planning, contracting, monitoring and stakeholder engagement. Using high-quality data to illuminate the business case for waste reduction helps make a persuasive argument to finance ministries, development partners and private investors, and is key to attracting climate finance that recognises waste management as both mitigation and adaptation. Clear, long-term strategies provide the certainty that businesses and financiers need to invest in infrastructure, innovation and workforce development.

Economic instruments can then translate these strategies into market signals. Public procurement and targeted tax incentives can be leveraged to support SMEs delivering zero-waste services and circular solutions such as repair, rental, reuse, composting and recycling. At the same time, ensuring universal access to municipal waste-management services is fundamental to protecting public health and meeting human-rights obligations, particularly in underserved informal settlements and rural areas. Collecting gender-disaggregated and socio-economic data helps policymakers understand who benefits from current systems, who bears the risks, and how reforms can be designed to close rather than widen equity gaps.

Finally, scaling investment will require a concerted push from both private capital and development-bank finance. Dedicated green bonds, blended-finance facilities and risk-sharing mechanisms can crowd in private investors while keeping services affordable. Development banks can prioritise waste and circular economy projects that have strong social and environmental co-benefits, including job creation and resilience building. Knowledge-sharing networks—linking cities, regions and countries—play a crucial role in translating lessons from pilots into mainstream practice, avoiding repeated mistakes and accelerating learning cycles. If these efforts align around a 2050 horizon, circular models could help avert massive externalities and generate a net annual gain of around US$108.5 billion while containing projected externalities at about US$263.6 billion, turning today's waste crisis into a driver of inclusive, low-carbon development.

7. Helpful links

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

-https://www.unep.org/events/un-day/international-day-zero-waste-2024

-https://wedocs.unep.org/items/36e16872-2f02-4447-a3c1-c939bf50ea92

-https://unstats.un.org/sdgs/report/2022/The-Sustainable-Development-Goals-Report-2022.pdf

-https://sdg-action.org/closing-the-loop-on-waste/

-https://www.iswa.org/wp-content/uploads/2025/12/Global-Waste-Management-Outlook-2024-for-Youth.pdf

-https://www.undp.org/chemicals-waste/our-work-areas/chemicals-and-waste

-https://www.gu.se/en/research/participatory-innovation-videos-for-an-inclusive-and-sustainable-waste-management

-https://pmc.ncbi.nlm.nih.gov/articles/PMC9566108/

-https://www.youtube.com/watch?v=IYkGlIlfAZg


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