EU regulation on microplastics and nanoplastic: present action, plans and needs

CUSP workshop

7 February 2023

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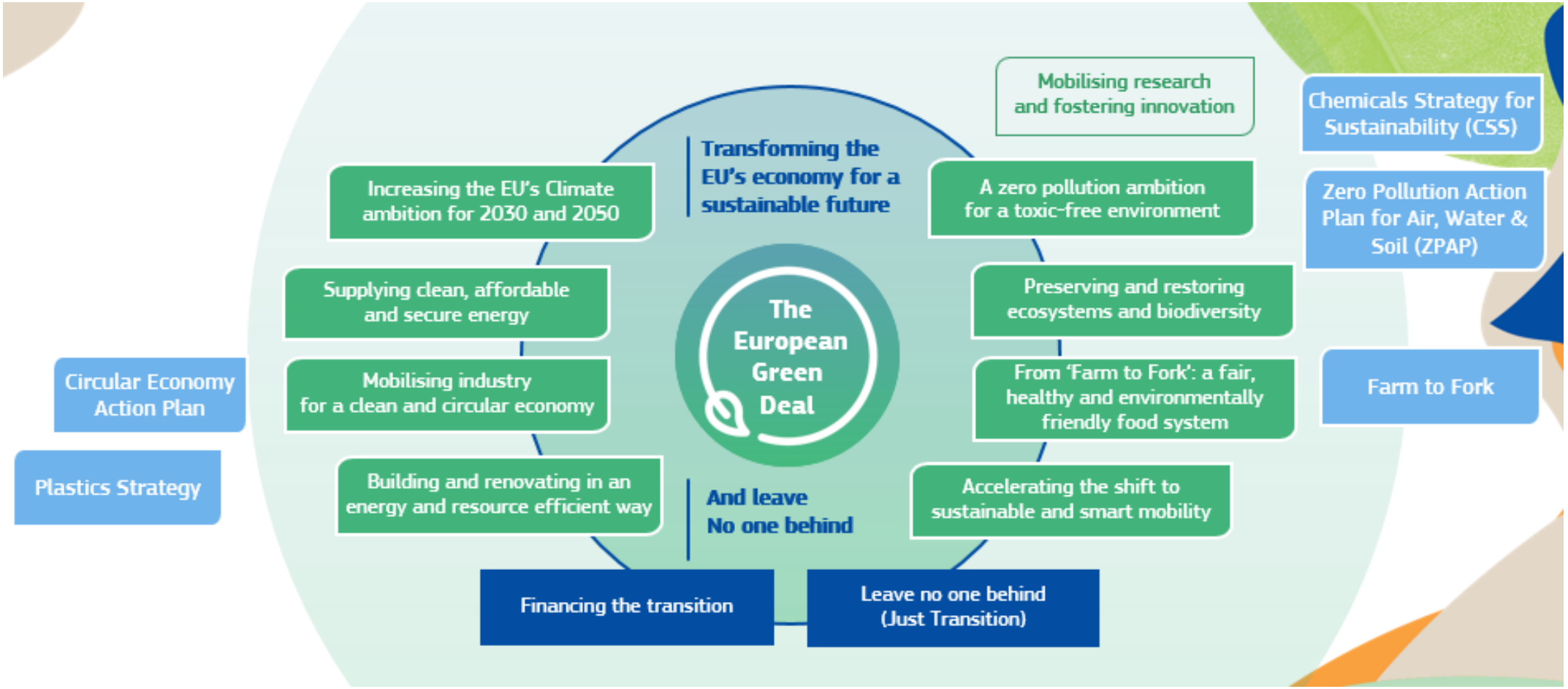
European Commission
DG ENV B2 – Safe and sustainable chemicals

Overview

- Policies and objectives to reduce (micro)plastics pollution
- On-going actions and status
- Gaps with regard to microplastics to support EU policy
- Policy needs regarding microplastics research

The European Green Deal



European Commission

Policies and objectives

- **Prevention**
  - *Circular Economy Action Plan and Plastics Strategy:*
    - *Restricting the use of **intentionally added microplastics** in products (REACH restriction)*
    - *Reduce **unintentional release of microplastics***
- **Minimisation and control**
  - *Zero Pollution Action Plan:*
    - *Reduce plastic litter at sea by 50% by 2030*
    - *Reduce microplastics released into the environment by 30% by 2030*
  - *Plastics Strategy & Circular Economy Action Plan*
    - *Reduce littering, increase recycling (packaging)*
    - *Close the gaps in scientific knowledge related to the risk and presence of microplastics (environment, drinking water, food)*

Relevant regulatory frameworks

- Chemicals legislation (REACH)
- Several sector- and product-specific legislations (tyre labelling, detergents regulation, construction products, textiles labelling, ESPR)
- Water legislation (drinking water, water framework and EQS directives)
- Food contaminants regulation
- International dimension: 5th United Nations Environment Assembly adopted “End Plastic Pollution: towards an international legally binding instrument”
    - Preamble highlights that “plastic pollution includes microplastics”.

REACH restriction

- Covers intentionally used microplastics: bans, reporting, instructions
- COM proposal currently discussed in the Reach Committee
  - Adoption foreseen in 2023
- Key points:
  - Restriction based on ENV RA (not sufficient data for HH RA)
  - No lower size limit in the scope: covers all microplastics
  - Need for analytical methods for implementation and enforcement
    - Practical limit of 0.1 µm set for enforcement purpose, until analytical methods are available

Unintentional microplastics

- Originally determined as most important sources:
  - Pellets: small granules that are intermediate raw material to manufacture plastic items
  - Tyres
  - Textiles - clothes
- Three additional sources identified in the ‘draft IA study’ and by stakeholders:
  - Paints: marine paints, road markings, architectural paints, …
  - Geotextiles: used in construction e.g. for building roads, coastal & flooding protection
  - Soluble films in detergent capsules for laundry and dishwashers

Possible legislative proposal in 2023

Water legislation

- COM proposal to review the list of pollutants for WFD, EQSD and GWD
  - Development of an harmonised method to measure MP in surface, coastal and groundwaters
  - When method available: inclusion of MP in the watchlists for surface water and groundwater
  - Monitoring of MP for 2 years before setting an EQS or a limit in GWD
- Drinking water directive
  - By January 2024, adopt a methodology for measuring MP for potential inclusion in watchlist, monitoring and reporting
  - Work on-going with JRC. Preliminary results: detection limit of 20 µm proposed

Food contaminants Regulation

- 2016 EFSA statement on the presence of microplastics and nanoplastics in food (https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2016.4501): list of data gaps,
    - Limited data availability for some foods and drinking water
    - Exposure assessment: more refined estimates are needed
    - Risks for human health ???
- Regulatory measures on MPs in food can only be considered when there is evidence of risks to human health→ a human health risk assessment is needed
- EFSA colloquium, May 2021:
    - Some progress has been made, but scientific evidence on human health effects is still limited

Gaps with regard to M(N)P* to support EU policy

- (Harmonised) definitions
- M(N)P sources, breakdown mechanisms / pathways / fate
- Sampling / Identification / Quantification
- Environmental risks / Human health risks / effects
- Economic impact assessment / instruments
- Innovative technologies (tracking, recycling, removal) and digital solutions. Alternatives

- Recall: CUSP Annual meeting CUSP 2022 (June 2022), picked up also in CUSP policy brief in October 2022

MNP used in CUSP. N *in parentheses M(N)P to stress inclusion of N in MP

Harmonisation & standardisation

- *Definitions*
  - Common understanding, data collection, modelling, interpretation, response
  - Link to methods/standards that have ad*equate scope (e.g. particle size, types covered) and ensure supporting data is collected:*
- *Standard (analytical) methods for identification, quantification in accordance with environmental matrices, in food, biomonitoring,*
- *Methods supporting health & environmental assessment of MP (?)*
- *Performance standards e.g. on unintentional MP releases (tyres, textile, …)*

Harmonisation & standardisation (2)

- *Analytical methods for products covered by the REACH restriction intentionally added MP*

- *Drinking Water Directive (DWD) (reviewed): establishment of a methodology for measuring MP in drinking water by January 2024*
- *Urban Waste Water Treatment Directive (UWWTD) (under revision): measuring/monitoring of MP*
- *Sewage Sludge Directive (SSD) (under evaluation): measuring MP content in secondary material (e.g. agriculture)*
- *Environmental Quality Standards Directive (EQSD) (under review): measuring MP will be considered*

- *Marine Strategy Framework Directive (MSFD): harmonisation measurement/monitoring methodologies + establishing baselines for quantities with a view to prepare legislative thresholds*
- *Regulatory Framework on contaminants in food: harmonisation of MP definitions and analytical methods*

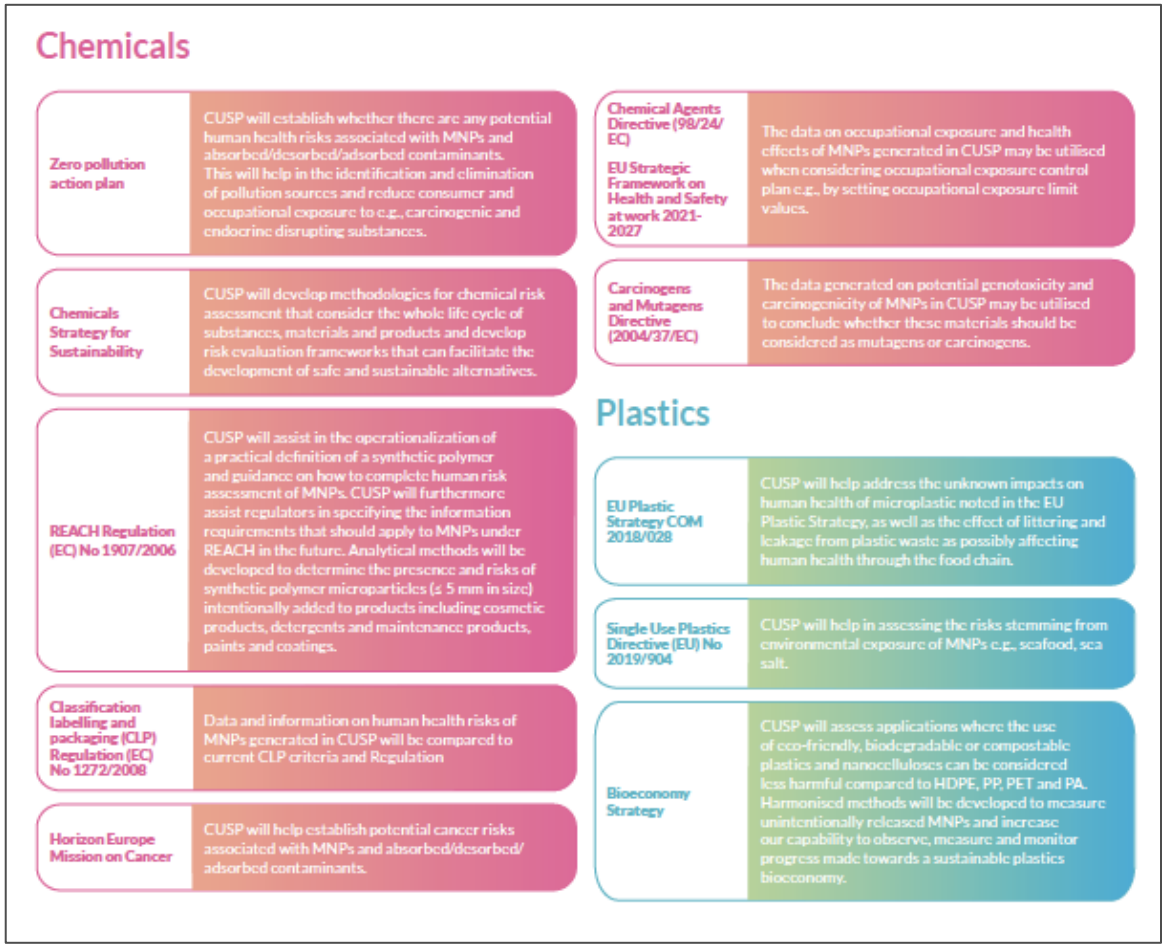
Data collection and knowledge sharing

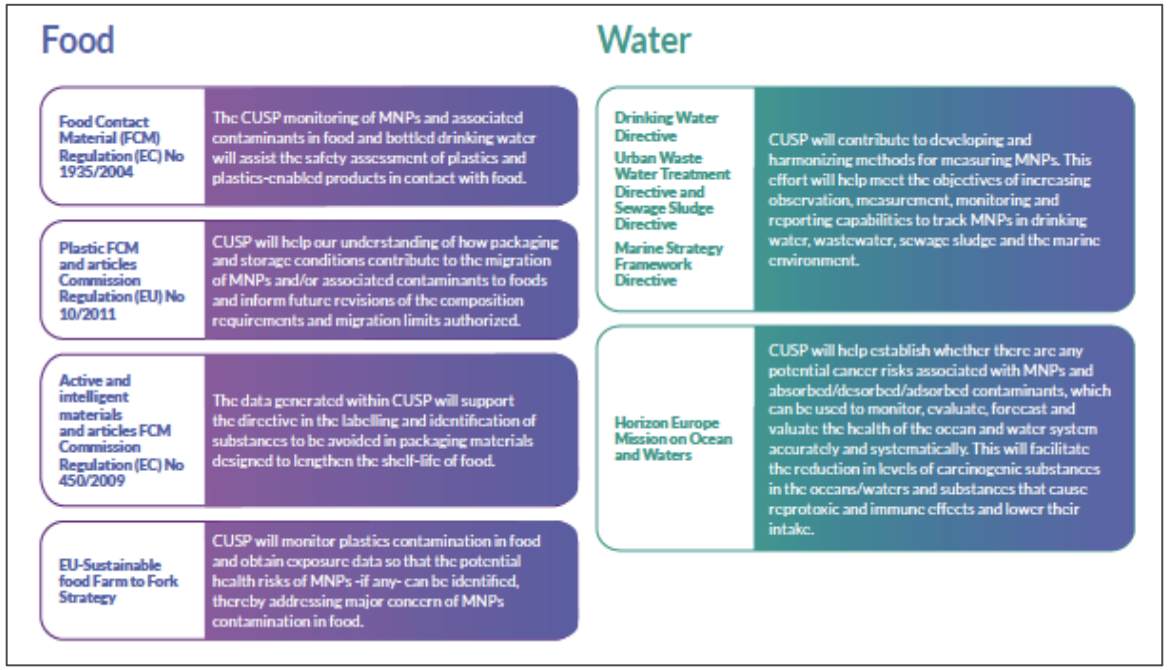
- *Sources (including sectoral impacts e.g. fisheries)*
- *Release mechanisms*
- *Occurrence, pathways & fate (including ultimate sink). Flow model(s)*

- **Environmental risks / Human health risks / effects**
  - **Dose/response; human/microbiota; own/as vectors for toxic chemicals**
- *Interactions with environment, effects on ecosystem functions*

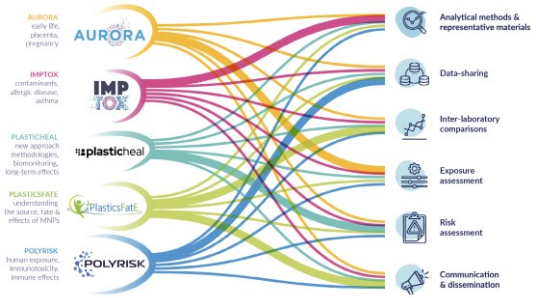
- *ALL microplastics & differences between types of plastics, particles of different sizes (micro/nanoplastics)*

Areas that can be informed by CUSP findings





CUSP coverage of policy needs



- *Not surprisingly, largest coverage of health impacts and standardisations*
  - ***Not all endpoints covered?***
  - ***Harmonization/standardisation outputs – delivery in 24/25. Timely?***
- *Use of (and support to agreement on) definitions*
- *(FAIR) data*
- *Assessments with translation for policy*

Conclusions

- **EU policies covering M(N)P are very recent**

- **Concern on M(N)P release across many EU policy strategies (precautionary principle). A number of policy actions are taken whilst knowledge gaps still being filled**

  Prevention → Minimisation & Control → Elimination and Remediate

  - Immediate needs for policy interventions to ensure data gathering (standard methods for monitoring) and no-regret interventions

  - *Quick closing of remaining knowledge gaps (fate, impacts) to ensure policy effectiveness. Comprehensive coverage of all M(N)P >> informed decisions*

Thank you !

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European Commission