

# The need for data on plastics – ensuring a transparent, equitable and ambitious global agreement to end plastic pollution

## Key messages

- The success of a global agreement on plastic pollution will ultimately depend on robust mechanisms for transparency, accountability, and reporting, and a binding obligation to compile relevant national data on plastics.
- Data on plastics across the lifecycle will be essential to measure progress towards global objectives and enable regularly opportunities to increase ambition.
- Most countries lack comprehensive data on plastic production, consumption and pollution.
- Looking to other Multilateral Environmental Agreements (the Basel Convention, Minamata Convention, Paris Agreement, and Stockholm Convention) all explicitly require parties to collect relevant data, establish national inventories, monitor progress, and report findings to their respective secretariats or Conference of the Parties (COPs).
- Such clear and binding provisions for comprehensive data collection, reporting, and monitoring have proven essential to the success of existing MEAs and will need to be included in the final text of the agreement.

## Why is data important for the effective management of plastics?

Currently, our grasp of global plastics production, consumption, and waste patterns remains surprisingly limited. We know that approximately 460 million tonnes of plastics are produced annually and estimate that 20 million tonnes end up in our waters and on the beaches of island states annually<sup>1</sup> – but significant gaps exist in our knowledge of how this plastic moves through the global economy and environment.

This knowledge gap makes it hard to:

- Determine the magnitude of the plastic problem and current challenges to management
- Direct finance and resources to the most needed areas or efficient solutions
- Develop ambitious but achievable national action plans

- Accurately measure the environmental, economic and social impact of efforts to address plastics
- Understand if collective efforts are making progress towards global goals.

Improved data and national data systems will be essential to track and understand the flows of plastics across the lifecycle into and within national economies (as envisaged by UNEA-5.2/Res 14).

## The global plastics data gap

At the national scale, few countries have established processes for systematic data collection and analysis. As a result, no country regularly reports plastics data across the lifecycle from production to release in the environment.<sup>2</sup>

One major challenge is that data and knowledge are fragmented across the lifecycle, with inadequate coordination between different

<sup>1</sup> IUCN, "Issues Brief: Plastic Pollution" (2024), <https://iucn.org/resources/issues-brief/plastic-pollution>

<sup>2</sup> UNSW Centre for Sustainable Development Reform, The Global Plastics Data Tracker (2025), accessed 16 July 2025, <https://plastictracker.org/>

sectors and government agencies responsible for various aspects of plastic production, use, and disposal. This fragmented approach results in incomplete and inconsistent data collection, hindering the development of a holistic understanding of plastic pollution flows and impeding effective policy formulation and implementation.

## How could the data gap influence the success of the treaty?

Based on negotiations to date, the treaty will most likely rely on a hybrid approach balancing national plans, which include nationally determined targets, policies measures, with robust global frameworks for transparency and monitoring to track and periodically assess global progress and encourage a “ratcheting” (i.e., increase) on ambition over time. Whether or not this approach is successful in curbing plastic pollution will largely depend on the requirements for transparency and accountability, which are premised on national data availability.

Without national data and/or data systems in place or pathways to develop this over time with adequate levels of support, the data gap will:

- Impact a country’s ability to establish realistic yet ambitious goals through **national action plans**<sup>3</sup> in line with the ambitions of the global treaty;
- Impact a country’s ability to **monitor** the implementation of those commitments, hindering not only national efforts but also complicating the aggregation of global progress and the evaluation of collective achievements against agreed global goals;
- Pose challenges for **verification** measures, including any potential market mechanisms. The absence of reliable and comparable data makes it difficult to verify

progress claims or ensure the integrity of any trading schemes or offset programs that might be implemented as part of the global effort to combat plastic pollution;

- Limit the ability to timely and transparently **report on progress**<sup>4</sup> within their national jurisdiction in a representative and coherent manner;
- Undermine efforts to **aggregate global progress**<sup>5</sup> against global goals to eliminate and/or phase out plastics; and
- Undermine the ability to **assess the effectiveness** of the instrument.<sup>6</sup>

## Data as the Backbone of Multilateral Environmental Agreements

Analysis of four multilateral environmental agreements (MEAs): the Basel Convention, Minamata Convention on Mercury, Paris Agreement, and Stockholm Convention on Persistent Organic Pollutants, revealed consistent approaches to data collection and reporting.<sup>7</sup>

### Universal Data Requirements

All MEAs studied explicitly require parties to collect relevant data, establish national inventories, monitor progress, and report findings to their respective secretariats or Conference of the Parties (COPs). This universality suggests that data collection is viewed as a fundamental requirement rather than an optional element.

Examples of universal data requirements are listed below.

- **Mandatory regular reporting:** The Basel Convention requires parties to transmit annual reports containing “information

<sup>3</sup> UNEA-5.2/Res 14, paragraph 3(d)

<sup>4</sup> UNEA-5.2/Res 14, paragraph 3(f)

<sup>5</sup> UNEA-5.2/Res 14, paragraph 3(g)

<sup>6</sup> UNEA-5.2/Res 14, paragraph 3(h)

<sup>7</sup> Northrop and Belonje, “Closing the Information Gap in Global Plastics Governance: No Data. No Deal”, Global Ocean Accounts Partnership (2024)

regarding transboundary movements of hazardous wastes” including detailed data on amounts, categories, characteristics, destinations, and disposal methods including plastic waste and trade flows (Article 13 Basel Convention).

- **National inventories:** The Minamata Convention mandates that parties “establish and maintain an inventory of emissions and releases from relevant sources” within five years of the Convention’s entry into force (Articles 8 and 9, Minamata Convention on Mercury)
- **National inventories:** The Stockholm Convention requires parties to develop “source inventories and release estimates” (Article 5, Stockholm Convention) that both inform action plans and provide the basis for ongoing assessment of progress towards reducing releases of persistent organic pollutants.

Data collection and centralisation in these agreements serves dual purposes. First, it establishes baseline measurements against which progress can be tracked over time. Second, it enables evaluation of policy effectiveness, creating feedback loops for continuous improvement.

### Standardised Methodologies

In addition to obligations for the collection and compilation of data, the MEAs examined also recognise the importance of harmonised methodologies and approaches.

For example, the Paris Agreement requires national inventory reports to be “prepared using good practice methodologies accepted by the Intergovernmental Panel on Climate Change agreed upon by the Conference of the Parties” (Article 13, Paris Agreement)

This standardisation serves multiple purposes: ensuring data quality, enabling meaningful comparisons between countries, and facilitating the aggregation of national data into global assessments.

### Time-Bound Obligations for Reporting

All the MEAs analysed consistently include specific timeframes for reporting. For example.

- The Minamata Convention requires emissions inventories to be established “no later than five years after the date of entry into force” (Articles 8 and 9, Minamata Convention).
- The Basel Convention mandates annual reporting “before the end of each calendar year” (Articles 13, Basel Convention)

These clear deadlines create structured opportunities to assess collective action through regular assessment cycles.

The Paris Agreement’s Global Stocktake mechanism demonstrates how individual national data can be aggregated to assess collective progress toward shared goals. The outcomes of this Global Stocktake then informs the next round of nationally determined contributions, ensuring a cycle of increased action which is informed by data.

This process transforms national actions into a coordinated global response by providing a clear picture of overall progress, identifying implementation gaps, and informing future commitments.

## What are the key considerations to ensure transparency and accountability in the plastics treaty?

### For inclusion in the final agreement text

- **Legally binding obligations on all Parties to compile and report national data on the full lifecycle of plastics,** reflecting the different national circumstances and special considerations of SIDS and LDCs. Ideally this would define clear timelines and be supported by an obligation to develop a national inventory of this data (Article 14 or Article 15).

- **Mechanism for global assessment and review (Article 16)** that aggregates national data to evaluate collective progress toward shared objectives.
- **Recognition of different country capacities and starting points and support for LDCs and SIDS (throughout but also in Article 11):** There should be synergy between the articles on developing a national plan, reporting, the effectiveness evaluation, finance and means of implementation and compliance. These processes should foster transparency, be based on science and data and enable improvement over time.

#### For agreement by the Conference of the Parties

- **Harmonised methodologies, reporting formats and definitions** to create a harmonised approach that ensures national data can be meaningfully aggregated at the global level.
- **Establish technical guidelines**, supported by the best available science, for data collection, inventory development and reporting methodologies to support consistent implementation across parties.
- **Ensure scientific and technical bodies** have the mandate and appropriate guidance to assess progress and make

recommendations based on the best available science.

- **Facilitate knowledge sharing** on best practices, lessons learned, and technical expertise among parties and stakeholders.

#### For national governments

- **Invest in data systems and technical capacity:** develop or strengthen national plastic data collection systems, building on existing statistical frameworks and invest in training and technical capacity for data collection efforts.
- **Integrate with policy:** ensure data collection systems are designed to support national policy development and implementation.

## Conclusion

The precedents of existing multilateral environmental agreements suggests that robust data frameworks represent a fundamental requirement for effective environmental treaties.

Without this foundation, even the most ambitious treaty will lack in measurable and visible change.

## Resources

- The [Global Plastics Data Tracker](#) consolidates all available government-reported plastics data into a single, accessible online platform.
- The [Plastics Data Checklist](#) is designed to support countries to assess the availability and reliability of their national data on plastics across the lifecycle.
- [Expert insights](#) on the importance of data and science for a successful regime to end plastic pollution.

The Global Ocean Accounts Partnership (GOAP) Secretariat is available to support countries working to develop or strengthen their plastics data.



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