

Trade in Plastics and Plastic Substitutes

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Rising Trend of Trade in Plastics

It is estimated that there were **369 million tons of plastics traded in 2021 alone, which is \$1.2 trillion in value**, a significant increase from \$933 billion the year before (UNCTAD, 2022d).

Waste management capacities are insufficient in most countries.

It is important to identify what materials or products could **effectively and safely substitute** plastics and how to implement this transition.

Substitutes in 2020: **282 Products** (HS codes) - **\$388 billion**.



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The distinction between plastic substitutes and plastic alternatives

Plastics substitutes are natural materials that have similar properties to plastics, while plastic alternatives include bioplastics or biodegradable plastics.



Plastic substitutes

Mineral, plant, marine or animal

Recyclable, reusable, biodegradable, compostable, or erodable

Should have lower environmental impact along their life cycle

Should not be hazardous for human, animal or plant life

Non-plastics

VS

Plastic alternatives

ORIGIN

Bioplastics or Biodegradable plastics

PROPERTIES

Recyclable, biodegradable, or compostable (end of life)

IMPACT

Should have lower GHG lifecycle emissions when compared to plastics

SAFETY

Should not be hazardous for human, animal or plant life

Better plastics



Source: UNCTAD Vivas Eugui & Pacini (2022). UNCTAD, based on presentation on plastic substitutes HS codes, Life-cycle analysis and tariffs considerations. WTO Dialogue on Plastics.



Draft text of INC Process on Non-plastic substitutes (Art.6) & DPP WTO Ministerial Declaration

6. Non-plastic substitutes

Option 0

No provision on this matter.

Option 1

1. [Subject to its national plan and based upon national circumstances and capabilities, each][Each] Party shall take measures to foster innovation[, including through the cooperation mechanism referred to in [Part III. ...]] and incentivize and promote [the research,] the development and use at scale of safe, environmentally sound, and sustainable non-plastic substitutes, including products, technologies and services, taking into account their potential for [waste reduction and reuse, as well as] environmental, economic, social[, cultural] and human health impacts[, based on life cycle assessments] [as well as the developing countries' access to the transfer of necessary technologies and financial resources].

2. Parties [are encouraged][shall ensure] to use regulatory and economic instruments, public procurement and incentives¹³ to promote the development and use of safe, environmentally sound and sustainable non-plastic substitutes[, taking into account national circumstances and capacities].



INC 4 Draft negotiating document

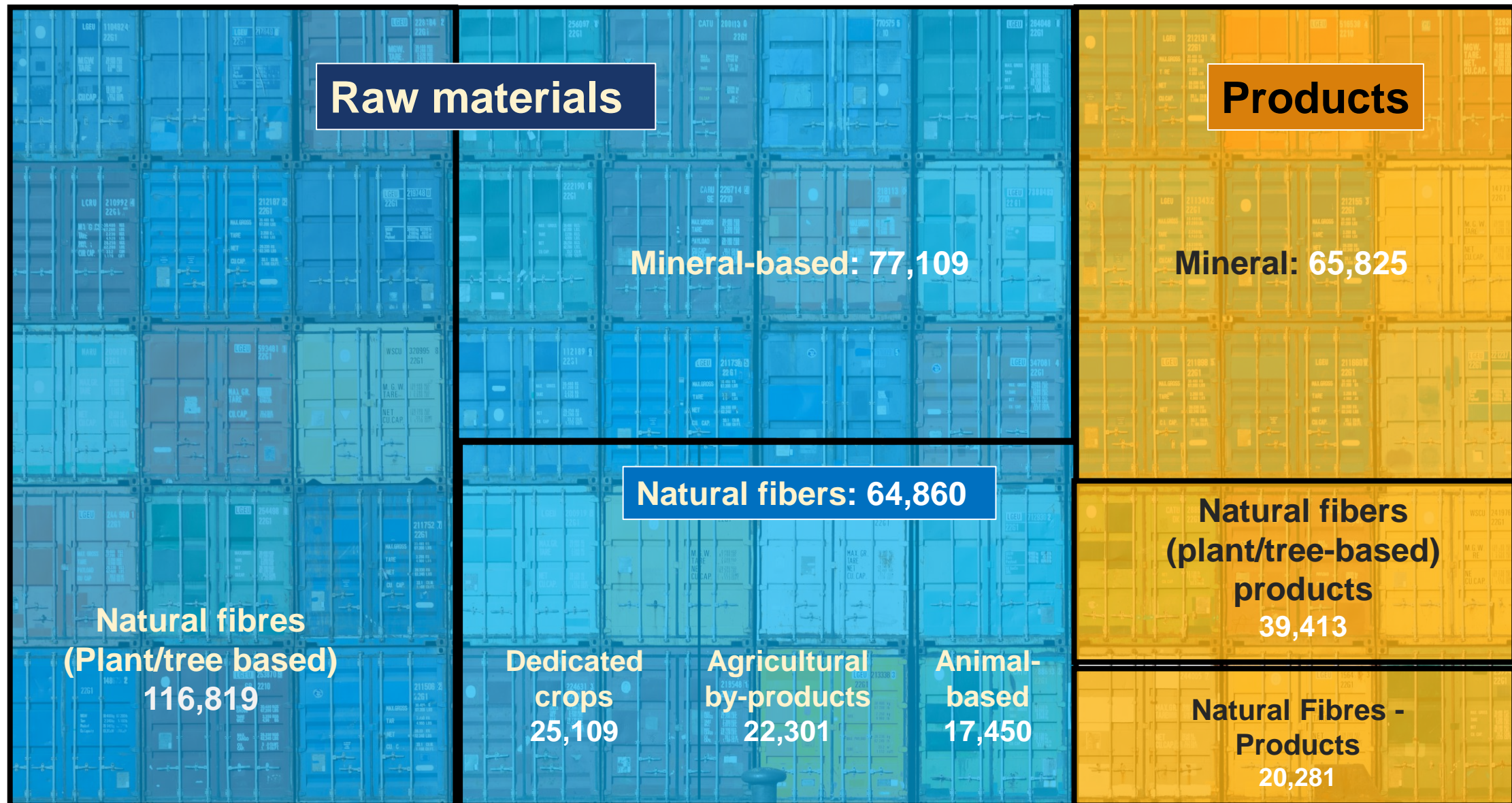
- Promote cooperation on trade that contributes to ending plastic pollution, including trade in environmentally sound, safe, and effective non-plastic substitutes taking into account scientific evidence and knowledge; and environmentally sound, safe and effective plastic alternatives; as well as systems to reuse, repair and refill; and services and technologies including for improving transparency, waste management and clean-up activities, in ways that consider the waste hierarchy and are appropriate to local development circumstances and needs, and in line with Basel Convention Technical Guidelines on Environmentally Sound Management of Plastic Wastes.



WTO Dialogue on Plastic Pollution / MC13 Draft Statement

Trade value of plastics substitutes

Export represented \$388 billion, approximately 2/3 represents exports of raw materials (\$258 billion)

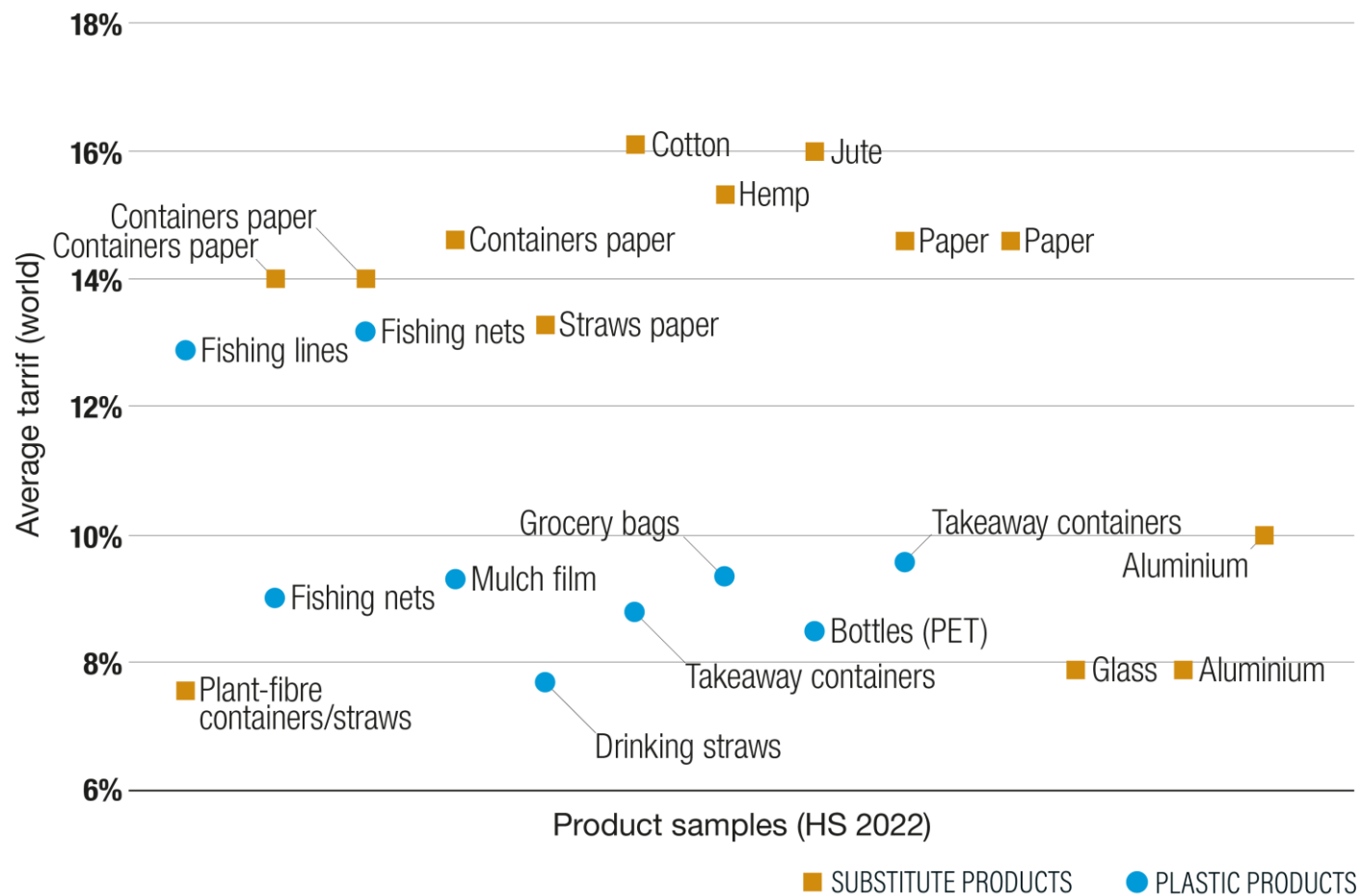




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Average import tariffs on plastic products vs material substitutes

Substitutes often face higher import tariffs than their plastic equivalents.



Important to promote more policy coherence in tariff schedules vis-à-vis potential control measures and incentives

Source: UNCTAD, based on OEC data 2020 and HS 2022 codes.

Note: Aluminium, paper, container paper and fishing nets are repeated because of different items represented in different HS codes.



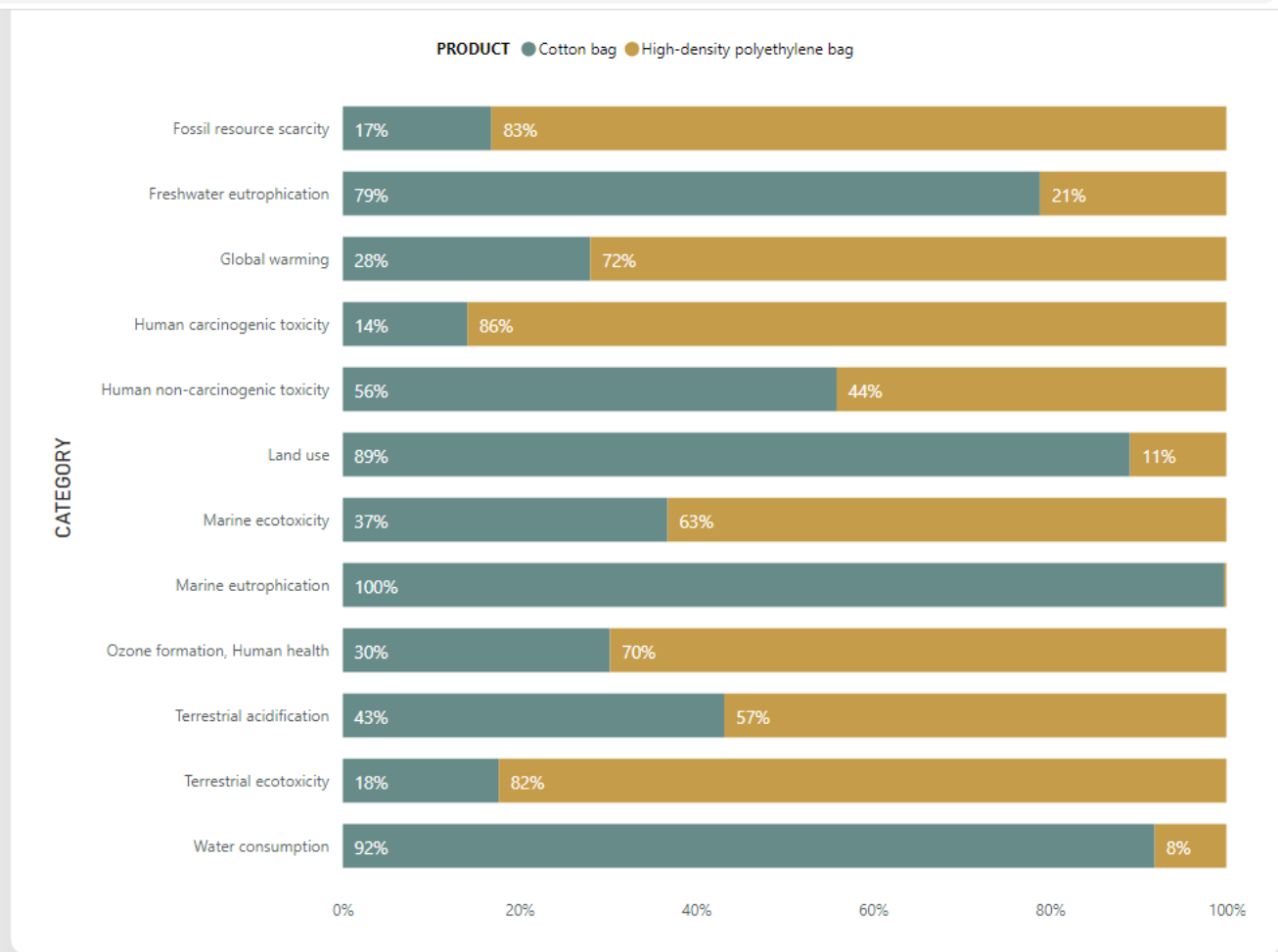
Material substitution: Life-cycle views matters!

COUNTRY
Please select only one scenario at a time for correct information

- Bangladesh
 - a) Reuse of substitute product (3-years)
- D.R. of the Congo
 - a) Reuse of substitute product (1-year)
- Ethiopia
 - a) Single use
- Ghana
 - a) Reuse of substitute product (1-year)
- Kenya
 - a) Single use
 - b) Reuse of substitute product (2-times)
- Nepal
 - a) Single use
 - b) Reuse of substitute product (4-times)
- Nigeria
 - a) Single use
 - b) Reuse of substitute product (2-times)
- Pakistan
 - a) Reuse of substitute product (3-years)
 - b) Reuse of substitute product (4-years)
- Rwanda
 - a) Reuse of substitute product (1-year)
- Senegal
 - a) Single use
- U.R. of Tanzania
 - a) Reuse of substitute product (3-years)
- Uganda
 - a) Single use
- Zambia
 - a) Single use

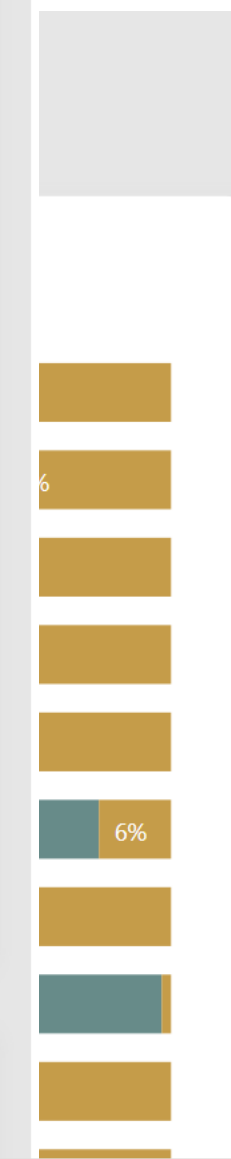
CATEGORY

- Select all
- Fossil resource scarcity
- Freshwater eutrophication
- Global warming
- Human carcinogenic toxicity
- Human non-carcinogenic toxicity
- Land use
- Marine ecotoxicity



FUNCTIONAL UNIT AND REFERENCE FLOWS

Functional unit	Plastic product	Substitute product	Uses
"Carrying 5 kg of items in four year's shopping (156 purchases) from the...	208 High-density polyethylene bags	1 cotton bag	Reuse of substitute product (4 years)



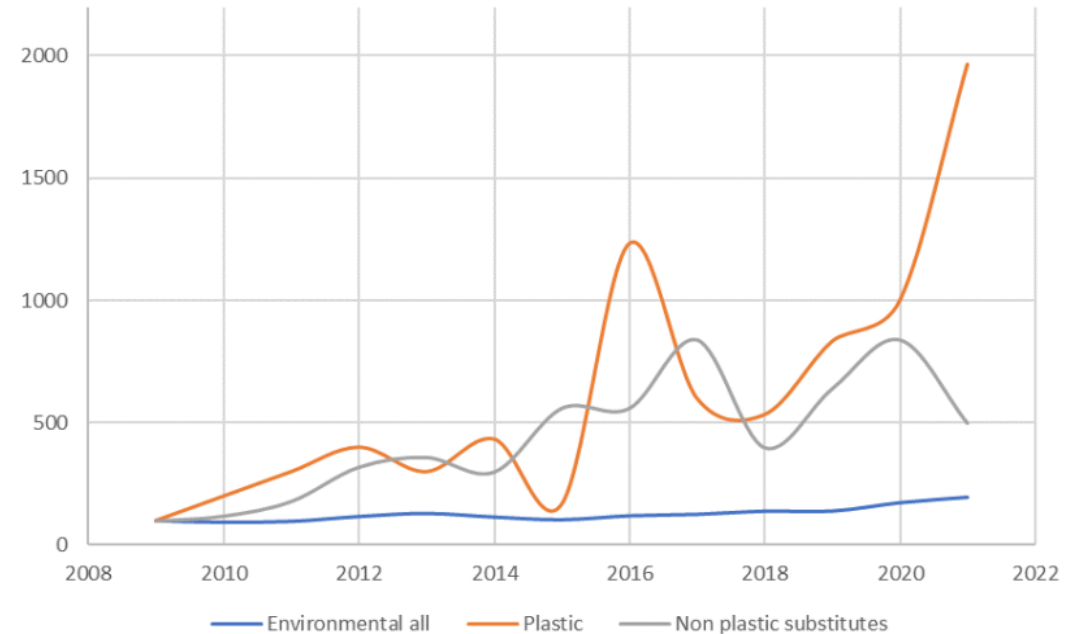
Trade-related policy measures on non-plastic substitutes

- 243 measures mapped (for subset of “major” substitutes)

Figure 1. Trade-related policy measures on non-plastic substitutes, plastic and environment-related (2009-21)

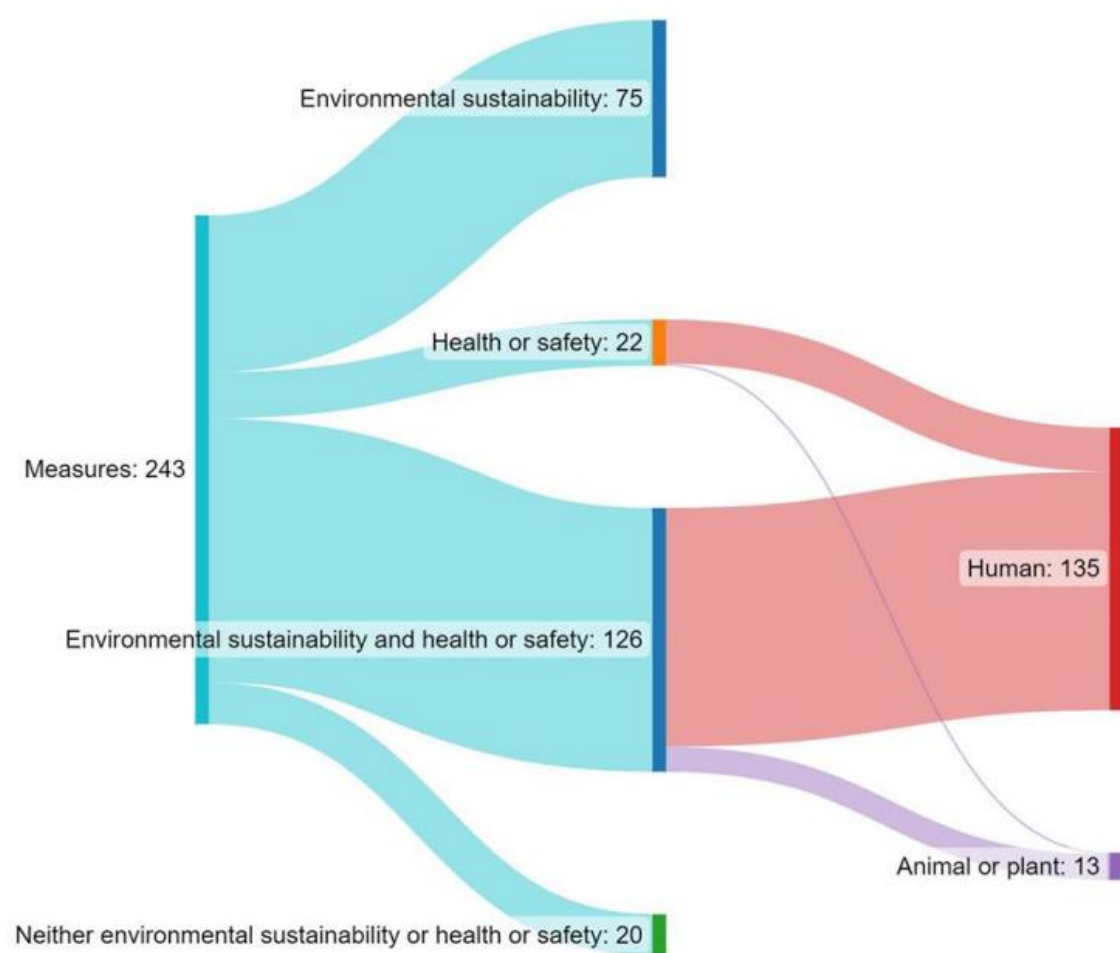


b. Indexed count (Base year:2009=100)



Source: UNCTAD (2023) based on data WTO Environmental Database. Last accessed November 2023.

Objectives of non-plastic substitutes measures notified to WTO (2009-2021)



- Substitutes already strongly regulated!
- Safeguards to human health and safety stand out!

Future

- Further refine working definitions
- Assistance for countries to prepare model regulation for biodegradables
- Addressing shortcomings of substitutes
- Develop frontier products with low land use / resource impacts.



Textile fibres from pineapple leaves



Seaweed production with innovative biodegradable ropes

**Thank you
Merci**

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