Why plastic pellets must be addressed in the treaty

Plastic pellets (nurdles), flakes and powders of primary and/or recycled polymer (collectively referred to as plastic pellets), are the plastic industry's feedstock, they are transported worldwide to make almost all plastic products. Each year **over 445,000 tonnes of plastic pellets** enter the environment from all stages of the global supply chain.[1] **Pellet pollution is impacting biodiversity, communities and industries** including tourism and fishing. Even countries that do not produce or use pellets are at risk of **transboundary** pollution due to pellets' mobility in the environment and international trade.

- Pellets spill into the environment at every stage of the global plastic pellet supply chain, on land and at sea, causing widespread pollution.
- Pellets are mistaken for food by wildlife. Plastic ingestion can lead to organ damage and starvation while introducing plastics into food chains.
- Pellets can leach, transport and adsorb harmful chemicals and pathogens in the environment creating a toxic cocktail.
- Microplastic fragments released as pellets age can enter human and animal tissues disrupting function. Chemical additives and microplastic have been linked to cancer in humans and hormone disruption in marine animals.[2]

Figure 1: Plastic pellets spill into the environment at all points of the plastic supply chain, including: pellet production, handling, transport by sea and land, conversion, and recycling.

Pellet loss is global, pellet pollution is global, **pellet loss prevention must be global and mandatory.** While there are some examples of proposed regulation to prevent pellet loss (e.g. European Union) and voluntary agreements in certain sectors (e.g. marine transport) there are no global mandatory measures to prevent pellet loss across the whole supply chain.

This upstream, transboundary, cross sector pollution must be addressed by the Legally Binding Instrument on Plastic Pollution by **retaining specific language on plastic pellet loss prevention within Compilation Text Provision 8 (Non-paper Article 7).**

To prevent pellet loss the treaty text must include:

- **All plastic feedstocks** (including primary, recycled, fossil fuel and biomass derived plastic in flakes, powder or pellet forms
- **All sectors & companies** (including producers, converters, waste handlers, transporters and actors who handle pellets)
- **Mandatory loss prevention measures** with specific minimum requirements
- **Requirements for independent standards and certification schemes** to demonstrate compliance.

Figure 2: Pellet pollution, Scotland, UK ©Fidra

As 95% of plastic pellet loss can be prevented with a mandatory global supply chain approach,[3] the treaty text must enshrine the prevention hierarchy (prevention, containment, clean-up) with ecologically sensitive clean-up and restoration/ mitigation measures where needed.

Find out more

References:

1. https://hub.nurdlehunt.org/solutions/mapping-the-global-plastic-pellet-supply-chain/
2. https://www.fauna-flora.org/wp-content/uploads/2023/05/FF_Plastic_Pellets_Report-2.pdf
3. https://eunomia.eco/reports/investigating-options-for-reducing-releases-in-the-aquatic-environment-of-microplastics-emitted-by-products/

Fidra

Environmental charity supporting sustainability and preventing chemical and plastic pollution

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Europe: A Major Source and Sink for Global Plastic Pellet Pollution

Europe has the **largest share of the world's plastic industry** based on combined imports and exports of primary plastics and 54% of the world's plastic recycling. This extensive plastic industry presence makes Europe the region with the **greatest risk of pellet pollution** and a major contributor to global plastic pellet pollution domestically and through international trade.

High levels of chronic pellet pollution across multiple sites in Europe show industry's **voluntary efforts to address supply chain sources have been insufficient**. Across Europe shipping has resulted in major pellet spills and road transport is also causing pellet pollution. Pellet pollution poses a threat to Europe's protected areas, communities, tourism and fishing.

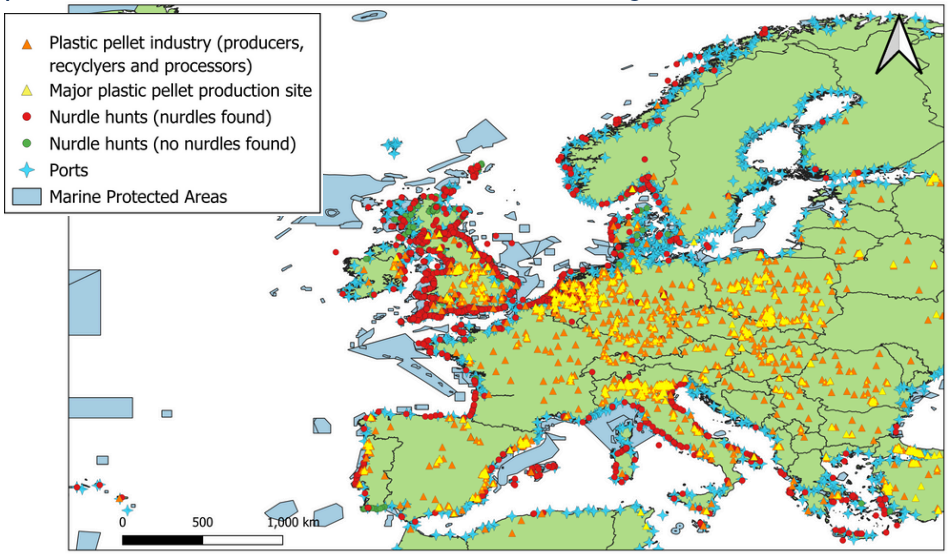

Figure 1: Pellet pollution has been identified across Europe

- Plastic pellet pollution is present in **every EU nation surveyed**, with over 160,000 tonnes of pellets estimated to be lost to the environment annually in the region.
- **Over 50 major pellet pollution sites** have been identified across Europe. This includes pollution from acute spill incidents and chronic pellet loss from industrial sites, however this an underestimate due to a lack of mandatory reporting.
- Pellet pollution has been **identified in Europe's protected areas**, posing a risk to biodiversity in both terrestrial and marine environments.
- Major plastic shipping routes cause pellet pollution in the region with **9 recorded maritime spills** between 2019 and 2023 (see case study). Europe's 55 major ports are also potential sources of pellet pollution, with Port of Antwerp already heavily polluted.[1]

Figure 2: Chronic pellet pollution has been identified across Europe, including protected areas
©Tina Hens, Belgium

Figure 3: Major chronic pellet pollution identified near plastics industry sites, Tarragona , Spain.
©Good Karma Projects, Spain

Figure 4: Pellet pollution, Italy
©Greenpeace Italia, Italy

Marine spill impacts Spain

In December 2023, multiple containers were lost from a container ship during a storm off the Portuguese coast. One of these containers held approximately **1000 25kg bags of plastic pellets** and within days, millions of plastic pellets began to cover the beaches of Galicia, Spain.

In the months following the incident, pellets continued to spread over a large area along the north coast of Spain and south west France, impacting, wildlife, local industries and communities.
"*Clean up is near impossible.* ***These spills will continue to happen*** *if containers are not handled, packed and shipped securely.*" - Dayana Del Puerto, Noia Limpa.
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