Written submission from The Ocean Cleanup
Response to the call for written submissions prior to INC-3, issued by the INC Secretariat (part a)

TEMPLATE FOR SUBMISSIONS (part a) – Elements not discussed at INC2

Name of country (for Members of the committee)	
Name of organization (for observers to the committee)	The Ocean Cleanup
Contact person and contact information for the submission	Dr. João Ribeiro-Bidaoui, j.ribeiro@theoceancleanup.com Other contacts at The Ocean Cleanup: Janne van Eerten
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Elements not discussed at INC-2

1. Scope
What is the proposed scope for the future instrument?
Which types of substances, materials, products, and behaviors should be covered by the future instrument?

Proposed scope:

To rid the ocean of plastic, we cannot ignore the legacy plastic in the ocean, that is already there. Nothing we can do on land will have any impact on the amount of plastic which has already accumulated in the ocean, and for which any preventative action comes too late.

In order to address plastic pollution and its far-reaching consequences on our Ocean, marine life, climate, economies and health, **the scope of the future instrument should span across the full lifecycle of plastics, including legacy plastic pollution in the marine environment**. To achieve this, the scope must encompass the reduction, mitigation and remediation of legacy oceanic plastic pollution, including in areas beyond national jurisdiction.

Explanatory Text:

Unique challenges arise with regards to legacy oceanic plastic pollution, including in areas beyond national jurisdiction. These cannot be adequately dealt, and with the necessary urgency, through domestic waste management or by production and consumption related actions. In the spirit of UNEA 5/14 Resolution, the Treaty should incentivize cooperation and coordination with member states and key stakeholders to design appropriate mechanisms under the treaty for the remediation of such legacy plastic pollution.

Not all countries are equally affected by such plastic waste. Small Island Developing States (SIDS) are disproportionality affected by legacy oceanic plastic pollution. Island nations contribute little to global

plastic production and pollution, yet their blue economies are heavily affected by its climate and environmental impacts. SIDS, characterized by low-lying and remote geographies, encounter difficulties in implementing effective waste management practices and address waste transported by sea to their shores.

The new instrument is an opportunity to formalize how states can collectively address legacy oceanic plastic pollution. The persistence of such plastic pollution on the high seas should be treated as a shared responsibility: a collective common good requiring improved collective management.

2. Principles

What principles could be set out in the future instrument to guide its implementation?

To effectively tackle plastic pollution, The Ocean Cleanup believes the future instrument to be developed must adopt, among others, the following three principles to guide its implementation:

I. The principle of technology neutrality
II. The principle of non-discrimination regarding transboundary pollution
III. The precautionary principle in relation to human health and marine life

The **technology neutrality** principle implies applying no constraints or prescriptions on choices of technology or equipment, and not favoring nor discriminating against any technology.

The **precautionary principle in relation to human health** and marine life implies that if plastic pollution in the environment poses a risk of harm to human health and marine life, precautionary measures, such as remediation activities, should be taken even if some cause-and-effect relationships of said harm are not fully established scientifically.

The **principle of non-discrimination** regarding transboundary pollution implies that regardless of whether plastic pollution occurs within or beyond national jurisdictions, collaborative strategies are prioritized, setting aside sovereignty concerns, and collectively addressing the urgent need to safeguard our marine environment for the well-being of present and future generations.

Explanatory Text:

I. The Principle of Technology Neutrality

There is increasing recognition of the critical role that technology and technological innovations will play in addressing plastic pollution, from source to sea. To support an innovation ecosystem and allow Member States to have the autonomy and flexibility to choose the technology most suitable to their capabilities and to local environmental, social, and economic circumstances – the principle of technology neutrality **guarantees freedom of choice by not forcing users into using any specific technology**.

Furthermore, **technology neutrality will support future technology development and innovation**. The absence of technology neutrality will result in technology-specific regulations that lead to dependency on specific manufacturers, developers, suppliers or distributors of technology or services which stifles the incentives for innovation and may result in additional

costs. It may further limit access to technology and raise costs for its transfer across regions. The elimination of unnecessary plastics can only be achieved through a full transformation that reduces society's over-dependence on plastics. We need innovators to bring eclectic ideas and fresh solutions. For this reason, ensuring technology neutrality of the provisions included in the instrument is **crucial to create the right incentives to create a flourishing innovation ecosystem.**

The practicality of this principle also extends to a legal perspective, as regulations tied to a particular technology may quickly become obsolete and require further amendment. There are several international regional agreements and regulations which adopt the principle of technology neutrality. For these reasons, adopting the **principle of technology neutrality will ensure the longevity and relevance of the legally binding instrument while accelerating the development of technologies needed to tackle the plastic pollution crisis, from source to sea**.

II. The non-discrimination principle

The principle of non-discrimination regarding transboundary pollution can be found in Article 26 of the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil.

> *1. Each Party shall take all measures to ensure that activities within its jurisdiction are conducted so as not to cause pollution beyond the limits of its jurisdiction.*
> *2. A Party within whose jurisdiction activities are being envisaged or carried out shall take into account any adverse environmental effects, without discrimination as to whether such effects are likely to occur within the limits of its jurisdiction or beyond such limits. (…)*

Incorporating the principle established by the Protocol into the Global Plastics Treaty as a foundational guiding principle would be pivotal in ensuring a uniform approach regardless of whether plastic pollution occurs within or beyond national jurisdictions. **By emphasizing the shared responsibility of the marine environment and promoting a cooperative approach, the Treaty should exceed the limitations of national jurisdiction, making it unequivocally clear that plastic pollution is a global concern that requires collective action.**

The inclusion of the non-discrimination principle would encourage all Parties to the Global Plastics Treaty to prioritize collaborative strategies, setting aside sovereignty concerns and collectively addressing the urgent need to safeguard our marine environment for the well-being of present and future generations.

III. The Precautionary principle in relation to human health and marine life:

Plastic pollution has been found everywhere on our planet - in the air, soil, and water, in our food and even in our bodies.[1] And the accumulation of legacy plastic waste in our marine environment

[1] Heather A. Leslie a et al. (2022) Discovery and quantification of plastic particle pollution in human blood, Environment International. Available at: https://www.sciencedirect.com/science/article/pii/S0160412022001258 (Accessed: 26 July 2023).

is not going away, particularly in the Ocean. To the point of humanity facing a risk of **irreversibility**: if we don't act now, we may never be able to do so in the future because the plastic will go further into the water column, out of reach for any viable remediation strategy. These legacy plastics are:

(1) Breaking down into micro and nano-plastics, which are then swallowed by fish and other marine life and entering our food chain[2]
(2) Directly mistaken for food and consumed by marine animals or seabirds[3]
(3) Entangling and injuring marine animals[4]
(4) Interfering with coral reefs and affecting the biodiversity of these ecosystems[5]
(5) potentially interfering with the biological carbon pump of the ocean, which sequesters as much CO2 as all of humanity emits.[6]

Scientists have been studying microplastics[7] for over a quarter century. However, plastics have continued to enter our bodies through the food we eat, the water we drink and the air we breathe. So much about microplastics remains unknown. While there are more studies[8] emerging on the possible negative impacts of microplastics on our health, **proving causation remains challenging because:**

(1) The wide range of particle sizes, densities, and compositions[9] and lack of an established standard to characterize the wide variety of micro and nano-plastic particles.
(2) Plastics are made from a complex combination of chemicals, including additives. A 2021 study found up to 8,681 unique chemicals and additives associated with a single plastic product.[10] Hence, sorting out which chemical combinations are problematic, and finding the level and length of exposure that causes harm is no easy task.
(3) The sheer number of chemicals we are exposed to in our daily lives (in addition to plastics) makes isolating the effects of microplastics an extremely, if not impossible, task.

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[2] How plastic has entered the Food Chain (2020) Plastic Soup Foundation. Available at: https://www.plasticsoupfoundation.org/en/plastic-problem/plastic-affect-animals/plastic-food-chain/ (Accessed: 27 July 2023).

[3] Threat of plastic pollution to seabirds is global, pervasive. Available at: https://www.pnas.org/doi/10.1073/pnas.1502108112 (Accessed: 27 July 2023).

[4] Risk analysis reveals global hotspots for marine. Available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/gcb.13078 (Accessed: 27 July 2023).

[5] Tiny Plastics Big Threat. Available at: https://www.epa.gov/sciencematters/tiny-plastics-big-threat-how-are-microplastics-impacting-our-coral-reefs (Accessed: 27 July 2023).

[6] Shiye Zhao and others, Pelagic microplastics in the North Pacific Subtropical Gyre: A prevalent anthropogenic component of the particulate organic carbon pool, PNAS Nexus, Volume 2, Issue 3, March 2023, pgad070, https://doi.org/10.1093/pnasnexus/pgad070.

[7] Defined as particles measuring less than five millimetres (a fifth of an inch) across.

[8] Examples of studies on the health impacts of microplastics: a. Health Effects of Microplastic Exposures: Current Issues and Perspectives in South Korea by Lee Y, Cho J, Sohn J, Kim C.; b. Global Pattern of Microplastics (MPs) in Commercial Food-Grade Salts: Sea Salt as an Indicator of Seawater MP Pollution by Ji-Su Kim, Hee-Jee Lee, Seung-Kyu Kim, and Hyun-Jung Kim.

[9] In a 2021 tally, Japanese scientists from Kyushu University estimated 24.4 trillion microplastics in the world's upper ocean

[10] Deep Dive into Plastic Monomers, Additives, and Processing Aids. Helene Wiesinger, Zhanyun Wang, and Stefanie Hellweg. Environmental Science & Technology 2021 55 (13), 9339-9351.

Given the structural research challenges, it is unclear when we will ever be able (if at all) to establish scientific certainty of the harm that plastic in our bodies causes.

While we know more today, the full impact of plastics still requires ongoing research, data gathering, analysis, and due diligence to prove full causality. Scientific research will be an ongoing, long-term process that should continue to be carried out and strongly supported by the new instrument; however, we also need to start acting now to minimize and avoid harmful scenarios created by legacy plastics becoming a reality or a more widespread reality. As such, the instrument should be guided by the **'precautionary principle in relation to human health and marine life' to set the baseline for Members States to be pro-active and preventative rather than reactive towards the remediation of plastic pollution.** This means that once scientific certainty is established, the extent of the impacts has already been mitigated as best as possible. Specifically, this principle should guide the implementation of Obligation 9 – eliminating the release and emission of plastics to water, soil and air and Obligation 10 – addressing legacy plastics.

This principle must extend to the protection of marine life. According to a study by the World Wildlife Fund, it is estimated that at least 100,000 marine animals die from plastic pollution every year.[11] This number is likely an underestimate, as it only accounts for a few species.

Remediation of **legacy oceanic plastic pollution** not only takes responsibility for our historical actions but prevents the worsening of future scenarios for human health and marine life. We are in a race against time. It will be simply too late to back out of the problem once we fully understand the consequences.

This principle manifests itself in the healthcare sector as a widely adopted social value that guides and influences the incentives set by businesses and government policy - as prevention is proven to be far more cost-effective than treatment.[12] **The precautionary principle in relation to human health and marine life will guide Members States, businesses, policymakers, non-for-profit organizations and others towards finding and implementing the best available approaches, the soonest, to address legacy plastic pollution.**

In conclusion, the inclusion in the instrument of the **precautionary principle in relation to human health and marine life** would encourage Members States to:

(1) **Remove legacy oceanic plastic pollution**, including those persistently accumulating in areas beyond national jurisdictions.
(2) **Actively intercept plastics flowing** in riverine environments to curb the continental emission of plastics to water, soil, and air - especially since most plastics leaked into the marine environment are found near coastal communities, much closer to our food chains.

[11] Commissioned by WWF and conducted by the Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research, the report "Impacts of plastic pollution in the ocean on marine species, biodiversity and ecosystems''
[12] Health Care Industry Insights: Why the use of Preventive Services is still low (2019) Centers for Disease Control and Prevention. Available at: https://www.cdc.gov/pcd/issues/2019/18_0625.htm (Accessed: 27 July 2023).