Tackling the Hidden Basel Plastic Wastes

Side Event: 8 May 2023, Geneva, Switzerland
Basel Convention 16th Conference of Parties
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
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.
The Basel Convention: Revealing the Forgotten Plastic Wastes

Jim Puckett, BAN
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.
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).
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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1115</td>
<td>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.</td>
</tr>
</tbody>
</table>
| 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:  
- Non-separable plastic fraction  
- Non-separable plastic-aluminium fraction  
- Non-separable plastic fraction  
- Non-separable plastic-aluminium fraction |
<p>| 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) |</p>
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1090</td>
<td>Waste batteries conforming to a specification, excluding those made with lead, cadmium or mercury</td>
</tr>
<tr>
<td>B1110</td>
<td>Electrical and electronic assemblies:</td>
</tr>
<tr>
<td></td>
<td>• Electronic assemblies consisting only of metals or alloys</td>
</tr>
<tr>
<td></td>
<td>• 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)</td>
</tr>
<tr>
<td></td>
<td>• Electrical and electronic assemblies (including printed circuit boards, electronic components and wires) destined for direct reuse, and not for recycling or final disposal</td>
</tr>
<tr>
<td>B1250</td>
<td>Waste end-of-life motor vehicles, containing neither liquids nor other hazardous components</td>
</tr>
<tr>
<td>B3030</td>
<td>Textile wastes</td>
</tr>
<tr>
<td>B3035</td>
<td>Waste textile floor coverings, carpets</td>
</tr>
<tr>
<td>B4010</td>
<td>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)</td>
</tr>
<tr>
<td>B4030</td>
<td>Used single-use cameras, with batteries not included on list A</td>
</tr>
</tbody>
</table>
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, IIB 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
Plastic in Refuse Derived Fuel

Yuyun Ismawati
Plastics in RDF

Yuyun Ismawati
Nexus3 Foundation
yuyun@nexus3foundation.org
About us

- 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](http://www.nexus3foundation.org)
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
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.
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)**

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

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

Caloric values of RDF samples from Indonesia

<table>
<thead>
<tr>
<th>Location</th>
<th>Code</th>
<th>RDF Type</th>
<th>Calorific Value (kcal/kg)</th>
<th>Calorific Value (MJ/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOSS Gema Santl, Klungkung Regency</td>
<td>RDF-B-01</td>
<td>Pellets</td>
<td>3,503.03</td>
<td>14.66</td>
</tr>
<tr>
<td>Jeruklegi Landfill, Cilacap Regency</td>
<td>RDF-C-01</td>
<td>Fluffs</td>
<td>8,272.91</td>
<td>34.61</td>
</tr>
<tr>
<td>Kebon Kongok Landfill, West Lombok Regency</td>
<td>RDF-L-01</td>
<td>Shredded</td>
<td>3,761.58</td>
<td>15.74</td>
</tr>
<tr>
<td>No.</td>
<td>SNI number</td>
<td>Concerning</td>
<td>Technical committee</td>
<td>Scope</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>---------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>SNI 8675:2018</td>
<td>Biomass pellets for energy (Pelet biomassa untuk energi)</td>
<td>27-10, solid bioenergy and gas</td>
<td>This standard stipulates the requirements for biomass pellets used as energy for domestic and/or industrial purposes</td>
</tr>
<tr>
<td>2</td>
<td>SNI 8021:2020</td>
<td>Wood pellets (Pelet kayu)</td>
<td>79-01, wood forest products</td>
<td>This standard specifies the classification, quality requirements, sampling, test methods, packaging and labeling of wood pellets</td>
</tr>
<tr>
<td>3</td>
<td>SNI 8951:2020</td>
<td>Biomass pellets for electricity generation (Pelet biomassa untuk pembangkit listrik)</td>
<td>27-10, solid bioenergy and gas</td>
<td>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).</td>
</tr>
<tr>
<td>4</td>
<td>SNI 8966:2021</td>
<td>Refuse Derived Fuel/Solid Recovered Fuel for electricity generation (Bahan bakar jumpulan padat untuk pembangkit listrik)</td>
<td>27-10, solid bioenergy and gas</td>
<td>This standard establishes quality requirements and test methods for the use of solid fuel in power plants for co-firing purposes, and as a standard guideline in establishing specifications, sampling, test methods, shipping and storage.</td>
</tr>
<tr>
<td>5</td>
<td>RSNI1 XXXX:2021 (in review process)</td>
<td>Woodchips for cofiring in electricity generation plant (Potongan kayu untuk cofiring pada pembangkit listrik)</td>
<td>27-10, solid bioenergy and gas</td>
<td>This standard stipulates the requirements and test methods for specification of wood chips used as fuel for cofiring in Coal-fired Power Plants (PLTU).</td>
</tr>
<tr>
<td>6</td>
<td>RSNI1 XXXX:2021 (in review process)</td>
<td>Palm oil shells for cofiring in power plants (Cangkang sawit untuk cofiring pada pembangkit listrik)</td>
<td>27-10, solid bioenergy and gas</td>
<td>This standard stipulates the requirements and test methods for the specification of palm shells used as cofiring fuel in Coal-fired Power Plants (PLTU).</td>
</tr>
<tr>
<td>7</td>
<td>RSNI1 XXXX:2021 (in review process)</td>
<td>Sawdust for cofiring in power plants (Serbuk gergaji untuk cofiring pada pembangkit listrik)</td>
<td>27-10, solid bioenergy and gas</td>
<td>This standard stipulates the requirements and test methods for the specification of sawdust used as fuel for cofiring in Coal-fired Power Plants (PLTU).</td>
</tr>
</tbody>
</table>

**Briquettes**

<table>
<thead>
<tr>
<th>No.</th>
<th>SNI number</th>
<th>Concerning</th>
<th>Technical committee</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SNI 19-4791-1998</td>
<td>Coconut coir powder briquettes</td>
<td>27-10, solid bioenergy and gas</td>
<td>This standard includes references, definitions, quality requirements, sampling methods, test methods, marking requirements, and packaging methods</td>
</tr>
<tr>
<td>2</td>
<td>SNI 01-6235-2000</td>
<td>Wood charcoal briquettes</td>
<td>27-10, solid bioenergy and gas</td>
<td>This standard includes scope, reference, definition, quality requirements, sampling, test method, test pass requirements, marking and packaging requirements for wood charcoal briquettes.</td>
</tr>
</tbody>
</table>

Source: Badan Standarisasi Nasional Indonesia, 2021
Indonesia: Coprocessing in cement kilns

<table>
<thead>
<tr>
<th>Wastes</th>
<th>Energy (MJ/kg)(^a)</th>
<th>Energy (kcal/kg) (Petcoke ~7500)(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used tire</td>
<td>23.03</td>
<td>5,500</td>
</tr>
<tr>
<td>Husk</td>
<td>19.93</td>
<td>4,760</td>
</tr>
<tr>
<td>Industrial plastic</td>
<td>18.21</td>
<td>4,350</td>
</tr>
<tr>
<td>Waste oil</td>
<td>14.65</td>
<td>3,500</td>
</tr>
<tr>
<td>Scrap paper</td>
<td>14.23</td>
<td>3,400</td>
</tr>
<tr>
<td>Contaminated waste</td>
<td>14.23</td>
<td>3,400</td>
</tr>
<tr>
<td>RDF plastic</td>
<td>11.72</td>
<td>2,800</td>
</tr>
<tr>
<td>Sewage sludge</td>
<td>8.37</td>
<td>2,000</td>
</tr>
</tbody>
</table>

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
- FMGs 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.
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?

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

Australian Government: Department of Agriculture, Waste and the Environment
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

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.

Australia’s waste export to Malaysia

<table>
<thead>
<tr>
<th>HS 3915 Plastic waste</th>
<th>Year</th>
<th>Quantity (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>13,996,138</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>16,762,437</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td>10,021,294</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>32,199,160</td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>44,992,549</td>
</tr>
<tr>
<td></td>
<td>2019</td>
<td>32,332,830</td>
</tr>
<tr>
<td></td>
<td>2020</td>
<td>32,504,460</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HS 360690 PEF</th>
<th>Year</th>
<th>Quantity (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>14,341,959</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>5,435,249</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2019</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2020</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: NTN report on RDF in Australia
Australia’s export of waste-derived products to Indonesia (HS Code: 3825, 3915, 4707, 400400, 401220, 401290, 700700) (in kg) (UN Comtrade)

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

PHI HS 3825  
SGP HS 360690
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)

Source: Consumer Association Penang, RDF in Malaysia report

Dept of Environment officer taking samples - KOSMO online (27 June 2021)
Waste tyre exports from Australia

Illegal structures at private jetty to be torn down

Source: Consumer Association Penang, RDF in Malaysia report

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.

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

<table>
<thead>
<tr>
<th>Date/Period</th>
<th>Country of Origin</th>
<th>Mass in Kilograms</th>
<th>Customs Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 2018 –</td>
<td>Australia</td>
<td>11,344,630kgs</td>
<td>USD 357,151.25</td>
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<tr>
<td>December 2019</td>
<td></td>
<td></td>
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<tr>
<td>January – December</td>
<td>Australia</td>
<td>2,269,080kgs</td>
<td>USD 69,787.9</td>
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<td>2020</td>
<td></td>
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<td>January – March</td>
<td>Australia</td>
<td>1,929,850kgs</td>
<td>USD 62,720.13</td>
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<tr>
<td>2021</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TOTAL</td>
<td>-</td>
<td>15,543,560kgs</td>
<td>USD 489,659.28</td>
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</tbody>
</table>

Source: CemNet, company websites
Process engineered fuel, is low-grade fuel; not garbage
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

THANK YOU

Yuyun Ismawati

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Plastic in Textiles

Urska Trunk
The hidden export of plastic waste

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

WORLD FIBRE PRODUCTION BY FIBRE TYPE 1980-2030
THOUSAND METRIC TONS
(Source: Tecevo OrbisChem)

- POLYESTER PRODUCTION DOUBLE 2000 LEVELS
- 2000 POLYESTER OVERTAKES COTTON
- SYNTHETICS MORE THAN DOUBLE NATURAL FIBRES

MORE THAN SIX TIMES COTTON PRODUCTION
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 textile 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 Bloomberg Series

Reactions from Parties

Questions / Discussion
Links