

## Contribution by the International Science Council

### Written views in advance of the second informal in-person meeting of Heads of Delegation to the INC on Plastic Pollution

The International Science Council (ISC) federates 245 national science academies, international disciplinary unions and regional scientific organizations and covers all world regions. The ISC also provides a key interface between the global scientific community, across the natural and social sciences, and the multilateral community as co-chair of the Scientific and Technological Community under ECOSOC for the SDGs, a long-term scientific partner of UNEP, is network organisation of the UN Secretary-General Scientific Advisory Board, and an observer to many multilateral treaties and global assessment bodies.

The ISC has engaged actively in the INC process since 2024, through a dedicated international and [multi-disciplinary expert group](#).

The ISC wants to bring the following points to the attention of delegations when negotiating the text:

#### KEY MESSAGES

**Science-Policy Interface:** An integrated science-policy interface (SPI) is essential to meet the substantial need for scientific and technical inputs into the treaty's decision-making and implementation. Notably, a robust subsidiary scientific body could periodically review progress and inform COP decisions on necessary updates of targets. Identifying the best models for such bodies should involve a consultative expert process drawing lessons learned across existing science advisory mechanisms and evaluating their effectiveness. All advisory structures should be guided by principles of independence, policy relevance, interdisciplinarity and inclusivity.

**Scope:** Growing volumes of plastic production are disproportionately inducing growing levels of plastic pollution. Research shows that, alongside measures that tackle plastic waste management, design and consumption, a global cap on primary plastic production levels is associated to curbing plastic pollution. Furthermore, evidence demonstrates that upstream measures are also the most cost-effective, proactively tackling both causes and impacts.

**Health:** Increasing scientific evidence demonstrates the human health risks posed by plastic pollution and exposure. The instrument must be informed by robust scientific advice on the health impacts of plastic pollution. Additionally, it should safeguard human rights, notably the right to health, the right to a healthy environment, and the rights of children and Indigenous communities worldwide.

**Monitoring:** Monitoring mechanisms must be designed to inform and complement periodic evaluations, providing essential data to assess progress and the treaty's effectiveness. This requires the establishment of standardized global procedures and protocols, open-access data systems, and a global digital hub under an international body to integrate life-cycle data.

## CLUSTER A

- **Effectiveness evaluation will depend on the availability of harmonized global data and methodologies** across the full life cycle of plastics. This will be essential to inform effectiveness evaluations with accurate data on plastic waste generation, emissions and leakage across the full life cycle, including microplastics, as well as for assessing impacts on human health and ecosystems.
- **Monitoring and reporting processes should contribute to the adaptive implementation and continuous improvement of treaty measures.** For this purpose, **a dedicated and independent science-policy interface is essential** to ensure that implementation, review and future decision-making remain informed by up-to-date scientific evidence and diverse knowledge systems, that encompass environmental, health, and socioeconomic dimensions.
- **Global standards for transparency and traceability of chemical composition and labelling across plastic value chains are also essential** to identify sources of pollution and evaluate the effectiveness of control measures.
- **Proactive national plans can be implemented through comprehensive, existing policy measures that cover the full life cycle of plastics.** Evidence has shown that piecemeal solutions with narrow focus on a specific product or stage produce fragmented and limited results. Some of the most effective policy mixes include extended producer responsibility (EPR) schemes, circular product design, and use of safe and sustainable alternative materials.

## CLUSTER B

- **The increasing production of polymers, products or chemicals of concern is associated with increased environmental leakage, exposure, health impacts or other risks.** The earliest phases of the plastic life cycle, namely the extraction of raw materials and petrochemical feedstocks already contribute to plastic pollution. Furthermore, all plastic types, in all their components and sizes – considering materials, chemicals, additives, micro- and nanoplastics – contribute to plastic pollution.
- **The instrument should include science-based criteria to determine safety and sustainability of plastics,** enabling the shift to a safe, toxic-free circular plastics economy. **Criteria should be developed to inform specific lists for elimination** and restriction of both chemicals and polymers of concern, and problematic and avoidable plastic products - and to determine safe and sustainable design. **Such criteria should also extend to all alternative, substitution and replacement solutions,** including bio-based, biodegradable and compostable plastics, to prevent regrettable substitution.
- **The instrument's development, including its objectives and principles, should be guided by the One Health approach,** which underscores the interconnection between human health with the environment. Recognizing existing gaps in understanding the full range of health impacts, the instrument should adopt a precautionary approach when establishing all measures in the instrument. Standardized international methods to monitor and assess

exposure and risks across the full plastic life cycle are essential to enable informed future decision-making.

#### CLUSTER C

- **The instrument should incorporate measures supporting the establishment of a financial mechanism** to minimize macroeconomic impacts on vulnerable communities and regions, namely Small Island Developing States and polar regions, which are disproportionately exposed to plastic-related issues. Substantial investments for addressing scientific and technical needs, including data collection and monitoring, in these regions is fundamental. We support the creation of a dedicated multilateral fund, informed by thorough needs assessments and existing evidence, to ensure equitable and effective support.
- **This fund should be complemented by technical assistance, technology transfer and capacity building**, particularly in low-income countries and Small Island Developing States (SIDS). With scientific capacity being unevenly distributed and regions being disproportionately impacted, international cooperation can fill the equity gap to promote new skill development, technology integration, monitoring, and data utilization, in order to facilitate knowledge-sharing and implementation. The treaty should ultimately enable all countries to participate effectively in generating, accessing and applying scientific knowledge relevant to plastic pollution.

#### CLUSTER D

- **The treaty should be grounded in the objective of ending all plastic pollution through a science-based, globally coordinated response that addresses the full life cycle of plastics, with consideration to the disproportionate impacts of plastic pollution on different communities and regions.** A full life cycle approach is essential to ensure that measures adopted under the treaty deliver benefits for human and environmental health while avoiding unintended consequences and burden shifting across the life cycle.
- **A strong science advisory and science-policy interface is essential to connect knowledge generation with decision-making** and ensure that treaty implementation remains effective over time. An independent science-policy interface can strengthen public awareness and access to scientific information, for a community-centric approach to ending plastic pollution. Inclusive knowledge systems that integrate Indigenous, traditional and local knowledge can increase legitimacy and effectiveness of the instrument.

Key ISC contributions:

- [Key Requirements for a Science-based International Legally Binding Instrument to End Plastic Pollution](#) (INC-4)
- [ISC statement at the informal webinar ahead of INC-5](#)
- [Statement at INC-5 Plenary](#)
- [ISC Statement on Outcomes of INC 5.2](#)