



The role of the informal recycling sector in plastic pollution reduction and recommended policy changes

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Plastic treaty

- Solve plastic waste and pollution, in a way that ALSO address climate change and biodiversity loss, under an international binding approach
- February 28-March 2, at UNEA 5.2 all 175 countries endorsed a landmark resolution to establish an international, legally binding treaty on plastic pollution by 2024.



UNEA attendees react to plastic resolution.

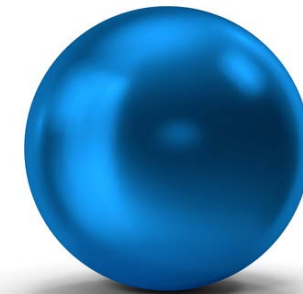
Image by Duncan Moore for UNEP/Flickr.

Informal Recycling Sector (IRS)

- Estimates suggest that the **informal recycling sector** involves at least 15 million people globally, **responsible for 58% of the collected and recycled plastic waste.** (*Lau et al.2020*)



Plastic recycled
in total



Plastic recycled by
the IRS



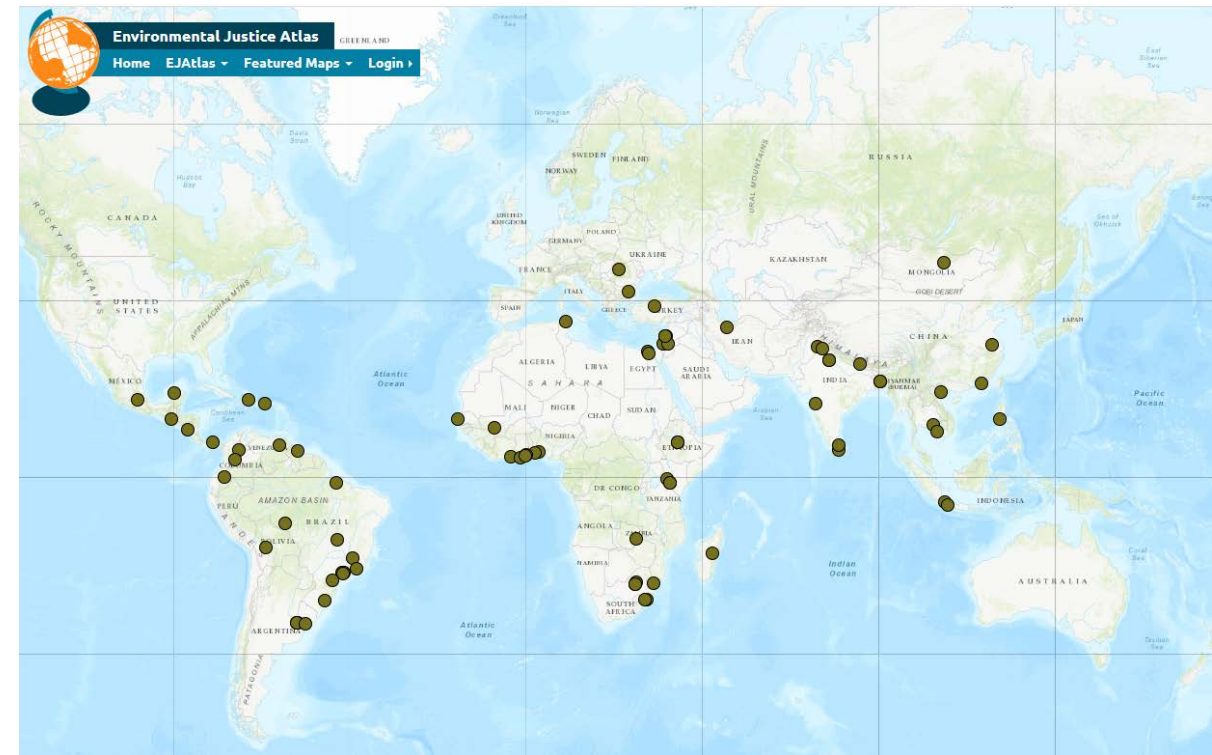
Who are they?

Scheinberg defines informal waste management activities as those which are “not sponsored, financed, recognised, supported, organised or acknowledged by formal solid waste authorities, or which operate in violation or in competition with such authorities”

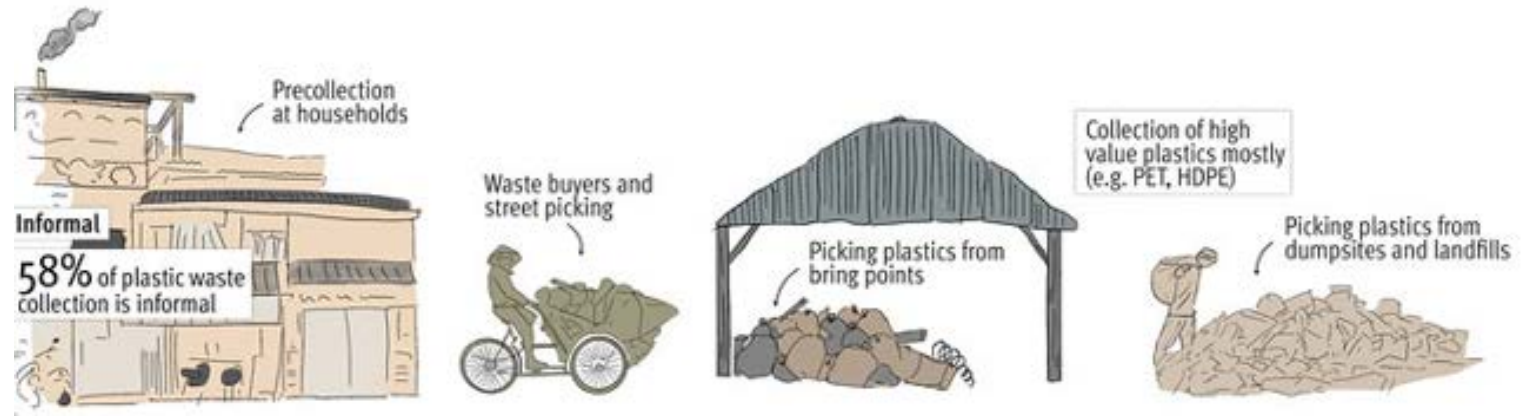


Geographies and size of the IRS

- **Informal workers** involved in the collection and processing of recyclables **in developing geographies** account for approximately **0.6 per cent of the population** (*Linzner and Lange 2013*).
- Informal waste activities in **China, India and Brazil**, accounts for approximately **6 to 12 million people** (*Linzner and Lange 2013*).
- Informal waste recycling is taking place in the **Global North** but is **less studied** - *millions of informal workers participating in waste management systems in Europe* (*Wittmer and Parizeau 2016; Scheinberg 2016*).

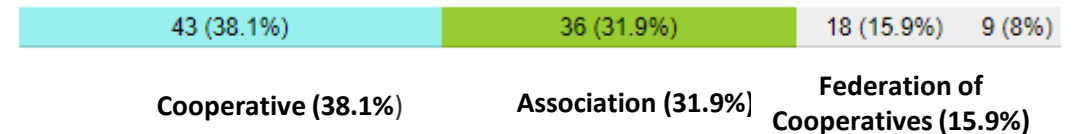


Structure and organization of the IRS



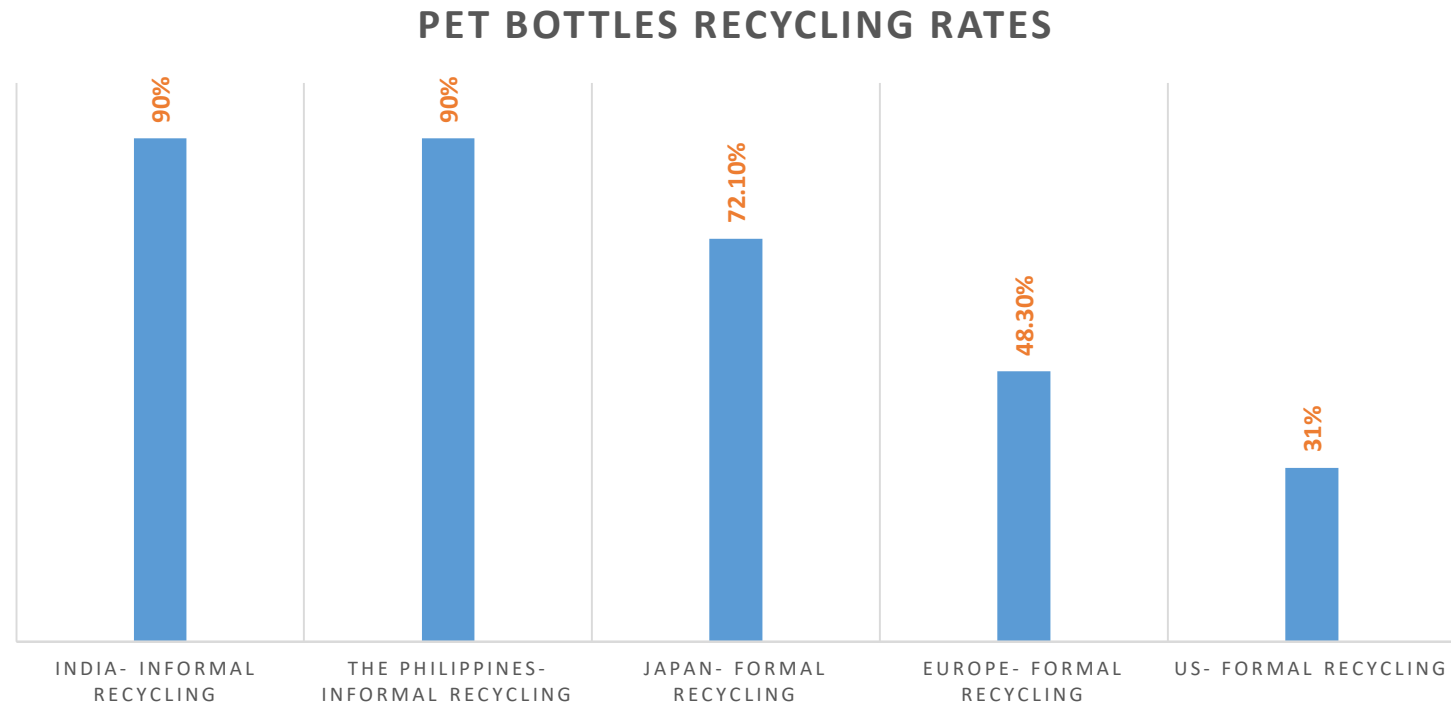
- **Itinerant waste buyers:** They purchase high-value recyclable materials such as PET , HDPE etc. from homes and sells off well sorted clean material to waste traders or recycling facilities.
- **Street waste pickers:** They recover recyclable materials from mixed waste discarded in community bins before it is collected by formal waste collectors.
- **Waste picking from collection vehicles and transfer stations:** Recyclable materials are recovered from vehicles or transfer stations before disposed to landfills or dumpsites.
- **Waste picking from dumpsites/uncontrolled landfill sites:** Waste picking directly on dumpsites or landfills.

Total organizations formed by waste pickers: 113



Recovering end-of-life plastics

- In **2016** alone, the informal waste sector managed to collect and prevent the littering of **27 million tonnes of plastic waste** (*Lau et al.2020*).
- The IRS recovers **high-value plastic** waste, such as polyethylene terephthalate (PET) and high-density polyethylene (HDPE)
- Collection of 1 kg of **plastic bags** requires **61 minutes**, while collecting 1 kg of **PET** requires only **37 minutes** (*Ocean Conservancy 2015*).
- **Recovery rates** of plastics from the informal sector and plastic materials also **vary from country to country**.



Contribution to climate change mitigation



Avoided emissions due to substitution of virgin raw materials through recycling

- Using recycled instead of virgin plastic reduces greenhouse emissions by 67 per cent for PET and 71 per cent for both HDPE and PP. (*Association of Plastic Recyclers, 2018*)
- Increasing the recycling rate of non-fibrous plastic resins from the current 18 per cent to 42 per cent would reduce global greenhouse gas (GHG) emissions by 142.3 million tonnes of CO₂ equivalent per year, (*Kajaste and Oinas 2021*)

Avoided emissions from less energy-intensive transportation and sorting

- Informal recyclers use comparatively less motorized transportation and sorting

Avoided emissions from open burning and mismanaged of waste

Wiego-GHF emission calculator 2.0

Argentina's Amanecer cooperative prevents the emission of 49,533 tonnes of CO₂ equivalent/year by substituting virgin raw materials with recyclables.

India's SWaCH cooperative prevents the emissions of 1,424 tonnes of CO₂ equivalent/year simply by operating manual pushcarts rather than conventional waste collection trucks.

Waste pickers in Dakar's Mbeubeuss dumpsite prevent the emission of 258 tonnes of CO₂ equivalent/year simply by sorting materials manually instead of using energy-intensive sorting technology.

India's SWaCH cooperative prevents the emission of 167,301 tonnes of CO₂ equivalent/year by collecting and preventing the open burning of waste in underserved communities

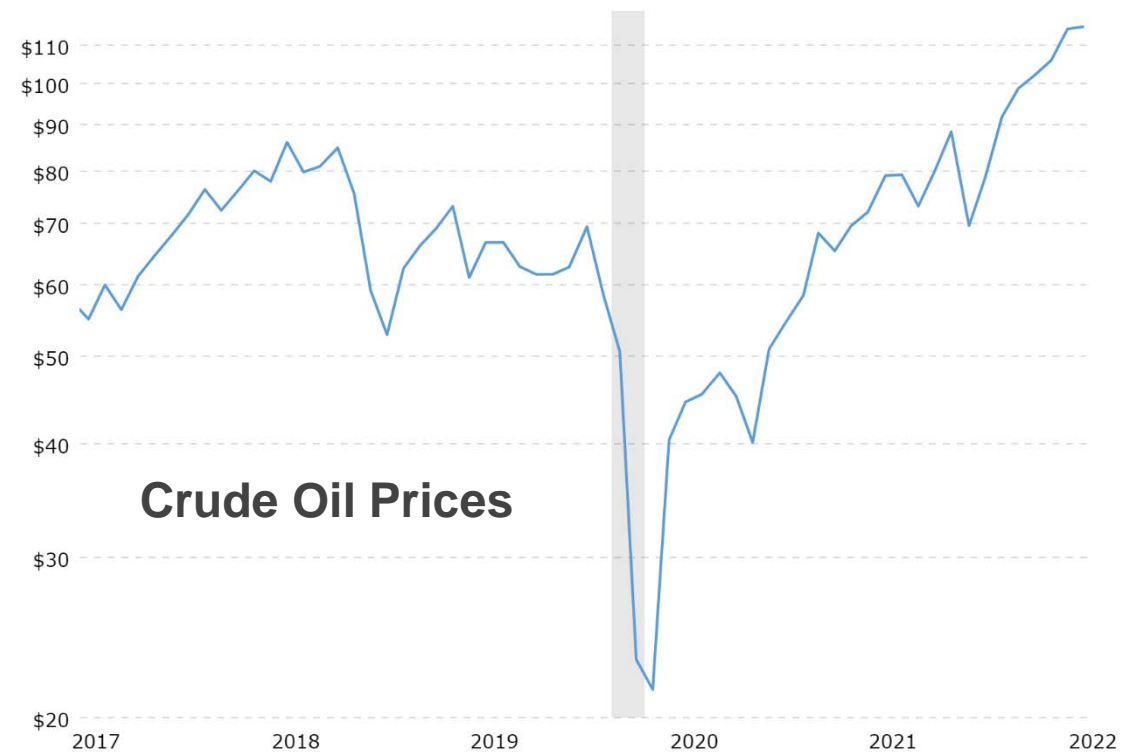
Challenges

- **Systemic Marginalization:** Despite the crucial role informal waste workers play in sustainable recycling, they continue to be subjected to systemic marginalization and have to deal with exploitative social behavior.
- **Poor living and working conditions:** People working in the informal waste sector live near dumpsites, and work under **unhygienic and unhealthy**.
- **Unstable income source:** A majority of formal waste collectors earn marginally higher than **poverty-line**. On average, waste pickers can earn approximately **USD 10 per day** (*Agamanthu and Law 2020*)
- **Lack of Social Security:** Waste pickers are not covered under any **labour legislation**, and they do not benefit from social security and **medical insurance schemes**.
- **Gender related risks:** Women of the informal recycling sector facing harassment, violation and individual attacks and have often less access to valuable materials and finance (*ISWA Women of Waste, 2018*)
- **Child labour:** Around **20 per cent of the 51,000 street** children in Delhi are waste pickers. Child waste pickers are **vulnerable to exploitation**, child abuse and trafficking.



Global trends impacting IRS's livelihood

- Volatile oil prices
- COVID-19 pandemic
- China's National Sword Policy (ban) 2018



Recommendations for policy and practice

- **Invite IRS to the negotiating table**, recognize their contribution and know-how. There can be no effective Plastic Pollution treaty without the voice of all large stakeholders included.
- **Address knowledge gaps** in the informal sector including the scale, collection capacity, network structures, and inclusive recycling national databases to build awareness of the role and contribution of informal workers in curbing plastic pollution by actively engaging policy makers together with them.
- **Run a gender assessment** to identify gender issues, barriers, and gaps that prevent women from full participation in the value chain is crucial to inclusivity. Furthermore, the development of gender-sensitive communication strategies for de-stigmatization of workers and for raising awareness of the role and contribution of men and women services in the plastic chain.
- **Support workers' organizations** for a just transition in the treaty as it enables crucial inputs from workers towards implementation of fair remuneration, improvement of quality controls in the sorting and handling of plastics, improvement of workers working conditions, health, and an ultimately greater recognition and improved livelihoods.

...more

- **Building capacity of key actors** is crucial in technical and governance issues to ensure understanding of each actors' roles and responsibilities in the treaty.
- **Social protection** should be a strong commitment in the Plastic Treaty by recognizing the need for provision of adequate personal protective equipment (PPE), access to health, workers education about Occupational Health and Safety (OHS) and malpractices in solid waste management as essential elements of a just transition.
- **Extended Producer Responsibility** policies should be developed in tandem to improve the IRS's technical capacity, ensure access to materials, acknowledge toxicity and other hazards of the materials handled and improve IRS's equipment.
- **Establish long-term projects and systems** that fully fund the development of the informal sector in their ability to collect, sort, process, and aggregate value in the plastic chain is an extremely important aspect of the treaty.
- **Plan for a Pro-Poor formalization** which should take into consideration: creation of incentives for informal enterprises to formalize, creation of incentives for firms to hire workers with standards contracts and social benefits.

THANK YOU

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