



# **Plastic Waste and How it is connected to Climate Crisis**

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# Line up

1. How plastics affect climate change
2. The current situation of plastic issues especially in the APAC region and connection to Climate Change
3. Global Plastics Treaty: what was done at INC4, what we are demanding and expectation for INC5

# How plastics affect climate change

- Plastics cause greenhouse gas emissions throughout its lifecycle.
- Oil, gas, and coal are the building blocks of fossil-fuel based plastics.
- Extraction and transportation of these fossil fuels is a carbon-intensive activity.
- According to the World Economic Forum, about 4-8% of annual global oil consumption is associated with plastics.

Source:  
<https://foodprint.org/blog/plastic-and-climate-change/>



# How plastics affect climate change

The estimate of OECD reveals that the life-cycle emissions of plastics including production and disposal – is 1.8 billion tonnes carbon dioxide equivalents.

As a whole, plastic production and use contributes to 3.4% of global greenhouse gas emissions.

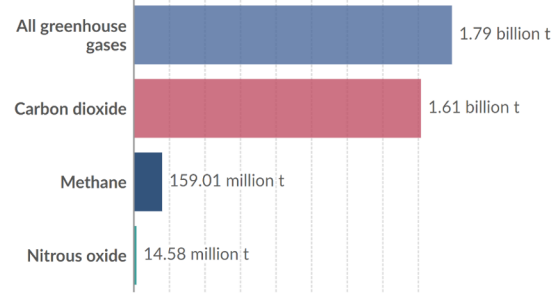
Sources: [How much of global greenhouse gas emissions come from plastics? - Our World in Data.](#)

[The impacts of plastics' life cycle - ScienceDirect.](#)

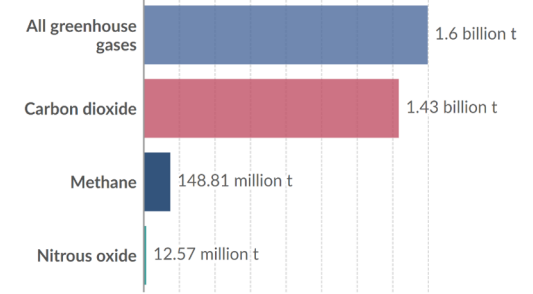
## Greenhouse gas emissions from plastics, 2019

Emissions are measured in tonnes of carbon dioxide-equivalents<sup>1</sup>.

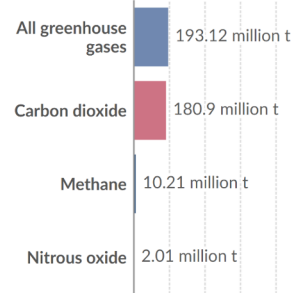
### All lifecycle stages



### Production and conversion



### End-of-life



Data source: OECD (2022)

[OurWorldInData.org/plastic-pollution](https://OurWorldInData.org/plastic-pollution) | CC BY

**1. Carbon dioxide equivalents (CO<sub>2</sub>eq):** Carbon dioxide is the most important greenhouse gas, but not the only one. To capture all greenhouse gas emissions, researchers express them in "carbon dioxide equivalents" (CO<sub>2</sub>eq). This takes all greenhouse gases into account, not just CO<sub>2</sub>. To express all greenhouse gases in carbon dioxide equivalents (CO<sub>2</sub>eq), each one is weighted by its global warming potential (GWP) value. GWP measures the amount of warming a gas creates compared to CO<sub>2</sub>. CO<sub>2</sub> is given a GWP value of one. If a gas had a GWP of 10 then one kilogram of that gas would generate ten times the warming effect as one kilogram of CO<sub>2</sub>. Carbon dioxide equivalents are calculated for each gas by multiplying the mass of emissions of a specific greenhouse gas by its GWP factor. This warming can be stated over different timescales. To calculate CO<sub>2</sub>eq over 100 years, we'd multiply each gas by its GWP over a 100-year timescale (GWP100). Total greenhouse gas emissions – measured in CO<sub>2</sub>eq – are then calculated by summing each gas' CO<sub>2</sub>eq value.

# Other problems of plastics - Human health and society

- Ingestion, inhalation, and dermal exposure, to chemicals of concern near production and disposal facilities
- Observed in drinking water (bottled and tap), beer, sea salt, seafood, honey
- Observed in the placenta, lung tissue, and blood
- Chemical toxicity via exposure to additives in plastics
- Physical particle toxicity and accumulation
- Economic losses from littered beaches
- Correlation with irritable bowel syndrome (IBS)
- Psychological impacts from littered beaches

## CHEMICALS OF CONCERN IN YOUR PLASTICS



# Other problems of plastics - on the Biodiversity

- Entanglement
- Limited mobility
- Strangulation
- Death
- Ingestion and inhalation
- Toxicity
- Decreased reproductive health
- Habitat displacement
- Transport invasive species, viruses and pathogens



Source: [The impacts of plastics' life cycle - ScienceDirect](#).

# Other problems of plastics - on the Environment

- Contamination
- Air (e.g., indoor dust, sea spray, etc.)
- Water (e.g., surface water, groundwater, sea ice, glaciers, oceans)
- Soil (e.g., agricultural lands, landfills)
- Impact to plant growth/agriculture from plastics in soils
- Chemical release and transformation
- Polymer-associated chemicals
- Adsorb environmental contaminants
- Climate
- Extraction of fossil fuels for plastic production
- Carbon cycling impeded by microplastics

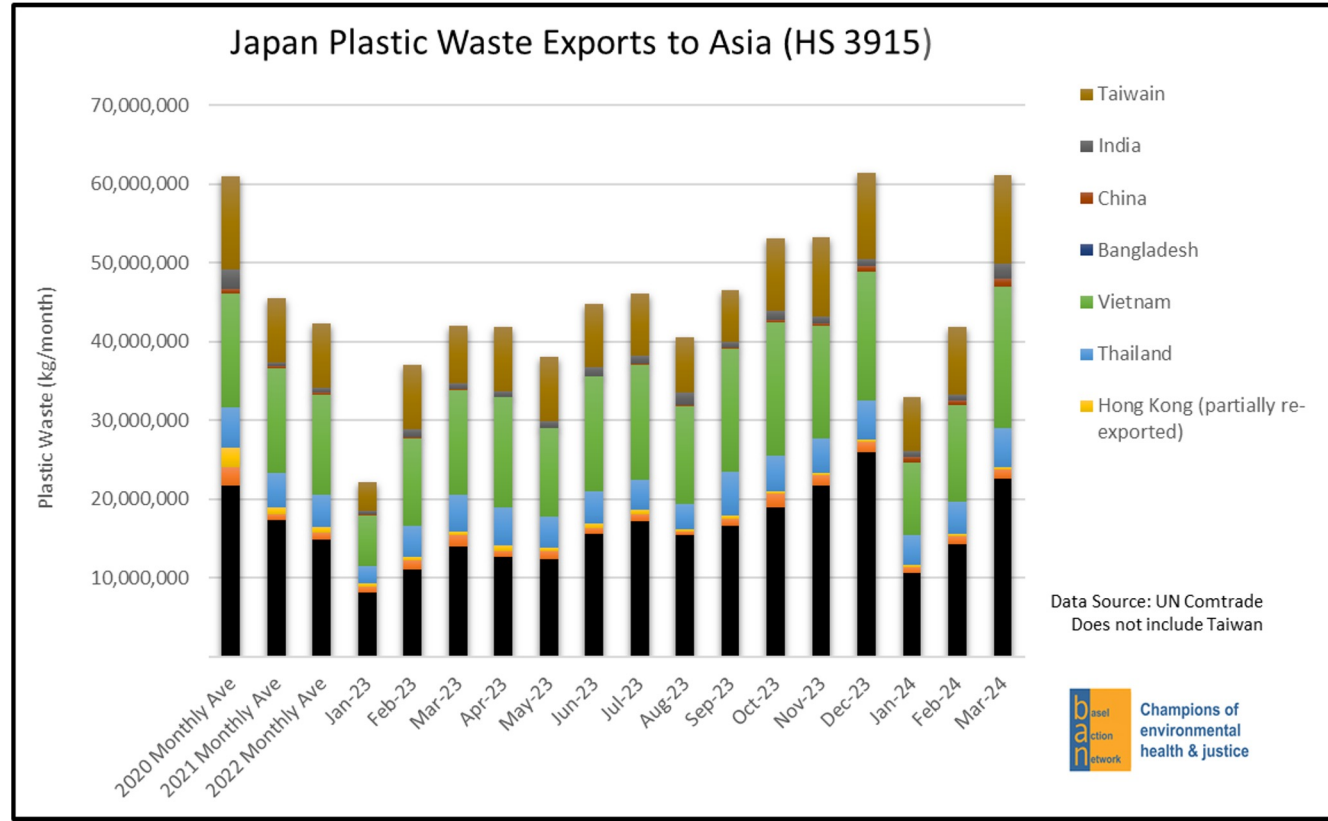


# The current situation of plastic issues especially in the APAC region and connection to Climate Change

- Waste colonialism - APAC is a victim of plastic waste trade despite having inadequate waste management/disposal facilities, leading to pollution as well as human rights violations  
<https://breakfreefpdev.wpengine.com/wp-content/uploads/2022/09/Plastic-Waste-Trade-Briefing-Paper.pdf>

[Japan Export](#)

[Data — Basel Action Network](#)





# The current situation of plastic issues especially in the APAC region and connection to Climate Change

Issue	Palestine	Russia	Sri Lanka	India	Nepal	Bangladesh	Indonesia	Malaysia	Philippines	Japan	South Korea	PNG	Australia
1. Waste colonialism	X		X	X			X	X		X			X
2. Chemical pollution through consumer plastics	X		X	X		X		X		X	X		X
3. Emissions in production				X		X				X	X		
4. Emissions in disposal			X	X		X	X	X		X	X		X
5. Inadequate national laws			X	X		X		X					X
6. Neglecting equitable, just transition of waste pickers			X	X		X							
7. False solutions			X	X			X	X		X			

# GPT: what was done at INC4, what we are demanding and expectation for INC5

[INC-4]

Expected

- Clarify revised Zero Draft.
  - Binding measures to phase down plastic polymer production
  - Global design standards for effective reuse and refill systems
  - Harmonized and more stringent regulations designed to minimize harm from plastic waste management
  - Clarity on scope and procedure that fosters efficiency and allows breakthroughs

Done

- Intersessional work will be held in Aug.
- Disagreement regarding primary plastic polymer regulation although there are 65 countries which want to regulate it.
- Disagreement regarding the range of full life cycle of plastic.

Challenge

- Increasing number of industry lobbyist participants.

# GPT: what was done at INC4, what we are demanding and expectation for INC5

[INC-5]

What FoE is demanding and expecting for INC5?

- Scope of the new Treaty - whole lifecycle of all plastics and associated pollution, especially upstream production controls and trade
- Binding rules, not a voluntary approach
- Ambitious global target to reduce plastic production
- Stop the dirty trade in waste and harmful plastic products
- Hold transnational corporations accountable
- No greenwashing or false solutions
- Just transition and a human right-based approach
- Support system change solutions
- Zero waste hierarchy
- <https://www.foei.org/publication/foei-demands-for-the-new-plastics-treaty/>