Informal Recycling Sector & Plastic Waste Management

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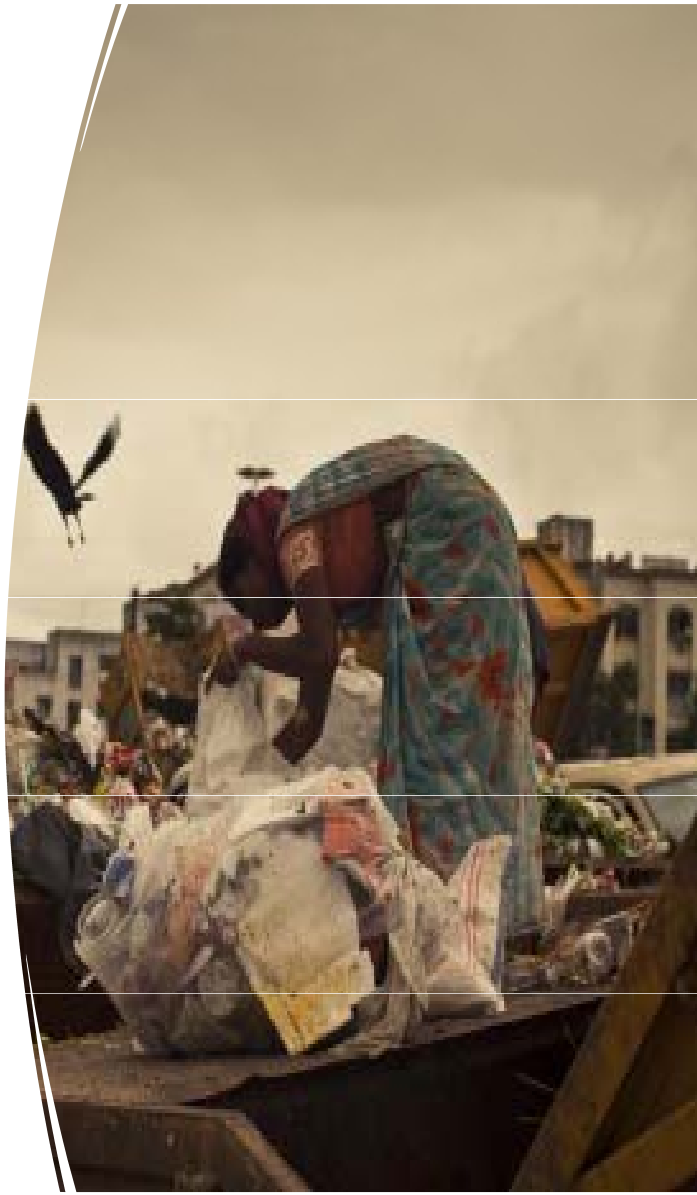
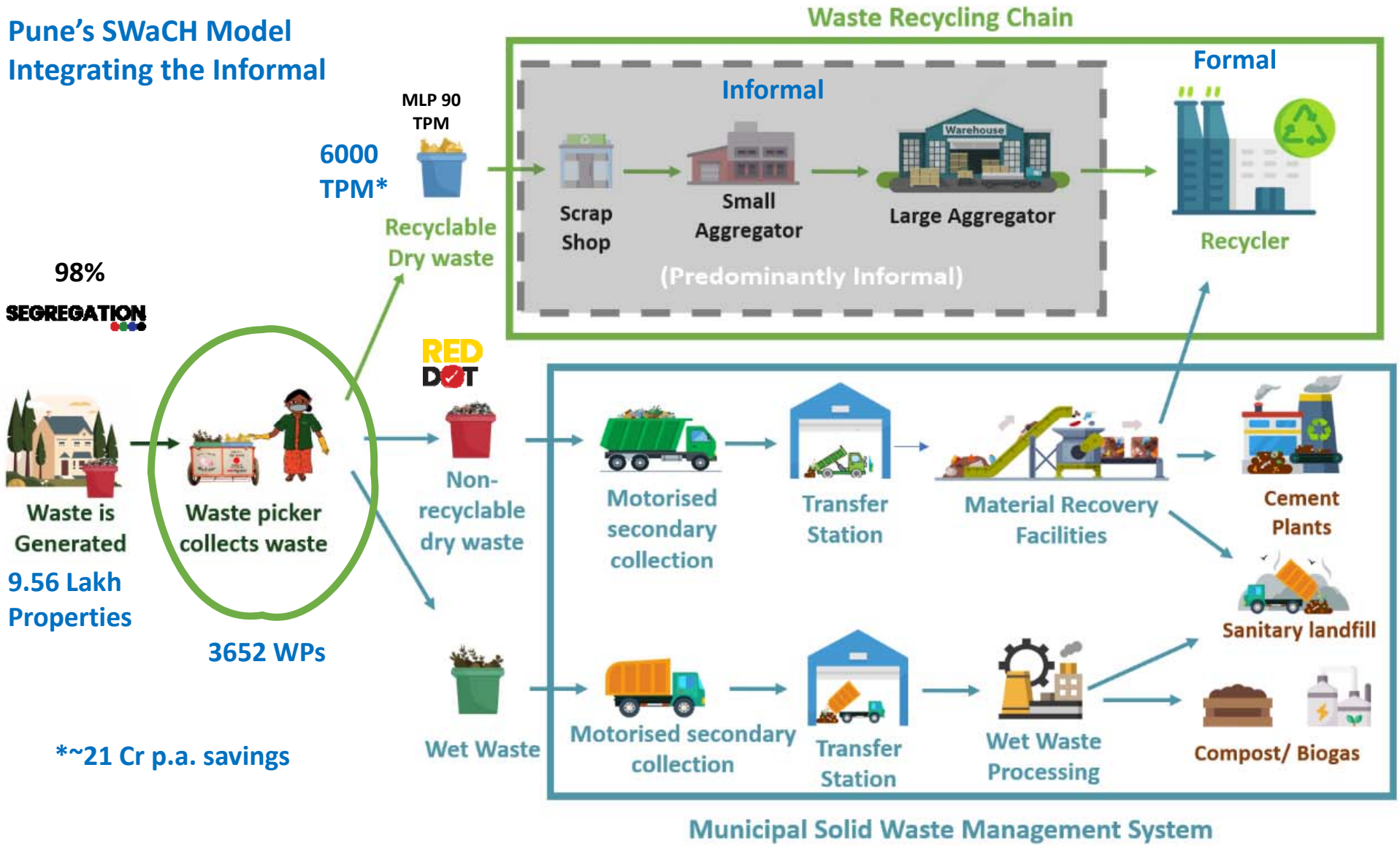
INFORMAL WASTE-PICKERS

- Itinerant, self-employed, informal workers – recovery of recyclable saleable materials from streets, waste bins, containers, garbage dumps and landfills – pick, purchase or barter.
- WIEGO: 22 Lakh; AIW: ~45 - 50 L; Pune: KKPKP (75%?)
- Socio-Economic Status: (Pune)
  - Income: 5,000 to 15,000 per month
  - 75% Women; 91% SC / ST;
  - Children: More organized, less child labour (Pune, 2018: <0.5% WPs brought children to work)
- Precarious: Health, dignity, access, no social welfare / security.
- In conflict with scrap traders, municipal officials, police etc.
- Not recognized, no space, non-compliant (tax, labour, environment)
- Yet, bulk of post-consumer waste recycling through the informal sector.
- Flexible, fast moving, innovative & resilient.
- **Integrating the sector in formal SWM is critical for sustainable plastic waste management – Pune Example**



Typical SWM System

Pune's SWaCH Model Integrating the Informal



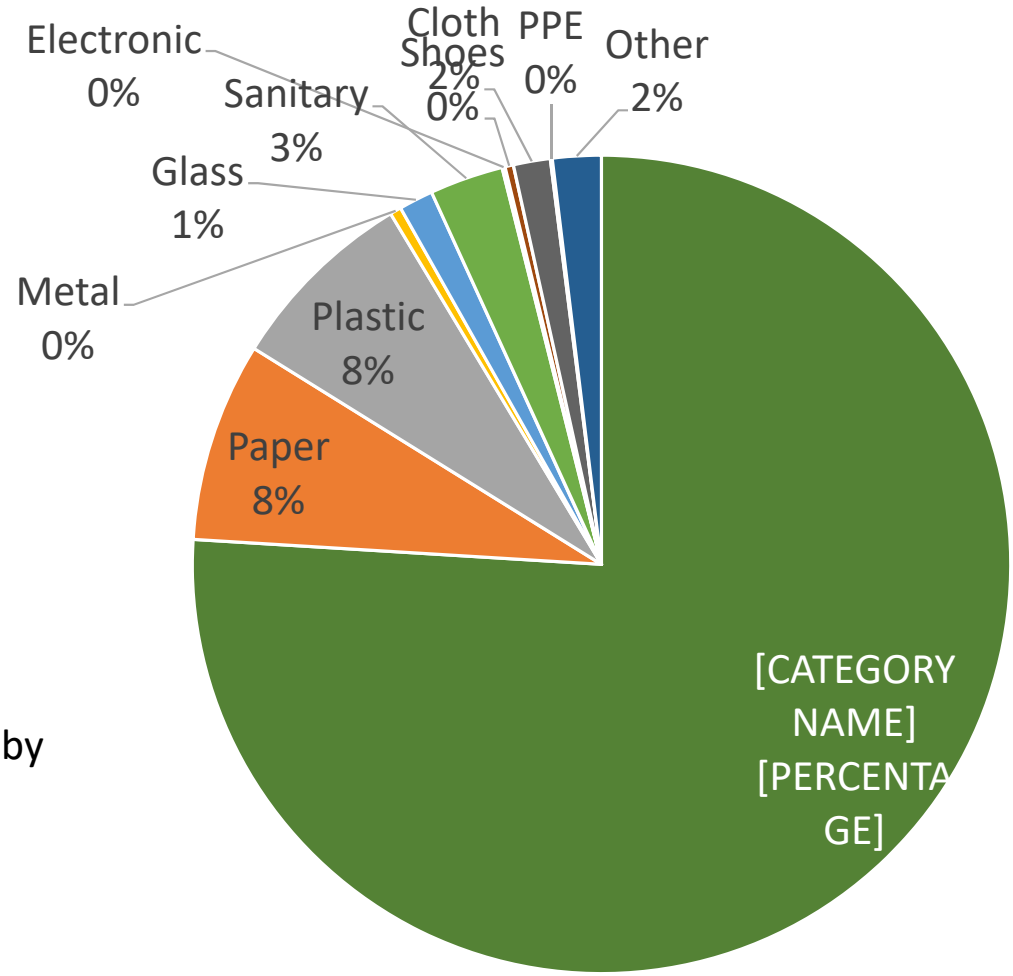
*~21 Cr p.a. savings

Plastic Recycling Rates

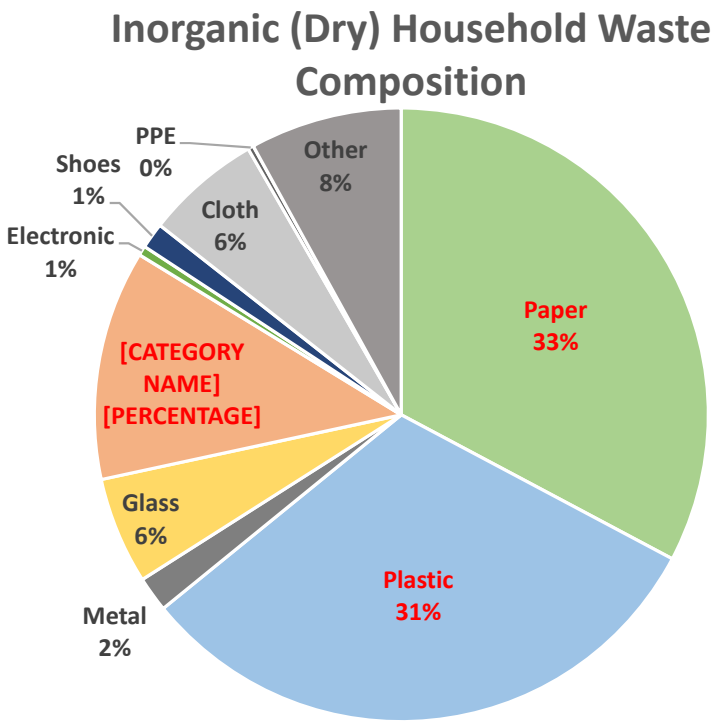
- Global Rate (EMF): 14% - 16% (2016)
- US (Greenpeace): 5% (2022)
- GoI: 60% (Rigid)
- Plastic Life Cycle (CSE)– 12.3%
- Swach Pune WPs – 37%

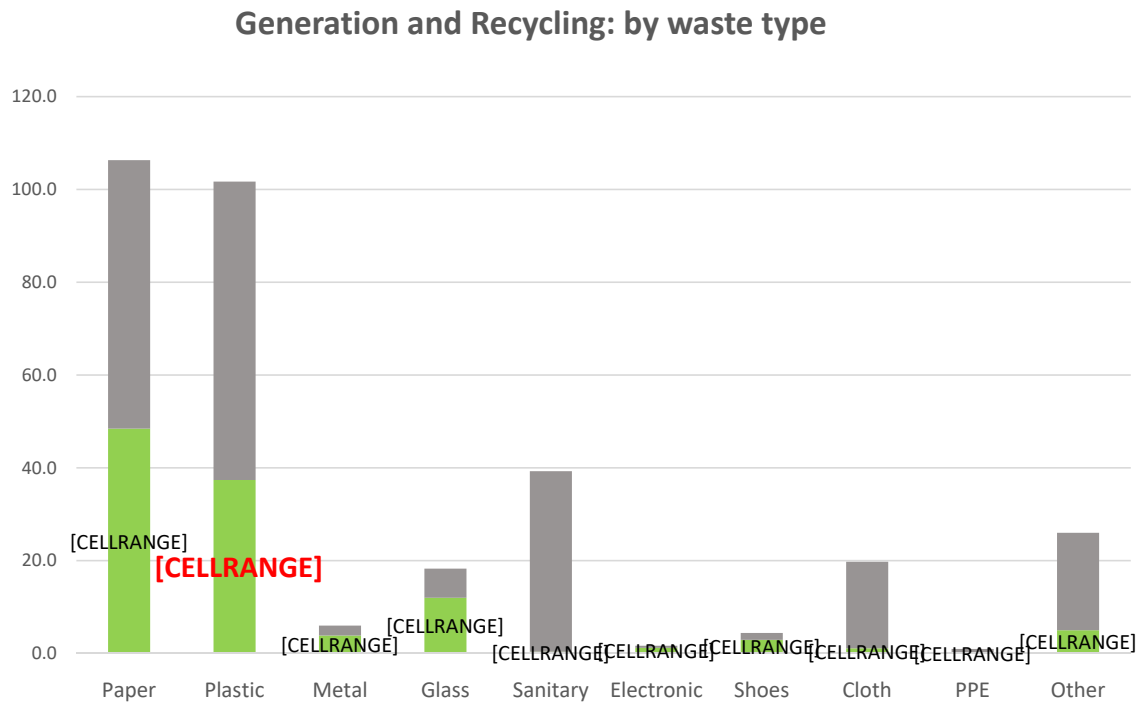
PSF Waste Characterisation Study (Pune, 2022)

- 10,000 Generators – across income groups
- 7 Days, 16 Tons (~2 Grams), 75+ Categories
- Computed - generation, diversion to recycling by waste-pickers
- *Residential Only



Pune Household Recycling Rates

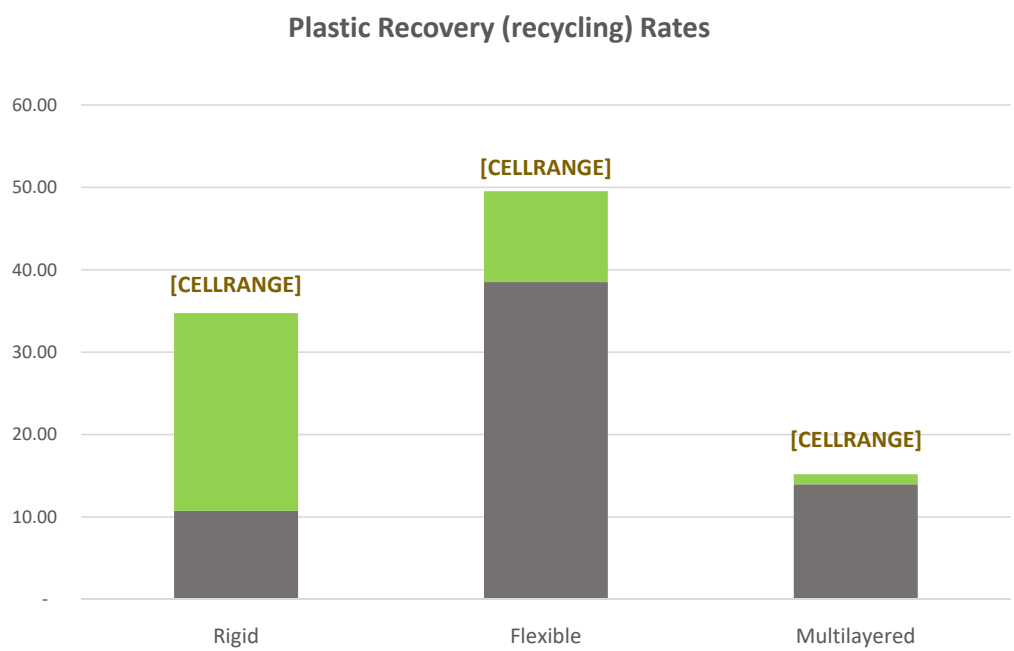




- 35% of Pune city's inorganic household waste is recovered by waste pickers for recycling.
- Paper waste (48 TPD) is the most abundant type of waste reclaimed by waste pickers, followed by Plastic waste (37 TPD) and Glass (12TPD). These three types of waste account for 87% of all waste recovered for recycling.

Plastic Waste Recycling

Plastic Generation and Recovery: By EPR categories			
EPR Category	Generation (TPD)	Current Recovery Rate	EPR-mandated recycling rate
Rigid (Cat. I)	35	69%	50-80%
Flexible (Cat. II)	56	22%	30-60%
Multi-material (Cat. III)	9	8%	30-60%
Compostable (Cat. IV)	0	68%	50-80%
Other	2	10%	NA
Total	102 TPD	37% recycled	



- 34% rigid and 64% flexible (single- and multi-layered).
- Rigid recycling higher than the lowest recycling rate under EPR for 24-25. However, mostly informal.
- Compostable is mixed with flexible polymer
- PET (75%), HDPE (83%), PP (71%), LDPE (28%), HM (20%), MMLP (8%)
- ~50% of waste-picker income from sale is through Plastics

Waste pickers & EPR: SWaCH Plus-ITC

SWaCH pays to buy MLP from waste pickers, transport, aggregate, sort and bale, send to processor, maintain data and documentation

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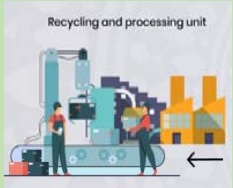

Processor pays SWaCH for MLP

2

Of 2000 MT collected since 2019, 70% sent for Mechanical Recycling

3

ITC reimburses SWaCH the system cost minus payment from processors i.e. the viability gap funding

- **Informality is more often by default position than as a conscious choice.**
- Margins, cheap virgin plastic, EPR – Western centralized formalized system? Or our own model.
- Informal: Poor, not weak. Flexible, innovative & resilient.

- **<u>Way Forward: JUST TRANSITION</u>**
- **Preservation** – Identification, registration, integration of waste-pickers & the scrap trade
- **Social Security** – The true cost of recycling must include the cost of social security for the informal sector. EPR / Co-contribution from ULBs
- **Municipal Spaces** – For sorting, temporary storage, scrap shops, aggregation & local recycling. Currently only provided for unsustainable processes like RDF or co-processing.
- **EPR** – Informal sector sidelined. Needs urgent review. Without support, the informal sector stands to be decimated & livelihoods will disappear.
- **Taxation** – Margins too low for compliance (Katraj) – special exemption?
- **Investment** – in primary recycling technologies, upgrading informal sector infrastructure
- **Ban, Reuse, Refill** – New livelihoods, Inclusive Just Transition – priority in services, organics management, participation in DRS
- **Alternatives** – those with better life cycles & with potential forward linkages for reuse or recycling.

Zero Waste & Informal Sector

- **Are waste-pickers in conflict with the Zero waste approach?**
- Or necessary ally? Practical & Moral requirement
- Preservation of Livelihoods
  - Millions dependent on informal sector - journey to zero waste must mean **just transition** towards reduction, reuse & recycling
  - E.g. Plastic Bans: Supported by waste-pickers?

- So where do waste-pickers fit in this?
  - **Reduction**: Finding newer sources of livelihoods – composting, biogas, services, integration into waste-collection & management, increasing value of other types of waste through EPR / Government Intervention / Recycling Fees etc.
  - **Reuse:** create livelihoods to promote transition – wastepickers as part of return programs, washing & reuse programs, reuse logistics (V Collect), refill programs – train and integrate (Bangalore / Pune)
  - **Recycling:** integration, leveraging existing systems for EPR, R&D support, improving working conditions & compliance, improved rates for recycling, Regulatory mechanisms for upgrading the sector (registrations, subsidies, tax breaks, land reservation

THANK YOU!