Background Paper

Committee: United Nations Environment Programme

Topic A: Addressing Marine Plastic Pollution and Its Impact on Global Ecosystems

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Marine plastic pollution has become one of the most pressing global environmental issues of the twenty-first century. Since the beginning of large-scale plastic production in the 1950s, global output has increased from roughly two million tonnes annually to over 400 million tonnes today, much of which is used for single-use products and packaging that are quickly discarded(Our World in Data 2023). The persistence of plastics in the environment means that once they reach oceans and waterways, they can take hundreds of years to degrade. The United Nations Environment Programme (UNEP) identifies plastic pollution as a key threat to marine ecosystems, biodiversity, and sustainable development. This problem is inherently transboundary: plastics produced or consumed in one country often end up polluting the aquatic environments of another, carried by rivers, wind, and ocean currents. As such, UNEP has prioritised collective international action, viewing plastic pollution not just as a waste management failure but as a systemic challenge that requires interventions across the entire plastic lifecycle, from production and design to consumption and disposal.

The causes of marine plastic pollution are complex and interconnected, but they center on overproduction, inadequate waste management, and poor product design. The exponential rise in global plastic production, particularly of lightweight single-use packaging, has overwhelmed many national waste systems (Jambeck et al., *Science*, 2015). In countries where waste collection infrastructure is limited or poorly managed, large quantities of plastic leak into rivers and coastal areas before entering the ocean. Additional contributors include lost or abandoned fishing gear, maritime transport, and stormwater runoff from urban areas. The durability and chemical

composition of plastics, designed for longevity, mean they break down into microplastics and nanoplastics that spread widely across ecosystems. These tiny fragments are now found in virtually every marine environment on Earth — from surface waters to deep-sea sediments — and are being ingested by hundreds of marine species. This has serious ecological implications, including physical harm and death to wildlife through entanglement and ingestion, the alteration of habitats, and the transport of invasive species and pathogens (UNEP, *From Pollution to Solution*, 2021). The consequences also extend to human societies and economies. Microplastics have been detected in seafood, salt, and drinking water, raising health concerns even though evidence on long-term effects remains limited (WHO, 2019). Economically, the cost of marine plastic pollution is substantial, with billions lost annually through damaged fisheries, reduced tourism, and cleanup efforts. Furthermore, the plastics lifecycle contributes to climate change since plastic production and disposal rely heavily on fossil fuels and emit significant greenhouse gases.

Internationally, awareness of this issue has grown through a series of landmark events. In the late 1990s, the discovery of the Great Pacific Garbage Patch revealed the true scale of oceanic plastic accumulation, sparking global alarm. The 2015 publication of Jambeck et al.'s study quantified for the first time how millions of tonnes of plastics leak into oceans each year from land-based sources, prompting governments to act. That same year, the adoption of the 2030 Agenda for Sustainable Development and its Goal 14.1 committed countries to reducing marine pollution. In 2017, UNEP launched the Clean Seas campaign to mobilize governments and businesses to phase out single-use plastics. A major turning point came in March 2022, when the United Nations Environment Assembly adopted Resolution 5/14, calling for the creation of a legally binding global treaty to end plastic pollution, covering the full life cycle of plastics from production to disposal. This resolution marked the first diplomatic consensus recognizing plastic pollution as a planetary crisis. The ongoing Intergovernmental Negotiating Committee (INC) process, which began later that year, continues to work toward drafting this treaty — a critical step in establishing global rules for plastic production, product design, and waste management.

Marine plastic pollution threatens biodiversity, human health, and the sustainability of our oceans. Its causes — ranging from unsustainable production and consumption patterns to

insufficient waste management — reflect systemic challenges that no single country can address alone. The global consequences of inaction include degraded marine ecosystems, disrupted food webs, economic losses, and potential health risks for current and future generations. Addressing this issue is therefore essential to achieving the Sustainable Development Goals, particularly SDG 14 on life below water, but also SDGs 3, 6, 11, and 12 on health, water quality, sustainable cities, and responsible consumption. The UNEA Resolution 5/14 and the subsequent INC negotiations represent a historic opportunity for the world to adopt a legally binding framework that closes the tap on plastic pollution and transitions societies toward circular, sustainable systems of production and consumption. Only through collective global action, backed by science, innovation, and international cooperation, can we restore marine ecosystems and ensure the health of the planet for generations to come.

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Background Paper

Committee: United Nations Environment Programme

Topic B: Promoting Renewable Energy as an Alternative to Fossil Fuel

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For a long time, the world has lived depending almost completely on fossil fuels like oil, coal, and gas. They have given us energy and comfort, but at a really high cost for our planet. Every year, the air gets more polluted, the temperatures keep rising, and the effects of climate change are harder to ignore. That's why renewable energy isn't just a trend or a dream — it's something we actually need to survive. Using clean sources like solar or wind power can help us protect the planet and still have the energy we need to keep moving forward.

The problem is that this change is not that easy. Some countries simply don't have the money or technology to make the switch, and others are too attached to the big oil and gas industries that still bring so much profit. It's unfair because the richest nations can move faster toward clean energy, while the poorest ones keep paying the price of pollution. If this doesn't change, the world will stay divided between those who can protect their future and those who can't.

We are already seeing what happens when we ignore this problem. There are floods, droughts, and wildfires destroying entire communities, and people are breathing air that makes them sick. Renewable energy could actually change that — it can give jobs,

cleaner cities, and more independence to every country. But to make that happen, leaders need to work together, invest in education, and support each other instead of competing.

At the end, promoting renewable energy isn't only about saving nature; it's about saving ourselves. The world needs to understand that we can't live forever burning what's killing the planet. The decisions we take now will define how the next generations live. And if we truly care about the future, it's time to stop depending on what harms us and start building a cleaner and fairer world for everyone.

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