International Treaty on Plastic Pollution

For a systemic approach that meets the challenge
From November 28 to December 2, the Intergovernmental Negotiating Committee of the International Treaty on Plastic Pollution will meet in Punta del Este, Uruguay. In order to prepare this first round of discussions, the Secretariat of the United Nations Environment Program (UNEP) has produced a summary document on the state of knowledge on this subject and has outlined a few strategy options.

As a Special Observer to the UN, the Tara Ocean Foundation takes stock of the situation: what can we learn from it? What expectations can legitimately be stated regarding the objectives of the future Treaty?

* All figures are taken from the document “Intergovernmental negotiating committee to develop an international legally binding instrument on plastic pollution, including in the marine environment, First session, Punta del Este, Uruguay, 28 November - 2 December 2022, Item 4 of the provisional agenda, UNEP/PP/INC.1/7, Dist.: General, 13 September”. 

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Trends in production and consumption of plastics, the UNEP Report

Global plastic production has grown exponentially since the 1950s. It doubled between 2000 and 2019, from 234 million tons to 460 million in 2019. It is expected to at least triple again by 2060, if no changes are made. These projected increases show significant variability between member states of the Organisation for economic co-operation and development (OECD) and developing countries. However, it should be noted that OECD countries are expected to remain by far the largest contributors to global plastic pollution. Each inhabitant of OECD countries will consume 238 kg of plastics in 2060, compared to 77 kg for inhabitants of non-OECD countries.

Furthermore, plastics are widely additivated with chemical components (plasticizers, anti-static agents, colorants, flame retardants, etc.) that improve the characteristics of the polymers. More than 10,000 chemical molecules are currently used and 99% of polymer production is based on fossil resources.

The plastics market is mainly (86%) occupied by thermoplastics, plastics that soften under the action of heat and harden on cooling in a reversible manner, mainly in the packaging sector (66%), followed by construction, transport and the textile industry.

The collection, treatment and valorization of end-of-life plastics

The UNEP Secretariat notes that the plastics economy is largely linear, leading to massive production of non-treated or poorly treated wastes.

Currently, between 60 and 99 million tons of plastic waste are produced per year, a figure that is expected to increase 2.5 times by 2040. 46% of plastic wastes are landfilled, 17% incinerated, 22% abandoned in the natural environment. 15% are collected for recycling, but only 9% are actually recycled. Waste mismanagement is the main source of environmental contamination by plastics.

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The UNEP Secretariat specifies that although many plastics are theoretically recyclable, only a few are actually recyclable, and only in certain territories. Unfortunately, these results are unlikely to change since projections do not allow us to imagine an increase in the recycling rate beyond 12% in 2060. Finally, regarding chemical recycling, UNEP indicates that this is a field of research that could be interesting given the technical limitations of mechanical recycling. However, it still must demonstrate its environmental added value in terms of energy costs, use of toxic materials and by-products potentially generated. Chemical recycling cannot be retained as a mobilizable solution because of its lack of industrial maturity and the impossibility to deduce an economic viability.
The impact on the environment and human health

It is estimated that 31 million tons of plastic wastes contaminate land ecosystems each year, 20 million tons contaminate aquatic ecosystems and 11 million tons contaminate the Ocean. Finally, open-air incineration of plastic wastes concerns 49 million tons. These figures are still estimates, but given the projections of plastic production, they should be multiplied by at least 2.5 in the next 20 years. In 2040, the amount of plastic waste that will reach the Ocean is estimated to be around 30 million tons per year.

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88% of these wastes are in macro waste form, that means particles bigger than 5 millimeters. The source is overwhelmingly related to the malfunctioning of waste treatment. UNEP indicates that plastics used by the fishing and agricultural sectors should be subject to special monitoring, due to a greater risk of leakage into nature. Finally, the issue of micro-plastics (smaller than 5 millimeters) is highlighted as a major monitoring issue.

The UNEP Secretariat points out the complexity of the impacts on the environment. Nowadays, the entire planet is concerned, from the atmosphere to the deepest ocean floors. We are talking about the direct alteration of ecosystems functions and the consequences on biomass production and alteration of major natural cycles, but also about more rarely mentioned consequences such as the major contribution of plastic production to global warming. They are estimated, at the present time, at 3.4% of global emissions and should quadruple, reaching 15% in 2050. We can also mention the consequences of the use of hydrofluorocarbons (HFCs), some deleterious additives for the ozone layer. In conclusion, plastics are at the heart of all environmental issues (biodiversity, climate, toxicity, etc.), their presence in the environment, by altering the resilience of ecosystems, could greatly accelerate the most worrying changes.

As a result, plastics are a threat to humanity. They alter its food resources and degrade its living environment. They are also serious threats to human health at every stage of their life cycle. This concerns the actors of production, exposed to polymers and their additives during industrial phases, those of the formal or informal sectors of waste treatment, up to the whole population concerned by a permanent exposure to micro and nano particles present into the air, water and food. For the record, plastic production involves more than 10,000 chemical additives, a quarter of which are a threat to human health. Finally, studies point to the role of plastic micro-particles in the circulation of pathogens.

The solutions mentioned by UNEP

Unsurprisingly, UNEP mentions circular economy as a major way to improve the situation. An approach that must be based on a life cycle analysis of plastics. This analysis must be exhaustive, from environmental costs of oil extraction to those of waste disposal, including a realistic assessment of the risks of leakages into the environment, at each stage. The circular economy implies the reduction and therefore the elimination and substitution of non-essential plastic objects, as well as the elimination or substitution of the most problematic additives. It also implies the improvement of re-use and recycling, based on technological solutions that are operational today. UNEP insists on two key points: the imperative need to improve collection, in order to avoid leakage into the environment, and the complementarity between regulatory and voluntary approaches by companies, with governments being responsible for ensuring that pollution reduction targets are met, including through coercion, when the market fails to do so.
What expectations does the Foundation Tara Ocean have for the Punta del Este negotiations?

The Tara Ocean Foundation makes the following recommendations for the upcoming negotiations on the establishment of the future Treaty:

1. **Establish official definitions of key terms such as "plastics", "recyclable", "recycled"**

   In its document, UNEP points out the issues related to terminology and reporting. Although some definitions are outlined, they remain very insufficient. Fundamental terms such as "plastics", "recyclable" or "recycled" remain without official definitions, which could largely alter the scope of the final text.

2. **Require States to report on the placing on the market of plastics**

   The Tara Ocean Foundation advocates for a report that will not only concern waste processing but also the entry on the market of plastics, for example in the form of a register of declarations. This tool would allow a better knowledge of the volumes and typologies of plastics and, by comparison with the recycling figures, would help to target the plastics not yet identified as sources of environmental pollution.

3. **REDUCTION : quantify the target with an established and operational timetable**

   The Tara Ocean Foundation welcomes the «Circular Economy» approach promoted by the UNEP and is pleased to see that it involves the approach of Reduction, Re-use and Recycling. But the efficiency of this approach will be measured by the respect of the 3Rs value hierarchy. Faced with a production of plastic that could be multiplied by three in the next forty years, an international treaty that does not set precise objectives to limit production would simply not be credible. The reduction target must therefore be clearly quantified, with an established operational timetable. The definition of «non-essential» objects must be specified, and those of problematic polymers and additives must be established.

4. **RE-USE : promote combined eco-design and regulations to increase the guaranteed life span for the user**

   On re-use, the Tara Ocean Foundation invites the negotiators to focus on increasing the life span of objects involving the most complex and problematic plastics by promoting combined eco-design and regulatory approaches to increase the guaranteed life span for the user.

5. **RECYCLING : include an environmental benefits / risks assessment**

   Finally, as far as recycling is concerned, the Tara Ocean Foundation stresses that the strategy to be adopted must include an environmental benefits / risks assessment of recycling. Moreover, it can only involve operational industrial technologies and devices, on time and on scale, and consider the difficulties inherent to the recycling of artificial polymers (degradation of the material's properties, economic competitiveness, etc.).

6. **Explore the idea of a globalized model of extended producer responsibility (EPR)**

   The Tara Ocean Foundation stresses that it is imperative to deal with the costs to process plastics at their end of life. This point could quickly become a stumbling block for the future Treaty, with questions of responsibility and solidarity that could bog down the negotiations. To avoid this, the Foundation invites the negotiators to explore the idea of a globalized model of extended producer responsibility (EPR). It could be inspired by occidental EPR, while seeking to go beyond their limits and consider all the costs of collecting, sorting and treating all wastes, including those found outdoors.

7. **Overlook the linkage of the Treaty with existing texts**

   Finally, the negotiations must not overlook the linkage of the Treaty with existing texts, in particular trade agreements and the Basel Convention, which contains some elements of response to the treatment of plastic wastes.
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