
Tackling the Hidden Basel Plastic Wastes
Side Event: 8 May 2023,
Geneva, Switzerland
Basel Convention 16th Conference of Parties
basel action network
IPEN
for a toxics-free future

# Agenda

- The Report: Plastic Waste Trade / The Hidden Numbers -- Lee Bell, IPEN
- The Basel Plastic Amendments: The Hidden Plastics -- Jim Puckett, BAN

Case Examples of Forgotten Basel Plastics

- Plastic waste in Paper Bales – K. Oanh Ha, Bloomberg News,
- Plastic in Refuse Derived Fuel (RDF) – Yuyun Ismawati, Nexus3,
- Plastic textile waste – Urska Trunk, Changing Markets

- Path Forward: NGO Recommendations – Jim Puckett
- Reactions from Parties
- Questions / Discussion

# SPEAKERS

LEE BELL

International Pollutants Elimination Network

JIM PUCKETT

Basel Action Network

# SPEAKERS

K. OANH HA

Bloomberg News

YUYUN ISMAWATI

Nexus3 Foundation

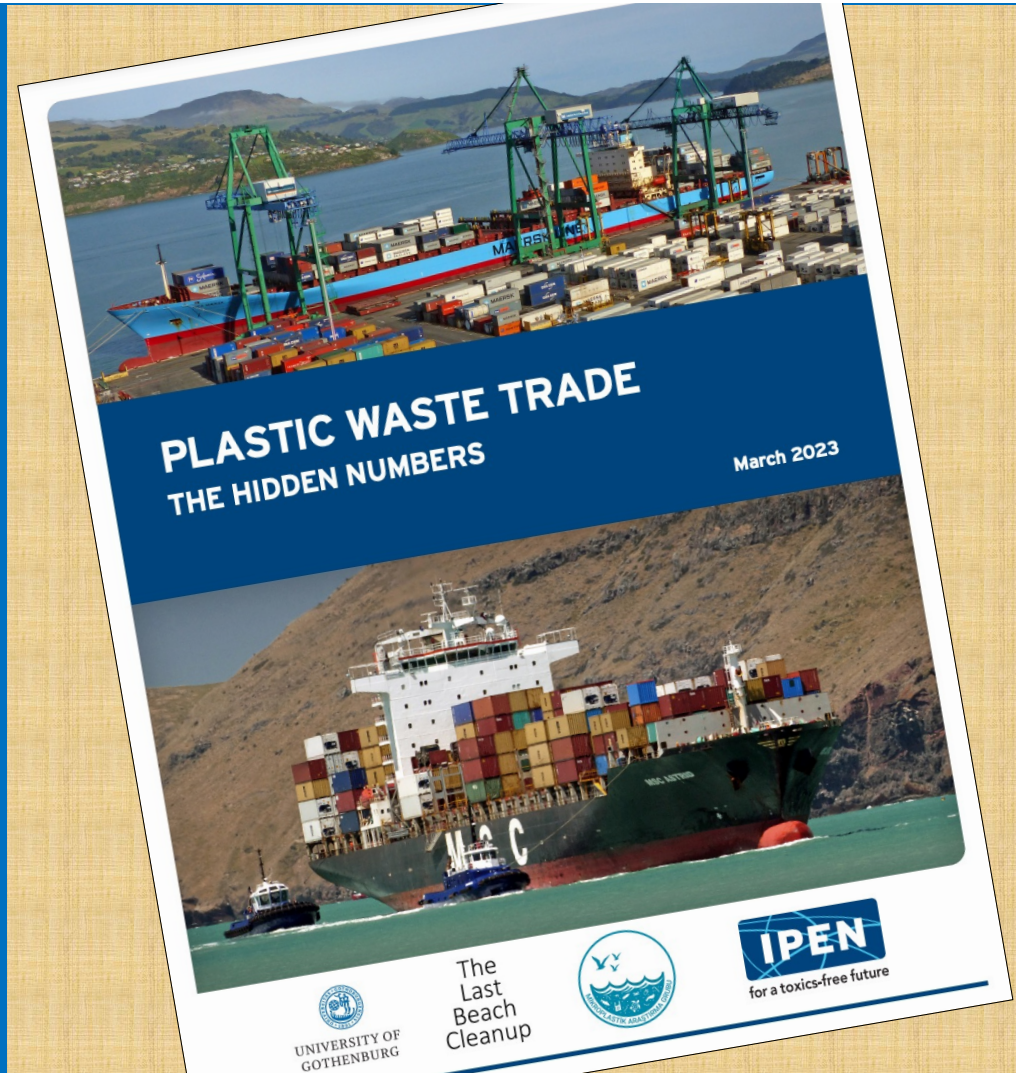
URSKA TRUNK

Changing Markets Foundation

# Plastic Waste Trade: The Hidden Numbers

***Authors: Therese Karlsson, Jan Dell, Sedat Gündoğdu & Bethanie Carney Almroth***

Lee Bell, IPEN



# Tariff Codes: Revealing the Hidden Unreported Volumes of Plastic Waste

Lee Bell, IPEN

# HS 3915 – Waste Pairings, and scrap, of plastics

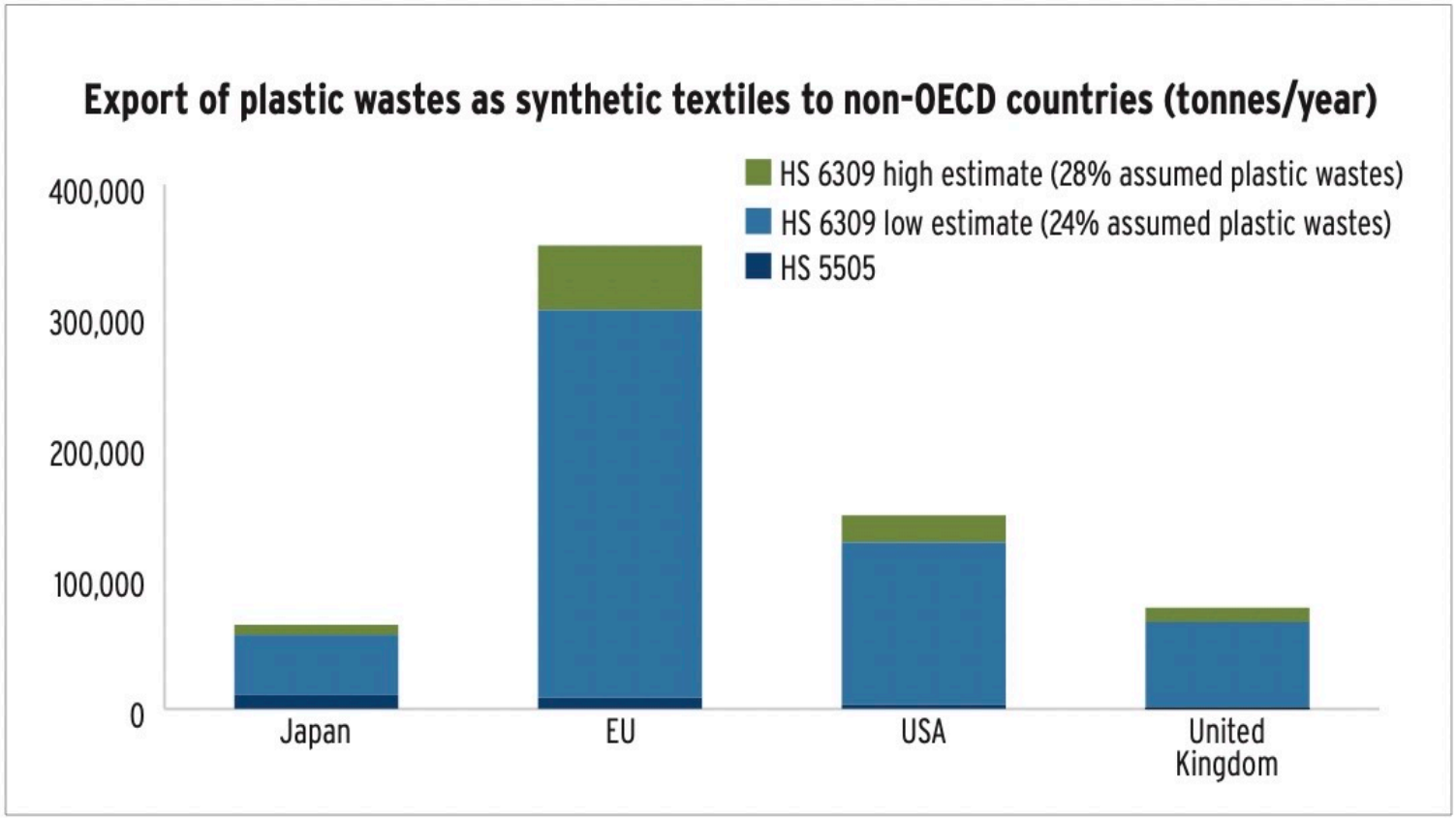
- HS 3915 is the HS code from the UN comtrade database that is used to track plastic waste trade

- HS codes were not made to track all plastic and HS 3915 only covers a small part of plastic waste trade

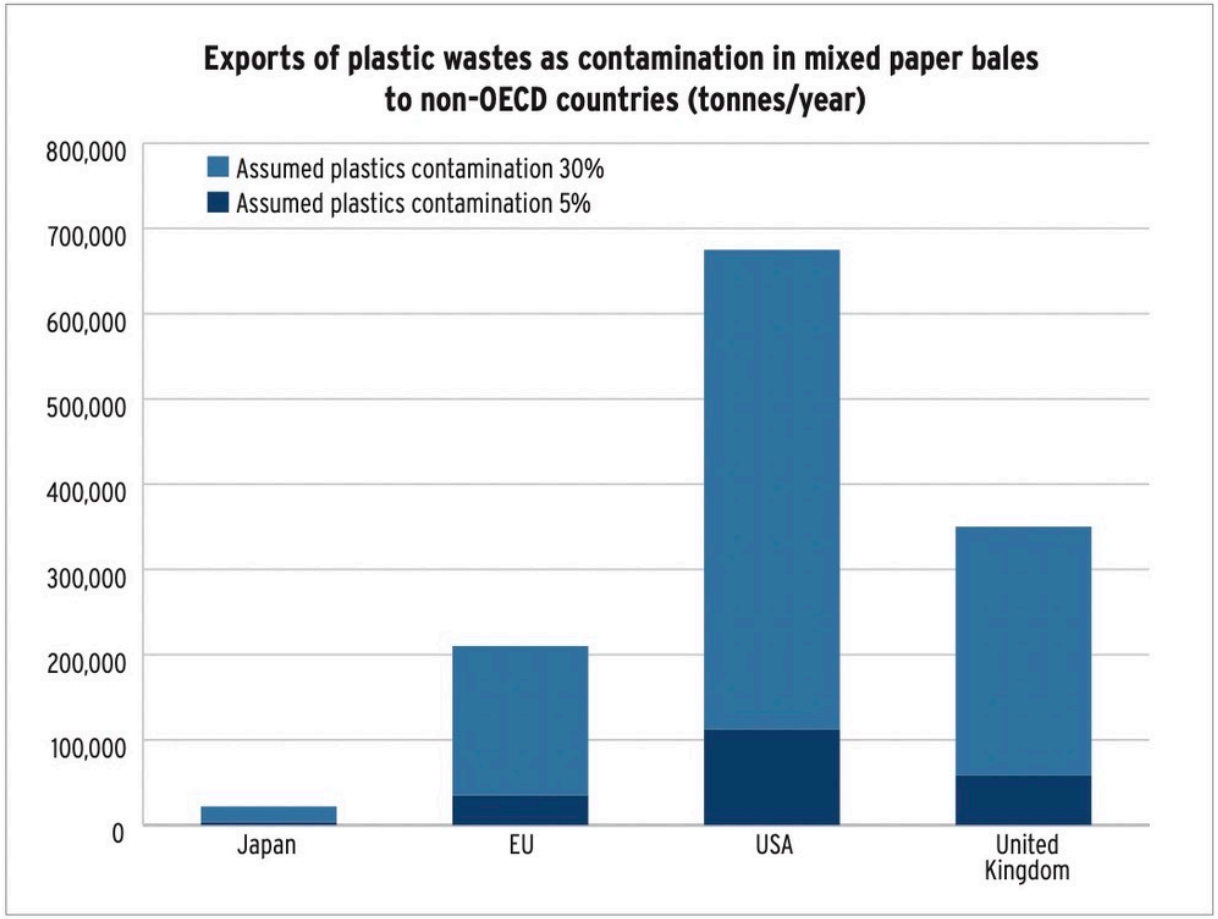
Plastics are found in many other types of wastes

For example

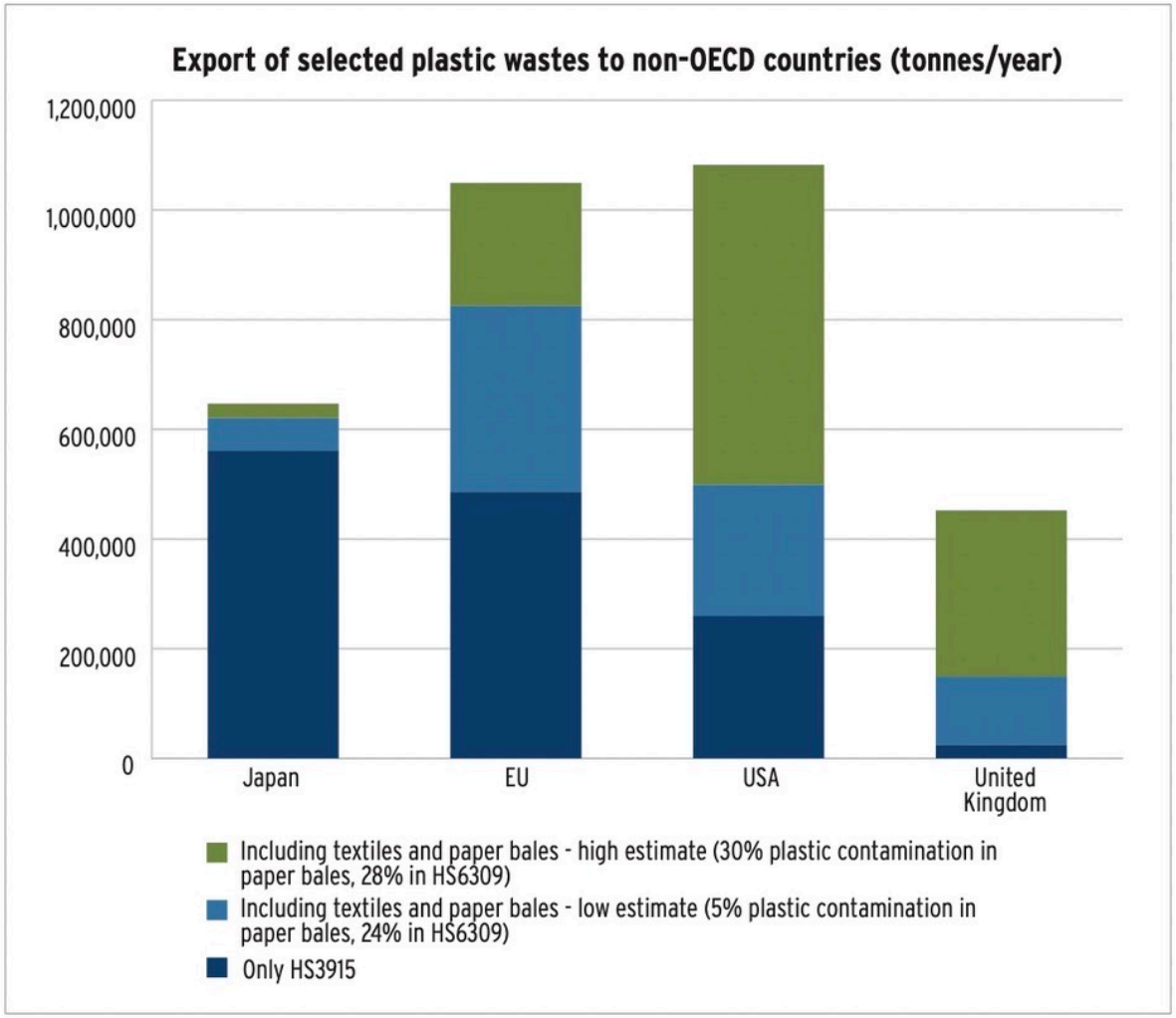
- Textiles
- Paper bales
- Electronics
- RDF




Estimates are based on literature values showing that 60-70% of textiles are synthetic and 40% of textiles exported as worn clothes are waste.




Estimates are based on literature values showing that 5-30% of mixed paper bales are plastic wastes.




If plastics in textiles and paper bales are included, the numbers for plastic waste trade are 1.6-2.4 times higher than if we only look at HS3915.

And....this still does not account for all plastics.

# MALAYSIA: REPACKAGED WASTE IMPORTS

## CASE STUDY OF PROCESSED ENGINEERED FUEL

March 2022

PULAU PINANG

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for a toxics-free future

# PLASTIC WASTE FUELS

SERIOUS IMPLICATIONS ACROSS SOUTH EAST ASIA, AS AUSTRALIA KICKS THE 'WASTE' CAN DOWN THE ROAD

*Executive Summary*
March 2022

NTN
NATIONAL TOXICS NETWORK

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# PROCESS ENGINEERED FUEL - FUEL PRODUCT OR PLASTIC WASTE EXPORT IN DISGUISE?

## NATIONAL REPORT ON PEF IMPORTATION AND USE IN THE PHILIPPINES

March 2022

EcoWaste Coalition

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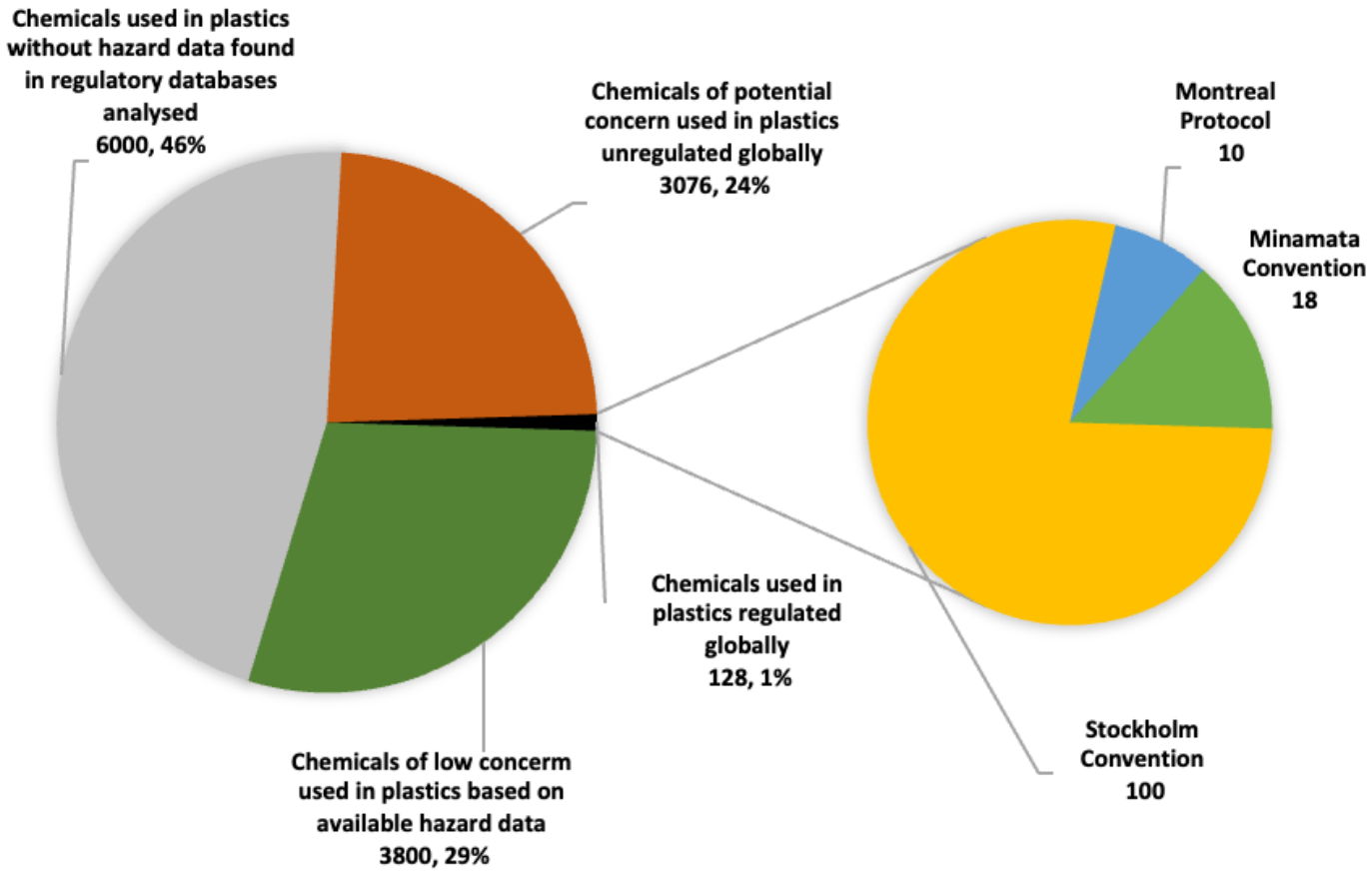
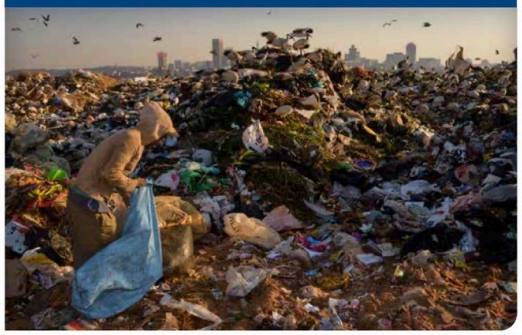

Chemicals used in plastics without hazard data found in regulatory databases analysed
6000, 46%
Chemicals of potential concern used in plastics unregulated globally
3076, 24%
Chemicals used in plastics regulated globally
128, 1%
Chemicals of low concerm used in plastics based on available hazard data
3800, 29%
Montreal Protocol
10
Minamata Convention
18
Stockholm Convention
100


GLOBAL GOVERNANCE OF PLASTICS AND ASSOCIATED CHEMICALS
2023
SECRETARIAT OF THE BASEL, ROTTERDAM AND STOCKHOLM CONVENTIONS
UN environment programme

# PLASTIC WASTE POISONING FOOD AND THREATENING COMMUNITIES IN AFRICA, ASIA, CENTRAL & EASTERN EUROPE AND LATIN AMERICA

June 2021



ARNIKA

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# ENVIRONMENTAL, FOOD AND HUMAN BODY BURDEN OF DECHLORANE PLUS IN A WASTE RECYCLING AREA IN THAILAND: NO ROOM FOR EXEMPTIONS

April 2023

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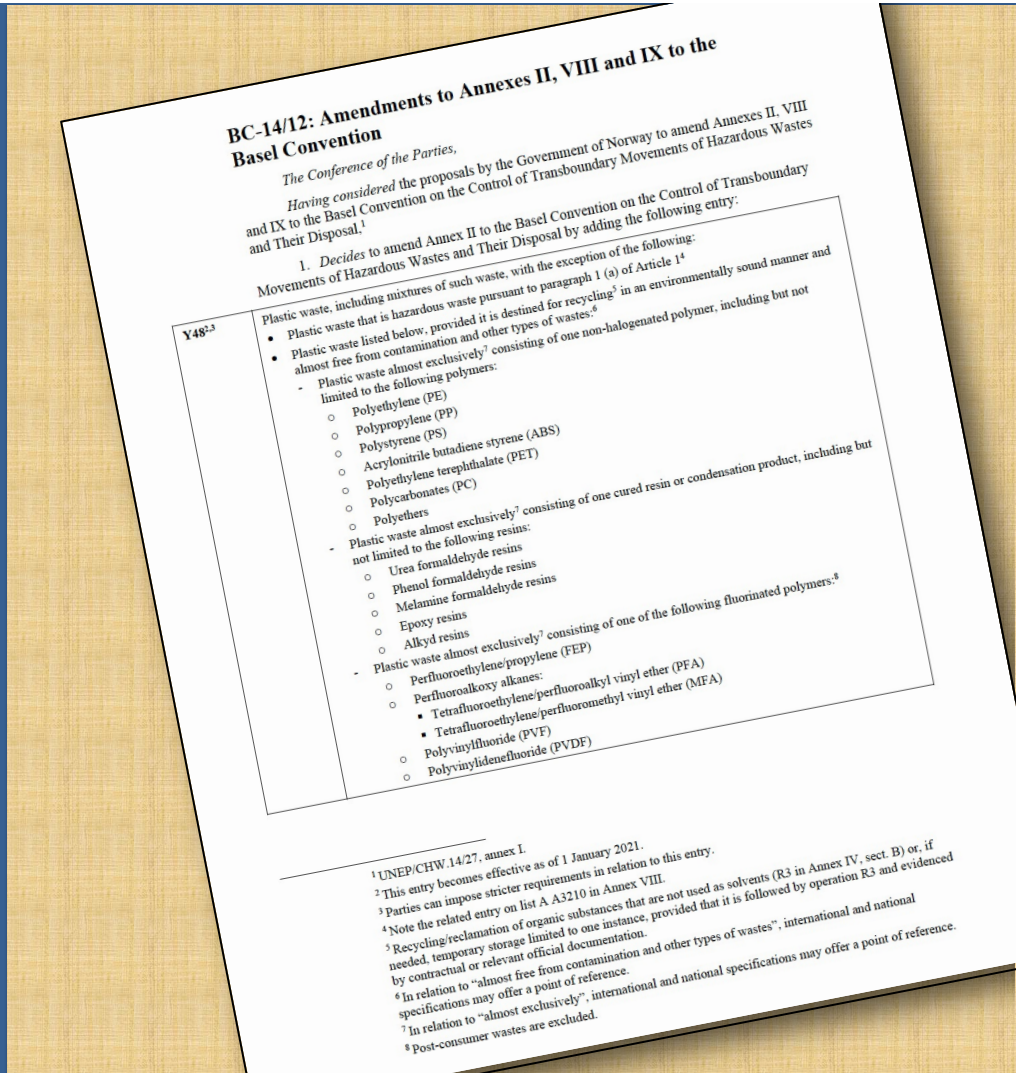
ARNIKA

# The Basel Convention: Revealing the Forgotten Plastic Wastes

Jim Puckett, BAN



**BC-14/12: Amendments to Annexes II, VIII and IX to the Basel Convention**

*The Conference of the Parties,*

*Having considered* the proposals by the Government of Norway to amend Annexes II, VIII and IX to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.[1]

1. *Decides* to amend Annex II to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal by adding the following entry:

| | |
|---|---|
| Y48[2,3] | Plastic waste, including mixtures of such waste, with the exception of the following:<br>• Plastic waste that is hazardous waste pursuant to paragraph 1 (a) of Article 1[4]<br>• Plastic waste listed below, provided it is destined for recycling[5] in an environmentally sound manner and almost free from contamination and other types of wastes:[6]<br>- Plastic waste almost exclusively[7] consisting of one non-halogenated polymer, including but not limited to the following polymers:<br>○ Polyethylene (PE)<br>○ Polypropylene (PP)<br>○ Polystyrene (PS)<br>○ Acrylonitrile butadiene styrene (ABS)<br>○ Polyethylene terephthalate (PET)<br>○ Polycarbonates (PC)<br>○ Polyethers<br>- Plastic waste almost exclusively[7] consisting of one cured resin or condensation product, including but not limited to the following resins:<br>○ Urea formaldehyde resins<br>○ Phenol formaldehyde resins<br>○ Melamine formaldehyde resins<br>○ Epoxy resins<br>○ Alkyd resins<br>- Plastic waste almost exclusively[7] consisting of one of the following fluorinated polymers:[8]<br>○ Perfluoroethylene/propylene (FEP)<br>○ Perfluoroalkoxy alkanes:<br>▪ Tetrafluoroethylene/perfluoroalkyl vinyl ether (PFA)<br>▪ Tetrafluoroethylene/perfluoromethyl vinyl ether (MFA)<br>○ Polyvinylfluoride (PVF)<br>○ Polyvinylidenefluoride (PVDF) |

[1] UNEP/CHW.14/27, annex I.
[2] This entry becomes effective as of 1 January 2021.
[3] Parties can impose stricter requirements in relation to this entry.
[4] Note the related entry on list A A3210 in Annex VIII.
[5] Recycling/reclamation of organic substances that are not used as solvents (R3 in Annex IV, sect. B) or, if needed, temporary storage limited to one instance, provided that it is followed by operation R3 and evidenced by contractual or relevant official documentation.
[6] In relation to "almost free from contamination and other types of wastes", international and national specifications may offer a point of reference.
[7] In relation to "almost exclusively", international and national specifications may offer a point of reference.
[8] Post-consumer wastes are excluded.

## From the IPEN report....

- All cited statistics for plastic waste exports are derived from HS Code 3915.

- But HS 3915 does not include many plastic wastes that are found in other HS codes (e.g rubber waste, textile waste, and paper waste).

- When these other, hidden and forgotten plastic wastes are counted, statistically recorded exports to non-OECD countries from OECD countries could be *more than double* the reported amounts.

# 2019 a time of Celebration...

# Plastic Wastes Forgotten by Basel

Similar to customs code 3915 forgetting many plastics, the Basel Convention, despite the new Plastic Waste Amendment listings of A3210, and Y48 of 2019 *do not include or control very significant categories of plastic waste.* Yet....

→ Many of these plastic wastes should qualify as Y48 or A3210

→ These are what we are calling the Hidden and Forgotten Basel Plastic Wastes.

→ Today we argue strongly that Basel rectify this oversight and ensure the control procedures of A3210 and Y48 apply to these.

# Plastic Wastes Forgotten by Basel

These "Hidden/Forgotten Plastic Wastes" are inappropriately missing from Basel Controls due to:

a) Not being listed anywhere in Basel Annexes. (RDF)

b) Being considered by some as a non-waste. (RDF)

c) Being separately listed under a non-hazardous Annex IX listing. (plastic in paper bales, plastic textiles, "rubber").

And yet, on the basis of the harm caused and criteria created in the Amendments, these should be either Y48 (waste requiring special consideration) or A3210 (hazardous).

# The Intention of the Plastics Amendments

***From BC/14/13 on Plastics:***

*8. Calls upon* Parties and others:

(a) **To prevent and minimize the generation of plastic waste**...;

(b) **To promote the environmentally sound and efficient management of plastic waste...**

**...by improving the collection, transport, treatment and recycling of plastic waste...**
**...by reducing transboundary movement of plastic waste to a minimum**,

**and by reducing the discharge of plastic waste and microplastics**;

(c) **To ensure that transboundary movements of plastic waste are undertaken in accordance with the provisions of the Convention...**

# The Intention of the Plastics Amendments

- **While "Plastic Waste" was never defined, at the same time there was no discussion of exceptions. All plastic wastes were meant to be covered by either by B3011, A3210 or Y48.**
- **B3011 – Non-Hazardous Plastic Waste (uncontrolled)**
- **A3210 – Hazardous Plastic Waste (controlled as hazardous waste)**
- **Y48 – Everything else (e.g. mixed, contaminated, halogenated, not Annex IV R3 destination. (controlled as waste for special consideration)**

***The intention was to cover all plastic wastes!***

## Characteristics of A3210 (Annex VIII) Plastic Waste

-- Plastic waste that contains or is contaminated with an Annex I constituent, to an extent that it exhibits an Annex III characteristic.

## Control Procedure of A3210 (Annex VIII) Plastic Waste

-- No Party to non-Party Trade
-- Subject to Article 4a Prohibition on Trade from Annex VII to non-Annex VII countries (Annex VII = OECD, EU and Liechtenstein)
-- Prior Informed Consent between Parties.

## Characteristics of Y48 (Annex II) Plastic Waste

-- Contaminated with non-target materials or other plastics; or

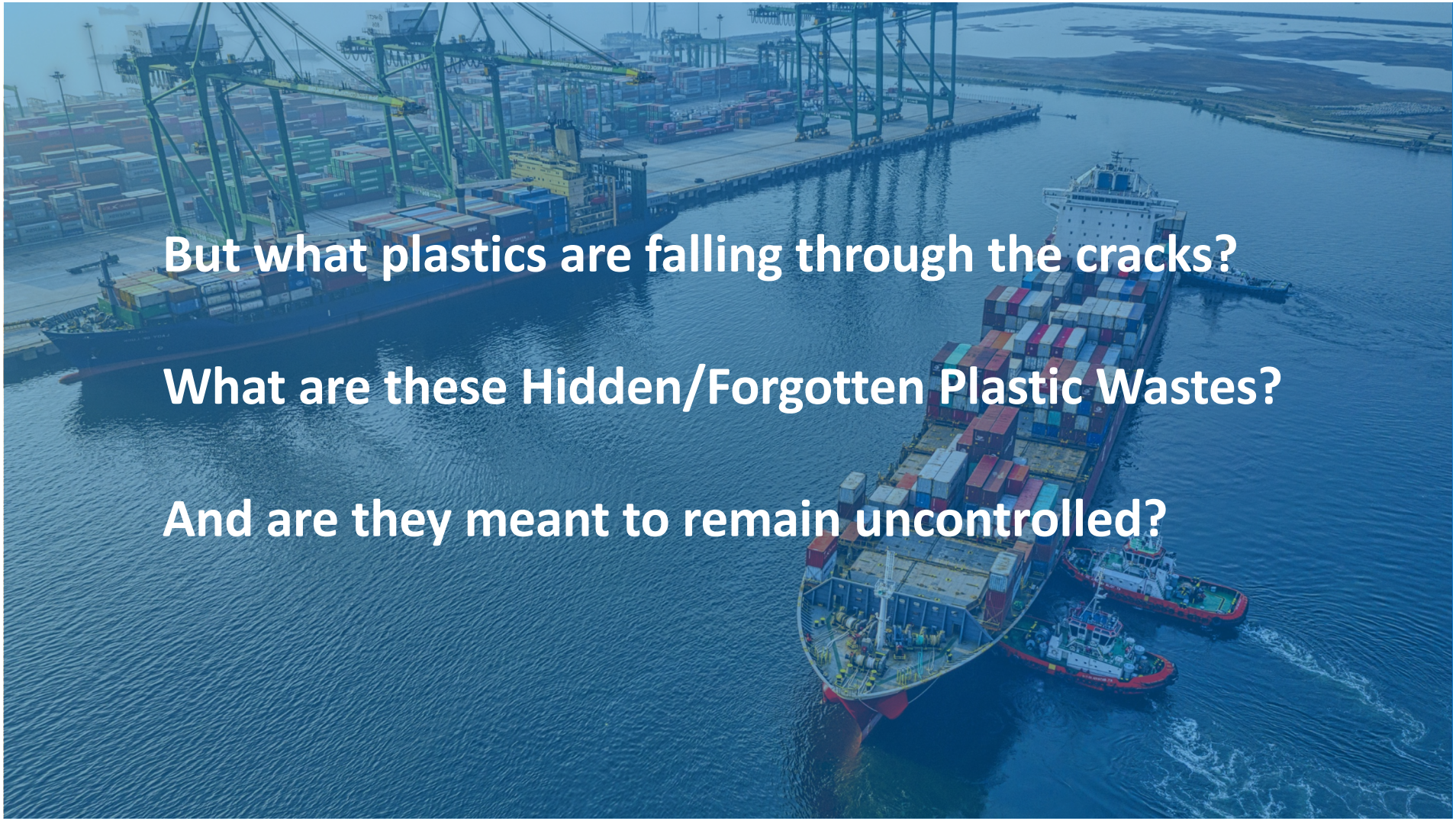
-- Halogenated polymer; or

– Not destined for R3 recycling; or

-- Mixtures of polymers, cured resins, condensation products or non-post-consumer fluorinated polymers except for mixtures of PE, PET and PP.

## Control Procedure of Y48 (Annex II) Plastic Waste

-- No Party to non-Party Trade
-- Prior Informed Consent between Parties.
-- EU ban to non-OECD Countries


But what plastics are falling through the cracks?
What are these Hidden/Forgotten Plastic Wastes?
And are they meant to remain uncontrolled?

# Table 8 of the Draft Technical Guidelines on Environmentally Sound Management of Plastic Wastes (**Entries with direct reference to plastic wastes)** presumed to be uncontrolled (Annex IX) despite meeting the definition of Y48

| | |
|---|---|
| **B1115** | Waste metal cables coated or insulated with plastics, not included in list A A1190, excluding those destined for Annex IVA operations or any other disposal operations involving, at any stage, uncontrolled thermal processes, such as open burning. |
| **B3026** | The following waste from the pre-treatment of composite packaging for liquids, not containing Annex I materials in concentrations sufficient to exhibit Annex III characteristics:<br>• Non-separable plastic fraction<br>• Non-separable plastic-aluminium fraction<br>• Non-separable plastic fraction<br>• Non-separable plastic-aluminium fraction |
| **B4020** | Wastes from production, formulation and use of resins, latex, plasticizers, glues/adhesives, not listed on list A, free of solvents and other contaminants to an extent that they do not exhibit Annex III characteristics, e.g., water-based, or glues based on casein starch, dextrin, cellulose ethers, polyvinyl alcohols (note the related entry on list A A3050) |

# Mixed / Contaminated Plastic Wastes presumed to be uncontrolled (Annex IX)

| | |
|---|---|
| **B1090** | Waste batteries conforming to a specification, excluding those made with lead, cadmium or mercury |
| **B1110** | Electrical and electronic assemblies:<br>• Electronic assemblies consisting only of metals or alloys<br>• Waste electrical and electronic assemblies or scrap (including printed circuit boards) not containing components such as accumulators and other batteries included on list A, mercury switches, glass from cathode-ray tubes and other activated glass and PCB-capacitors, or not contaminated with Annex I constituents (e.g., cadmium, mercury, lead, polychlorinated biphenyl) or from which these have been removed, to an extent that they do not possess any of the characteristics contained in Annex III (note the related entry on list A A1180)<br>• Electrical and electronic assemblies (including printed circuit boards, electronic components and wires) destined for direct reuse, and not for recycling or final disposal |
| **B1250** | Waste end-of-life motor vehicles, containing neither liquids nor other hazardous components |
| **B3030** | Textile wastes |
| **B3035** | Waste textile floor coverings, carpets |
| **B4010** | Wastes consisting mainly of water-based/latex paints, inks and hardened varnishes not containing organic solvents, heavy metals or biocides to an extent to render them hazardous (note the related entry on list A A4070) |
| **B4030** | Used single-use cameras, with batteries not included on list A |

## Missing from the Table 8 of Plastic Waste Guidelines
## List of Hidden Y48 Plastics

- Refuse Derived Fuel (not listed in Basel unless its explicitly recognised as Y45 – wastes derived from households)
- B3020 -- Plastic Mixed into Paper Wastes
- B3040 -- Rubber Wastes
- B3080 – Waste parings and scrap of rubber
- B3140 – Waste pneumatic tyres

# Concern that Parties will Ignore these Plastic Waste and Not Consider them as Y48 despite their Characteristics

**From EU Correspondent's Guidelines #12:**

16. A waste that, among other materials, contains plastic but can be classified under a specific entry in the Annexes III, IIIB and IV of the WSR (e.g. waste metal cables coated or insulated with plastics (see entries A1190 and B1115), waste electrical and electronic equipment (see e.g. entries A1180, B1110 and GC020) or waste vehicles (see entry B1250)), cannot be classified under one of the entries on plastic waste, but is to be classified under the relevant specific entry.

# Summary of Problems Identified with Respect to the Hidden Plastics

- **Likely half of the global plastic waste problem is not being controlled despite landmark Basel decision in 2019!**
- **Plastic Waste Guidelines currently provide no guidance on how to use Table 8 listings, or the other forgotten plastic wastes with respect to TBM controls.**
- **Some countries (EU) have already decided they are not going to control what should logically and scientifically be Y48 or A3210 plastics.**
- **We have no evidence that these Hidden/Forgotten Plastics have been controlled to date by a Basel Party.**
- **As a result, egregious free trade and dumping of mixed and contaminated plastic wastes is currently underway.**

# Case Examples

--Plastic in Paper
--RDF
--Plastic Textiles

K. Oanh Ha

Yuyun Ismawati

Urska Trunk

# Plastic in Paper Bales

K. Oanh Ha


The Failings of the Global Recycling System
Bloomberg Report, K. Oanh Ha
EXPLAINED

# Plastic in Refuse Derived Fuel

Yuyun Ismawati

# Plastics in RDF

Yuyun Ismawati

Nexus3 Foundation

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# About us


BALIFOKUS

Nexus for Health, Environment, and Development

www.nexus3foundation.org

- Established in June 2000 [BaliFokus Foundation]
- Jan 2019 re-branded as the Nexus for Health, Environment, and Development Foundation (Nexus3)
- Work with all stakeholders to protect vulnerable groups from the impact of developments on their health and the environment, and work towards a just, toxic-free and sustainable future
- Local problems, global challenges
- www.nexus3foundation.org

Aliansi Zero Waste Indonesia

IPEN for a toxics-free future

gaia

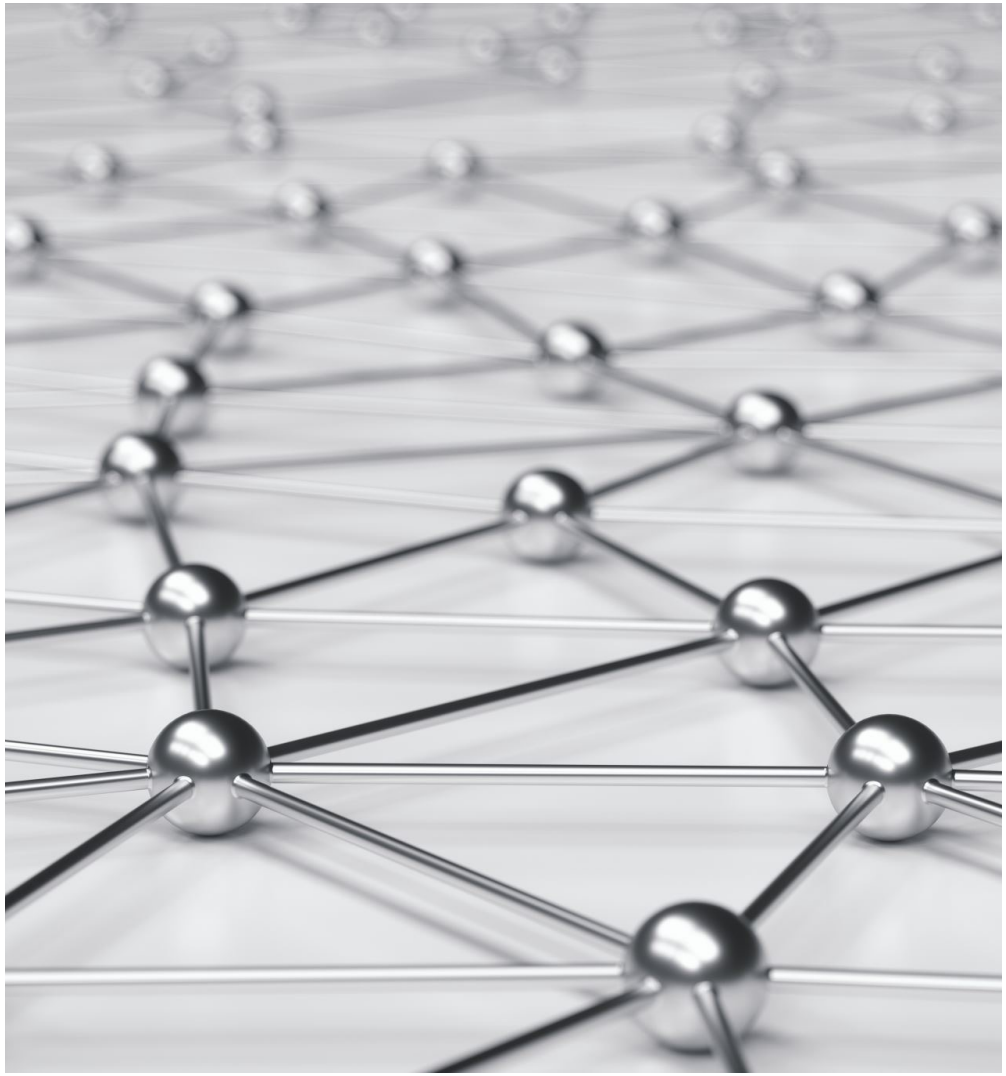
basel action network

#break free from plastic

WECF

THE EARTH PROJECT

World Alliance for Mercury-Free Dentistry



# Acknowledgement


- IPEN
- Basel Action Network
- Arnika Association Czech
- The Swedish government to IPEN
- Consumers Association Penang, Malaysia
- Eco Waste Coalition, the Philippines
- EARTH, Thailand
- National Toxic Network,  Australia
- Ecoton
- Alliance for Zero Waste Indonesia (AZWI)
- Dr Roland Weber – POPs Environmental Consulting


*Graphic: IPEN*

Plastic life cycle: from upstream to downstream

## What is RDF?

- Refuse Derived Fuel (RDF)
- Process Engineered Fuel (PEF),
- Solid Waste Fuel (SWF),
- Waste Derived Fuel (WDF),
- Solid Recovered Fuel (SRF)
- Tyre-Derived Fuel (TDF)

- Sources:
  - Municipal Solid Waste
  - Commercial and Industrial Waste
  - Construction and Demolition Waste
  - Vehicles tyres



# Various types of RDF


*In the first quarter England exported around 354,000 tonnes of refuse-derived fuel.*


PRODUCT

# Transboundary of RDF and SRF

- Popular since 1990s: SRF, RDF, MBT
- Transboundary shipments of **RDF** (red line) and **SRF** (blue line) in Asia:
- Cambodia, China, India, Indonesia, Thailand, Malaysia, Myanmar, and Vietnam

*Source: Ishigaki Tomonari, 2017*

# Tracking waste trade's Harmonized system (HS) codes

- **HS 3915 for Waste, parings and scrap, of plastics.**

  There is a whole range of associated categories of plastic waste under this category for different polymers and types of waste. 3915 is the base code with additional numbers added to this to describe the different categories of plastic waste.

- **HS 3825** for **Residual products** of the chemical or allied industries, not elsewhere specified or included; municipal waste; sewage sludge; other wastes .... Whole range of different categories of residual waste products classified under this base code.

- **HS 3825.10** is the code for **refuse derived fuel**

- **HS 3606.90.10** code for **processed engineered fuel** (Singapore Customs ruling in June 2015)

# Seven Types of RDF based on pre-sorted Municipal Solid Waste (MSW)

**TABLE 1.** SEVEN TYPES OF RDF BASED ON PRE-SORTED MUNICIPAL SOLID WASTES (MSW)

| | |
|---|---|
| RDF-1 | Waste used as fuel in as-discarded form |
| RDF-2 | Waste processed to coarse particle size, with or without ferrous metal separation. |
| RDF-3 | Shredded fuel derived from MSW that has been processed to remove metals, glass, and other inorganic materials (95%wt., passes 50mm² 10 mesh) |
| RDF-4 | Combustible waste processed into powder form (95%wt., passes 50mm 10 mesh) |
| RDF-5 | Combustible waste densified (compressed) into a form of pellets, slugs, briquettes, or briquettes (d-RDF) |
| RDF-6 | Combustible waste processed into liquid fuel |
| RDF-7 | Combustible waste processed into liquid, gaseous fuel |

*Soure: The American Standards for Testing of Materials (ASTM)*

Caloric values of RDF samples from Indonesia

| Location | Code | RDF Type | Calorific Value (kcal/kg) | Calorific Value (MJ/kg) |
|---|---|---|---|---|
| TOSS Gema Santi, Klungkung Regency | RDF-B-01 | Pellets | 3,503.03 | 14.66 |
| Jeruklegi Landfill, Cilacap Regency | RDF-C-01 | Fluffs | 8,272.91 | 34.61 |
| Kebon Kongok Landfill, West Lombok Regency | RDF-L-01 | Shredded | 3,761.58 | 15.74 |

**Type/grade of RDF**

# Indonesia: National Standards for RDF bio-pellets and briquettes

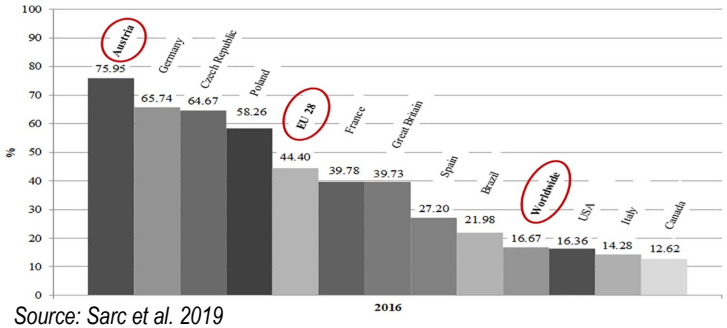
| No. | SNI number | Concerning | Technical committee | Scope |
|---|---|---|---|---|
| Biopellets | | | | |
| 1 | SNI 8675:2018 | Biomass pellets for energy (Pelet biomassa untuk energi) | 27-10, solid bioenergy and gas | This standard stipulates the requirements for biomass pellets used as energy for domestic and/or industrial purposes |
| 2 | SNI 8021:2020 | Wood pellets (Pelet kayu) | 79-01, wood forest products | This standard specifies the classification, quality requirements, sampling, test methods, packaging and labeling of wood pellets |
| 3 | SNI 8951:2020 | Biomass pellets for electricity generation (Pelet biomassa untuk pembangkit listrik) | 27-10, solid bioenergy and gas | This standard stipulates the requirements and specific test methods for biomass pellets used as fuel in Coal-fired Power Plants (PLTU) using Pulverizer Coal (PC) or Circulating Fluidized Bed (CFB) or Stoker boilers and PLTBm (Biomass Power Plants). |
| 4 | SNI 8966:2021 | Refuse Derived Fuel/Solid Recovered Fuel for electricity generation (Bahan bakar jumputan padat untuk pembangkit listrik) | 27-10, solid bioenergy and gas | This standard establishes quality requirements and test methods for the use of solid jump fuel in power plants for co-firing purposes, and as a standard guideline in establishing specifications, sampling, test methods, shipping and storage. |
| 5 | RSNI1 XXXX:2021 (in review process) | Woodchips for cofiring in electricity generation plant (Potongan kayu untuk cofiring pada pembangkit listrik) | 27-10, solid bioenergy and gas | This standard stipulates the requirements and test methods for specification of wood chips used as fuel for cofiring in Coal-fired Power Plants (PLTU). |
| 6 | RSNI1 XXXX:2021 (in review process) | Palm oil shells for cofiring in power plants (Cangkang sawit untuk cofiring pada pembangkit listrik) | 27-10, solid bioenergy and gas | This standard stipulates the requirements and test methods for the specification of palm shells used as cofiring fuel in Coal-fired Power Plants (PLTU). |
| 7 | RSNI1 XXXX:2021 (in review process) | Sawdust for cofiring in power plants (Serbuk gergaji untuk cofiring pada pembangkit listrik) | 27-10, solid bioenergy and gas | This standard stipulates the requirements and test methods for the specification of sawdust used as fuel for cofiring in Coal-fired Power Plants (PLTU). |
| Briquettes | | | | |
| 1 | SNI 19-4791-1998 | Coconut coir powder briquettes | 27-10, solid bioenergy and gas | This standard includes references, definitions, quality requirements, sampling methods, test methods, marking requirements, and packaging methods |
| 2 | SNI 01-6235-2000 | Wood charcoal briquettes | 27-10, solid bioenergy and gas | This standard includes scope, reference, definition, quality requirements, sampling, test method, test pass requirements, marking and packaging requirements for wood charcoal briquettes. |
| Source: Badan Standarisasi Nasional Indonesia, 2021 | | | | |

# Indonesia: Coprocessing in cement kilns

| Wastes | Energy (MJ/kg)[a] | Energy (kcal/kg) (Petcoke ~7500)[b] |
|---|---|---|
| Used tire | 23.03 | 5,500 |
| Husk | 19.93 | 4,760 |
| Industrial plastic | 18.21 | 4,350 |
| Waste oil | 14.65 | 3,500 |
| Scrap paper | 14.23 | 3,400 |
| Contaminated waste | 14.23 | 3,400 |
| RDF plastic | 11.72 | 2,800 |
| Sewage sludge | 8.37 | 2,000 |

*Source: [a]Akcansa (2010) and [b]Ekincioglu et al. (2012)*

- Thermal Substitution Rate target 15-23% by 2025
- Indonesia: SIG co-processing 6-15%
- CAPEX needed for coprocessing
- Collaboration with local suppliers of RDF fluff
- FMGcs supports and claimed plastic credits




*Source: Sarc et al. 2019*

# Indonesia: Cofiring of RDF in coal-fired power plants

- PLN's cofiring roadmap set out plans to migrate 114 existing coal-fired power plants (total capacity of 18,154 MW) by 2024 and feedstock management improvement 2021-2023
- The cofiring plan will require large-scale biomass production to secure stable alternative fuel supplies between 4 to 9 million tonnes annually – 1-5% coal replacement
- Power plant with Pulverized Coal Boiler, circulating fluidized bed (CFB) Boiler and Stoker Boiler
- Cofiring:
  - Direct cofiring: the cheapest and most-commonly used option;
  - Indirect cofiring: biomass is first gasified into fuel gas and then used as fuel; and
  - Parallel cofiring: biomass is burned separately, popularly used in the pulp and paper industry.

BAKU MUTU EMISI BAGI USAHA DAN/ATAU KEGIATAN INDUSTRI SEMEN

BAKU MUTU EMISI SUMBER TIDAK BERGERAK BAGI USAHA DAN/ATAU KEGIATAN INDUSTRI SEMEN YANG MENGGUNAKAN *REFUSE DERIVED FUEL* (MENGGUNAKAN SAMPAH RUMAH TANGGA DAN/ATAU SAMPAH SEJENIS RUMAH TANGGA)

| No | Parameter | Satuan | Nilai Baku Mutu Emisi |
|---|---|---|---|
| 1 | Partikulat* | mg/Nm³ | 60 |
| 2 | Sulfur Dioksida (SO2)* | mg/Nm³ | 650 |
| 3 | Nitrogen Oksida ($NO_x$)* | mg/Nm³ | 800 |
| 4 | Hidrogen Fluorida (HF)* | mg/Nm³ | 2 |
| 5 | Hidrogen Klorida (HCl) | mg/Nm³ | 20 |
| 6 | Karbon Monoksida (CO)* | mg/Nm³ | 625 |
| 7 | Cadmium (Cd) | mg/Nm³ | 0,2 |
| 8 | Merkuri (Hg) | mg/Nm³ | 0,2 |
| 9 | Lead (Pb) | mg/Nm³ | 5 |
| 10 | Arsenik (As) | mg/Nm³ | 1 |
| 11 | Nikel (Ni) | mg/Nm³ | 0,5 |
| 12 | PCDD/F (Dioxin dan Furan)** | ng TEQ/Nm³ | 0,1 |

Catatan :

- kadar maksimum baku mutu diatas dikoreksi terhadap 7% Oksigen ($O_2$) pada kondisi 25°C, 760 mmHg.
- Pengukuran emisi dilakukan pada kondisi kering.
- Pengukuran kadar Karbon Dioksida (CO2) pada cerobong keluar.
- (*) Pengukuran diwajibkan menggunakan CEMS
- (**) PCDD/F diukur setiap 4 (empat) tahun sekali setelah beroperasinya unit fasilitas *Refuse Derived Fuel*.

Salinan sesuai dengan aslinya
KEPALA BIRO HUKUM,

Ttd.

KRISNA RYA

MENTERI LINGKUNGAN HIDUP DAN KEHUTANAN REPUBLIK INDONESIA,

Ttd.

SITI NURBAYA

# Indonesia: MoEF Regulation No. P19/2017 emission standard for cement industry

PCDDs/Fs Alternative Fuels using:

- RDF from MSW waste measured every four years after the facility started its operation
- Hazardous waste → measured at least once a year

# Is Australia banning waste exports?

The Sydney Morning Herald

More than 14 million tonnes of plastic end up in the ocean every year. AP

Federal Environment Minister Sussan Ley said she wants other countries to ban plastic waste exports to "tackle the ghostly walls of death that litter Australian and international waters".

"I would like to see more nations follow Australia's lead and regulate their plastic waste, so it is not shipped offshore – where it becomes another country's problem, lying in landfill or in our oceans – where it destroys marine life and precious marine environments," Ms Ley said.

UN: Australia pushes for plastic export ban in pollution crisis The Sydney Morning Herald. 13 Feb 2022

*Source: NTN, RDF report in Australia*

**Plastic**

We have regulated the export of waste plastic since **1 July 2021**.

Find out more about exporting plastic waste.

**Tyres**

We have regulated the export of waste tyres since **1 December 2021**.

Find out more about exporting tyres waste.

**Paper and cardboard**

We will start to regulate waste paper and cardboard on **1 July 2024**. From this date, you will only be able to export paper and cardboard that is processed or sorted to specific requirements.

**Hazardous waste**


Separate requirements apply for the export of hazardous waste.

Check the export requirements for hazardous waste.

Australian Government: Department of Agriculture, Waste and the Environment *https://www.awe.gov.au/environment/protection/waste/exports*

# Australia's Plastic Rules

The plastic rules come into effect in two phases

From **1 July 2021**, you can only export waste plastics that have been:

- Sorted into single resin/polymer type or
- Processed with other materials into PEF

From **1 July 2022**, you can only export mixed waste plastics that have been:

- sorted into single resin/polymer type and further processed, for example in form of flakes or pelletized, or
- processed with other materials into PEF

*https://www.awe.gov.au/environment/protection/waste/exports/plastic*

Processed engineered fuel

*Source: https://awre.com.au/recycling/processed-engineered-fuel/*

NTN NATIONAL TOXICS NETWORK

# Tyres that can be exported from Australia

## Tyres you can export

From 1 December 2021, you can export the following waste tyres **if you have a waste export licence**:

- tyres that have been processed into shreds or crumb of not more than 150 millimetres for use as tyre derived fuel
- tyres for retread by an appropriate retreading facility, for example, one that is verified by Tyre Stewardship Australia's Foreign End Market program
- tyres to an appropriate importer for re-use as a second-hand tyre on a vehicle
- tyres that have been processed into shreds, crumbs (when the shred or crumb are not for use as tyre derived fuel), buffings or granules.

*https://www.awe.gov.au/environment/protection/waste/exports/tyres*

## Australia's waste export to Malaysia

| HS 3915 Plastic waste | |
|---|---|
| **Year** | **Quantity (kg)** |
| 2014 | 13,996,138 |
| 2015 | 16,762,437 |
| 2016 | 10,021,294 |
| 2017 | 32,199,160 |
| 2018 | 44,992,549 |
| 2019 | 32,332,830 |
| 2020 | 32,504,460 |

| HS 360690 PEF | |
|---|---|
| **Year** | **Quantity (kg)** |
| 2014 | 14,341,959 |
| 2015 | 5,435,249 |
| 2016 | - |
| 2017 | - |
| 2018 | - |
| 2019 | - |
| 2020 | - |

*Source: NTN report on RDF in Australia*

NTN NATIONAL TOXICS NETWORK

# Australia's export of waste-derived products to Indonesia (HS Code 3825, 3915, 4707, 400400, 401220, 401290, 700700) (in kg) (UN Comtrade)

| Year | Plastic-based | Paper-based | Tyre-based | Glass-based | Total Value (USD) | PEFs | Total Value PEF (USD) |
|---|---|---|---|---|---|---|---|
| **2017** | 14,921,730.00 | 294,947,470.00 | 363,053.00 | 0 | US$58,352,010.00 | 8,256.00 | US$13,611.00 |
| **2018** | 46,519,780.00 | 185,451,770.00 | 61,439.00 | 100,000 | US$35,553,746.00 | 80,332.00 | US$52,365.00 |
| **2019** | 35,378,430.00 | 194,117,600.00 | 109,349.00 | 0 | US$30,539,990.00 | 0.00 | US$0.00 |
| **2020** | 14,190,366.00 | 361,928,630.00 | 58,574.00 | 5 | US$53,376,622.00 | 1,887.00 | US$1,397.00 |

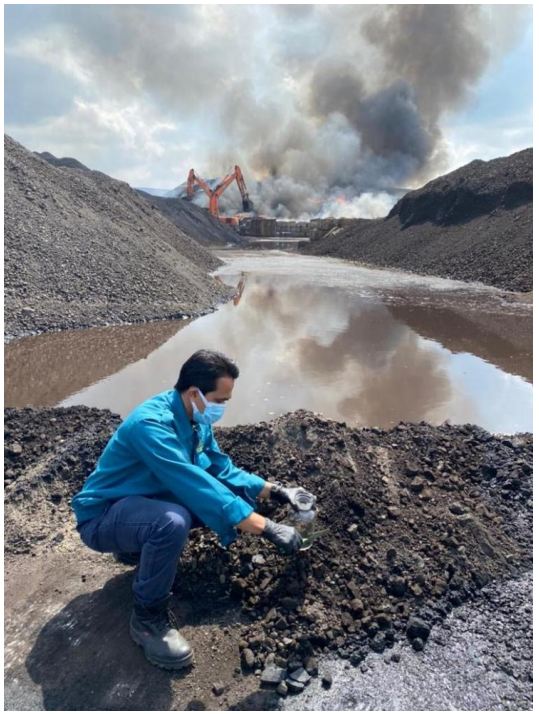
PHI HS 3825
SGP HS 360690


Aliansi Zero Waste Indonesia

ecoton
Ecological Observation and Wetlands Conservation

# Imported tire-derived fuel (TDF) in flames

A pile of crumb rubber blazing in flames, Teluk Panglima Garang, Kuala Langat, Selangor - The Star Metro online (27 June 2021)



Dept of Environment officer taking samples - KOSMO online (27 June 2021)

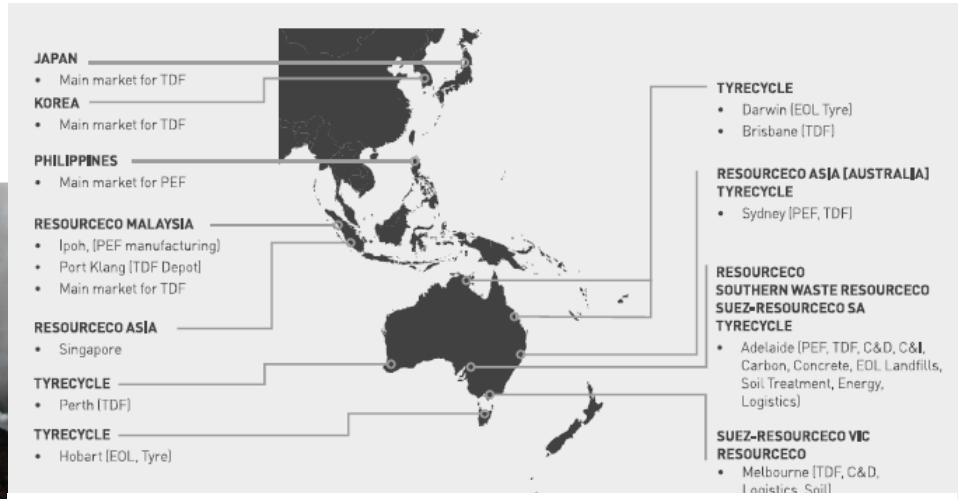
*Source: Consumer Association Penang, RDF in Malaysia report*

# Waste tyre exports from Australia

## Illegal structures at private jetty to be torn down

**Bernama** - June 29, 2021 10:10 PM

110 Shares | 89 | 16




Hee said it was learnt that the warehouse owner had a valid approved permit (AP) where the shredded tyres were shipped from Australia to be used as fuel for a plastic recycling factory in Chemor, Perak and a cement factory in Langkawi, Kedah.

*https://www.freemalaysiatoday.com/category/nation/2021/06/29/illegal-structures-at-private-jetty-to-be-torn-down/*
*Source: Consumer Association Penang, RDF in Malaysia report*

**Malaysia: Cement plants co-processing waste**

1. Pahang Cement Sdn. Bhd. Bukit Sagu, Kuantan, Pahang
2. Perak Hanjoong Simen Sdn. Bhd. Padang Rengas, Kuala Kangsar, Perak
3. Tasek Corporation Berhad, Ipoh, Perak
4. Associated Pan Malaysia Cement Sdn. Bhd. Jalan Kuala Kangsar, Perak
5. Hume Cement Sdn Bhd, Gopeng, Perak
6. Negeri Sembilan Cement Industries Sdn Bhd (Perlis Plant) Bukit Keteri, Chuping, Perlis
7. Negeri Sembilan Cement Industries Sdn. Bhd. (Kp) Bahau, Negeri Sembilan
8. CMS Cement Industries Sdn Bhd. Kuching, Sarawak
9. CMS Cement Industries Sdn Bhd. Bintulu, Sarawak

Nine cement plants in Malaysia are co-processing waste such as PEF, Tire-Derived Fuel (TDF), RDF, scheduled (hazardous) waste, fly ash, copper slag, saw dust, soap sludge, fluid cracking catalyst.

*Source: from CAP, RDF report, https://www.doe.gov.my/senarai-kilang-simen-yang-menjalankan- aktiviti-co-prosessing/*

# Thailand: No clear Waste-to-Energy Regulations

- Proper Definition of RDF → waste/SRF/PEFs?
- Industrial Standards for production/ quality of RDFs
- Clear regulation on the movement of RDFs
- Industrial point-source emission standards that include Dioxins
- Dumping of Hazardous Ash

*Source: EARTH, Thailand,2022*

## Thailand's CSOs: call for Standard for RDF

- It is unclear whether the Thai government sees RDF as waste or fuel → it is unclear which agencies should be in charge of regulation
- This makes it difficult to track the origins of RDFs, and thus the quality of RDFs
- Unregulated movement = risk of illegal dumping

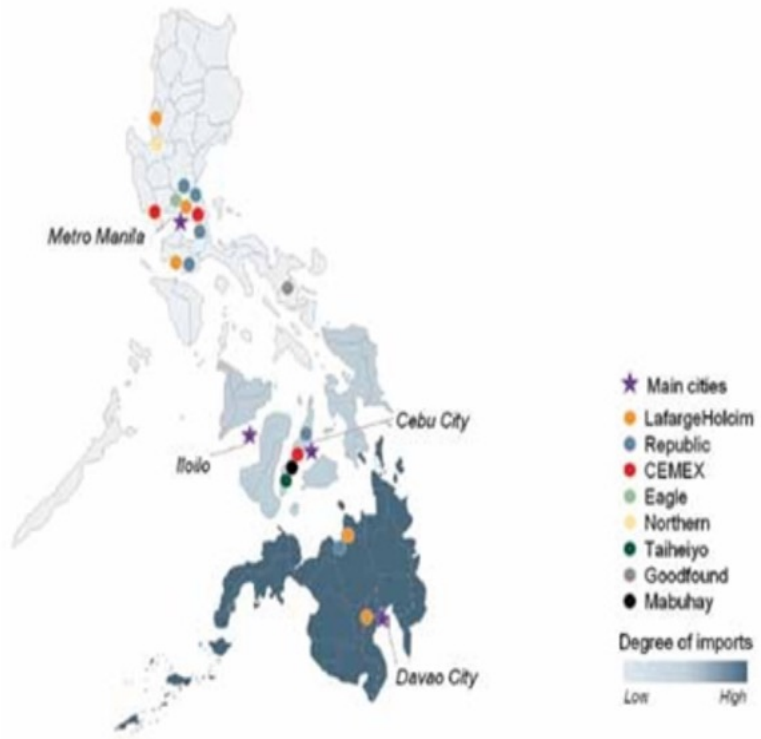
*Source: EARTH, Thailand,2022*

# Thailand's CSOs: Call for standard for Dioxin Emissions

- The closest is the Ministry of Natural Resources and Environment emission standard from 2010 for municipal waste incinerator
- Limit for Dioxin at no more than 0.5 nanogram per meter cube – But this is not applied to RDF power plant
- The emission standard reference provided by the Ministry of Industry was from 2006, which has no dioxin standard

*Source: EARTH, Thailand,2022*

# The Philippines:
# RDF/PEF use is Increasing with importation as a Key Driver




Source: CemNet, company websites

| Date/Period | Country of Origin | Mass in Kilograms | Customs Value |
|---|---|---|---|
| November 2018 – December 2019 | Australia | 11,344,630kgs | USD 357,151.25 |
| January – December 2020 | Australia | 2,269,080kgs | USD69,787.9 |
| January – March 2021 | Australia | 1,929,850kgs | USD62,720.13 |
| TOTAL | - | 15,543,560kgs | USD489,659.28 |

EcoWaste Coalition

Republic of the Philippines
Department of Finance
BUREAU OF CUSTOMS
CUSTOMS INTELLIGENCE & INVESTIGATION SERVICE
Collection District 10, Port Area, Cagayan de Oro City

DISPOSITION FORM

| | | | |
|---|---|---|---|
| For: | The Deputy Commissioner, IG | DATE: | Control No. |
| Thru: | The Director, CIIS | May 16, 2019 | |
| From: | Supervisor, CIIS-CDO | | |

**COMMENDATIONS:**

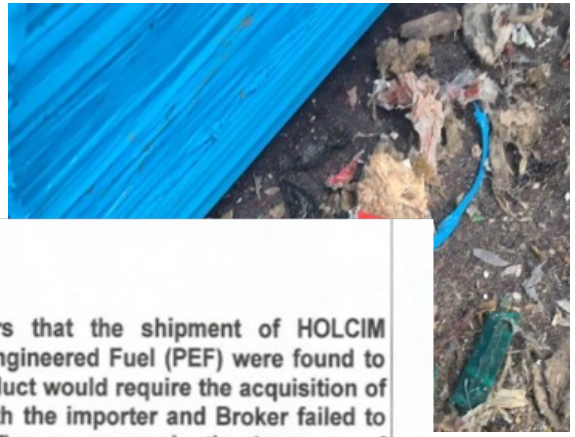
3. Based on the above findings it appears that the shipment of HOLCIM PHILIPPINES INC. Declared as Processed Engineered Fuel (PEF) were found to be shredded municipal waste. Thus, said product would require the acquisition of an Import Permit prior to its importation. Both the importer and Broker failed to produce the same. In lieu thereof, this office recommends the issuance of Warrant of Seizure and Detention (WSD) against 9x40 containers declared as Processed Engineered Fuel (PEF) but was found to contain Shredded Municipal Waste in violation of R.A. 9003, R.A. 6969, R.A. 8749 and Section 1400 of the CMTA Law.

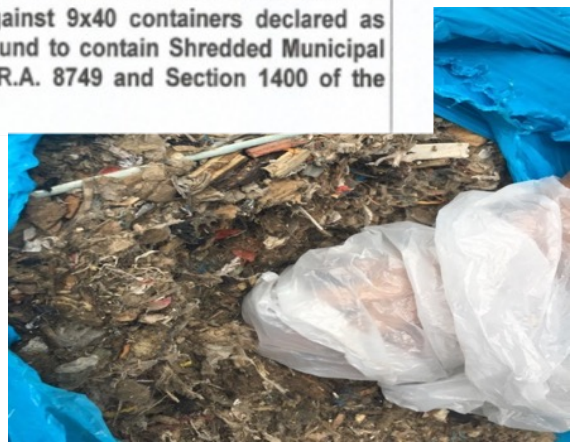
Attachments:

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]

CONCURRENT/ CONCUR

RANIEL T. RAMIRO
Acting Deputy Commissioner
Intelligence Group
Date





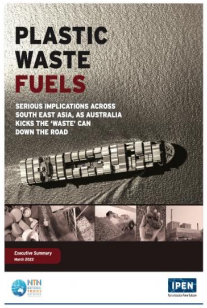
Process engineered fuel, is low-grade fuel; not garbage


EcoWaste Coalition

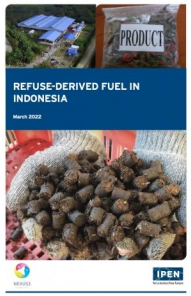
# The Philippines: Policy fails

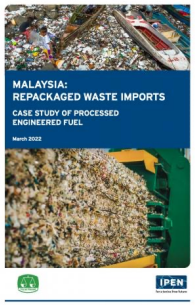
- Existing policies fail to consider the increasing evidence of the potential harmful effects
- PEF use is also inconsistent with several other existing laws and policies
- Exacerbated by the increasing importation of PEF and the lack of information on its use and facilities

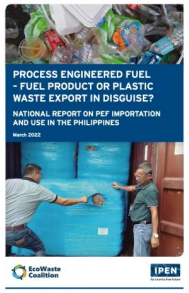
References
https://ipen.org/news/plastic-waste-fuels








# THANK YOU

Yuyun Ismawati

yuyun@nexus3foundation.org

# Plastic in Textiles

Urska Trunk

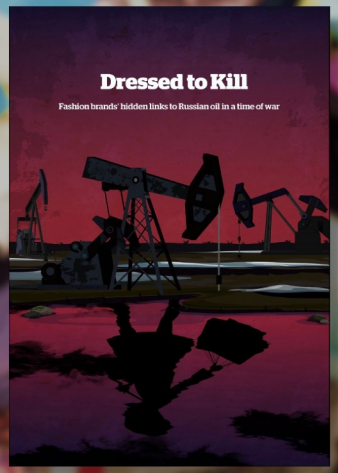
# The hidden export of plastic waste

Urska Trunk
Changing Markets Foundation
Urska.trunk@changingmarkets.org

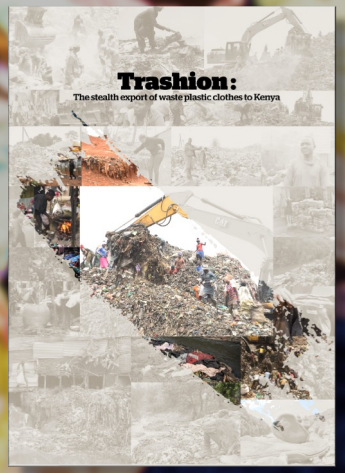
# FOSSIL FASHION












Dandora dumping Site
Korogocho Open Air Market, Babadogo, Nairobi, Kenya
Kawangware Market, Nairobi, Kenya
Gikomba Market, Maru Road, Kariokor, Nairobi, Kenya
City Stadium Open Air Market, Jogoo Road, Makongeni, Ruhatti, Nairobi, Kenya
NAIROBI
Ajjaha Centre Mitumba Godowns, Mombasa Road, Nairobi, Kenya
KENYA
NAIROBI
MOMBASA
Kongowea, Mombasa, Kenya
King'orani Mitumba Godowns
Mombasa Port, Kenya
MOMBASA
TRASHION
The stealth export of waste plastic clothes to Kenya
changingmarkets.org/fossilfashion
Changing Markets FOUNDATION
WILDLIGHT
CLEAN UP KENYA
Les Amis de la Terre France
Trashion: The stealth export of waste plastic clot...
Watch later
Share
TRASHION
The stealth export of
stic clothes to Kenya

**> 900 million**
items of clothing
sent to Kenya p.a.

**HS codes 6309: Textiles; worn clothing and other worn articles**

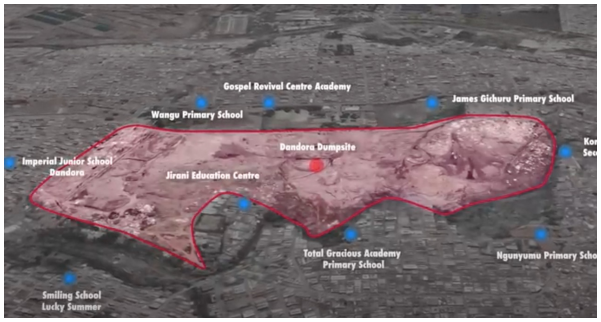
- **20–50%** of the used-clothing in bales is unsellable
- people employed in the trade report that the **amount of waste** in bales arriving from abroad **has increased significantly** in the last few years

# Waste plastic-based clothing

- **1 in 3 pieces** are waste plastic-based clothing
- Up to **300 million** of items made from plastic-based fibres



Plastic-based clothing as fuel

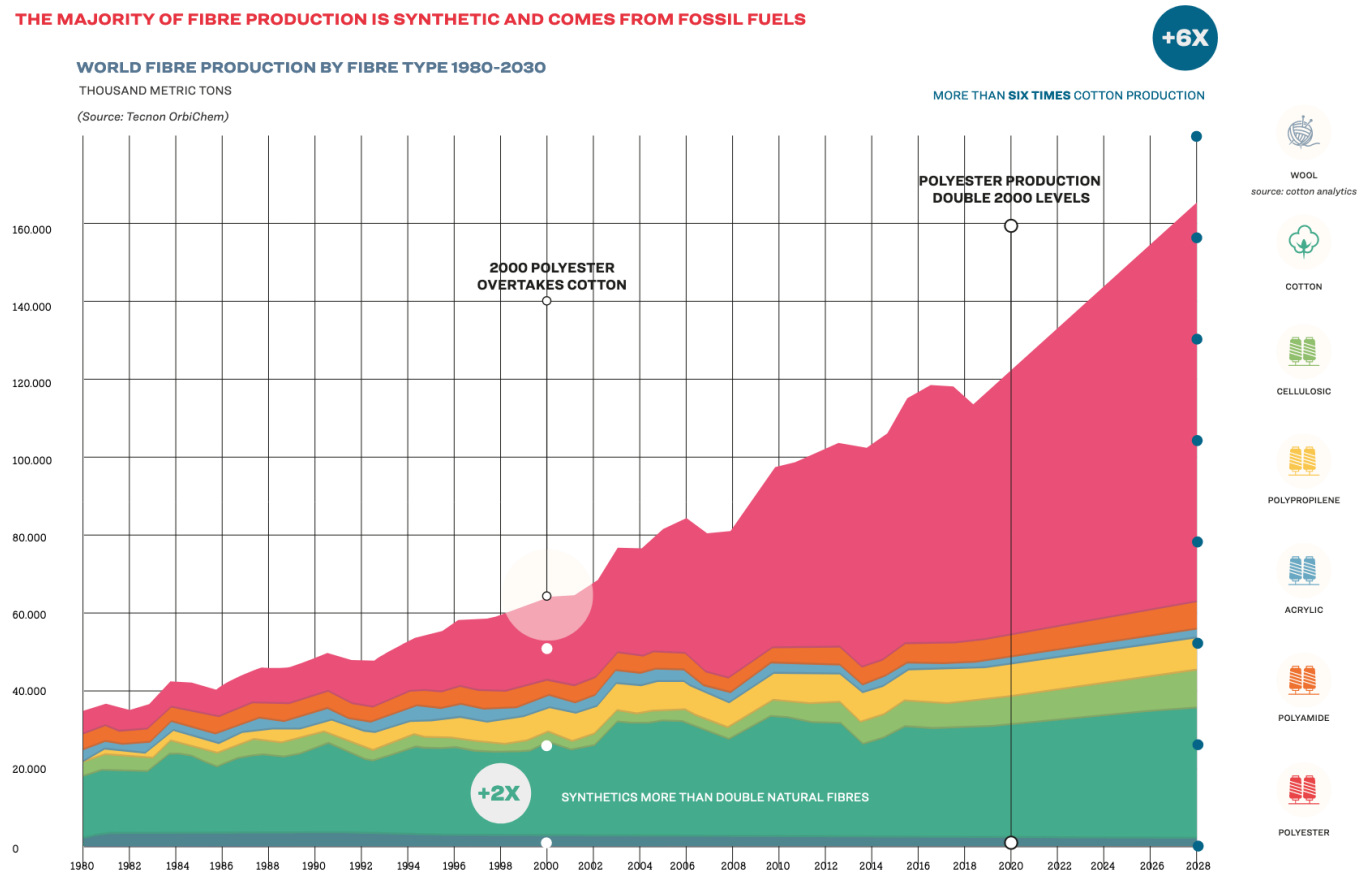



Continuously growing landfills adjacent to housing and schools

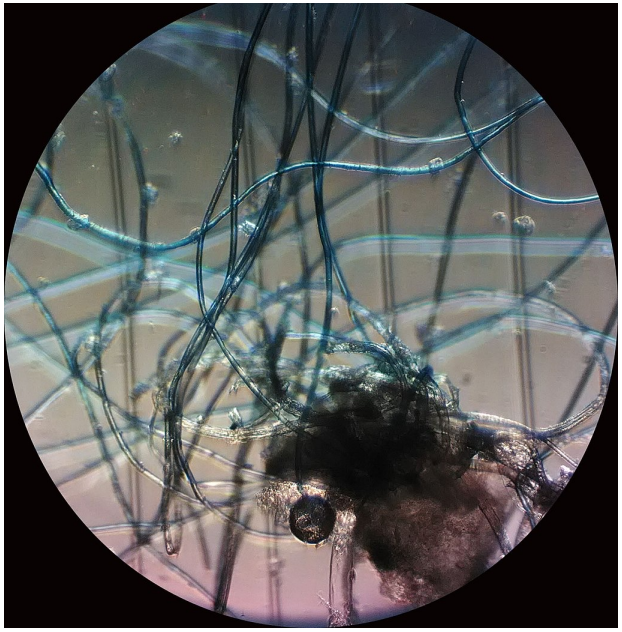
Pollution of Nairobi river

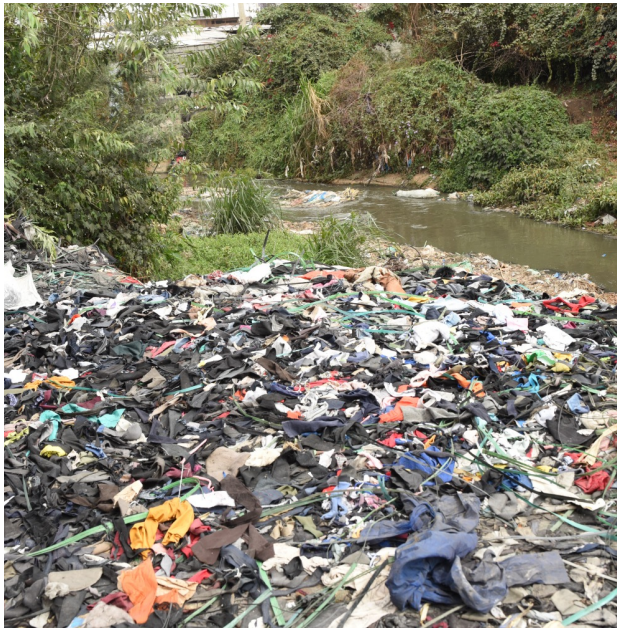
# FAST FASHION AND THE RISE OF POLYESTER

**THE MAJORITY OF FIBRE PRODUCTION IS SYNTHETIC AND COMES FROM FOSSIL FUELS**




WE'RE USING CLOTHES LESS AND LESS BUT THE SALE
OF CLOTHES HAS GROWN FASTER THA
SOME GARMENTS
200
190
180
170
160
150
140
130
120
110
100
2000
2005
CLOTHING UTILIZATION
CLOTHING SALES
WORLD GDP
Source: Mckinsey and Ellen Macarthur Foundation
Publications
European Environment Agency
EU exports of used textiles in Europe's circular economy
Textiles are on average the fourth-highest source of pressure on the environment and climate change from a European consumption perspective, as shown in previous EEA briefings. Europe faces major challenges managing used textiles, including textiles waste. As reuse and recycling capacities in Europe are limited, a large share of used textiles collected in the EU is traded and exported to Africa and Asia, and their fate is highly uncertain. The common public perception of used clothing donations as generous gifts to people in need does not fully match reality.





## Way forward

EU Textile Strategy

Waste Shipment Regulation

Basel Convention

# NGO Recommendations

Jim Puckett

# Recommendations

The status quo allowing no Basel trade controls over the hidden plastic wastes (e.g. textiles, plastic waste in paper, RDF) is inconsistent with the Plastic Amendment intent to remedy the harm from plastic wastes.

- A Basel party should propose to amend the Convention to include Refuse Derived Fuel as a new Annex II listing unless contaminated with Annex I material to the extent that it exhibits a hazardous characteristic.
- The Technical Guidelines on Plastic Wastes should be revised to advise Parties to use the most restrictive trade controls when Annex IX listings contain plastics that could be considered alternatively as Y48 or A3210.

# Recommendations

- Parties that proposed the Plastic Amendments should propose to amend Y48, B3011 and A3210 and other Annex IX listings to explicitly include Y48 controls for the “forgotten plastic wastes” such as rubber wastes, plastic in paper bales above 5%, RDF, textile wastes, etc.
- Until such time as amendments and guidance is provided at Basel level as noted above, Parties should ensure such Y48 controls are applied at national level through national policy or legislation.
- The European Union Correspondent’s Group on Waste Shipments should revise its Guideline #12, paragraph 16 to ensure that where Annex IX listings containing plastic which otherwise would qualify as Y48, then Y48 should prevail.


Thank You!


Link to IPEN Report
https://ipen.org/documents/plastic-waste-trade-hidden-numbers


Link to
Bloomberg
Series
https://www.bloomberg.com/features/
2022-india-plastic-recycling-pollution/


Reactions from Parties
Questions / Discussion


Links