

GAUTENG WASTE INDABA 2026

THE WASTE LANDSCAPE IN GP

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GAUTENG
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

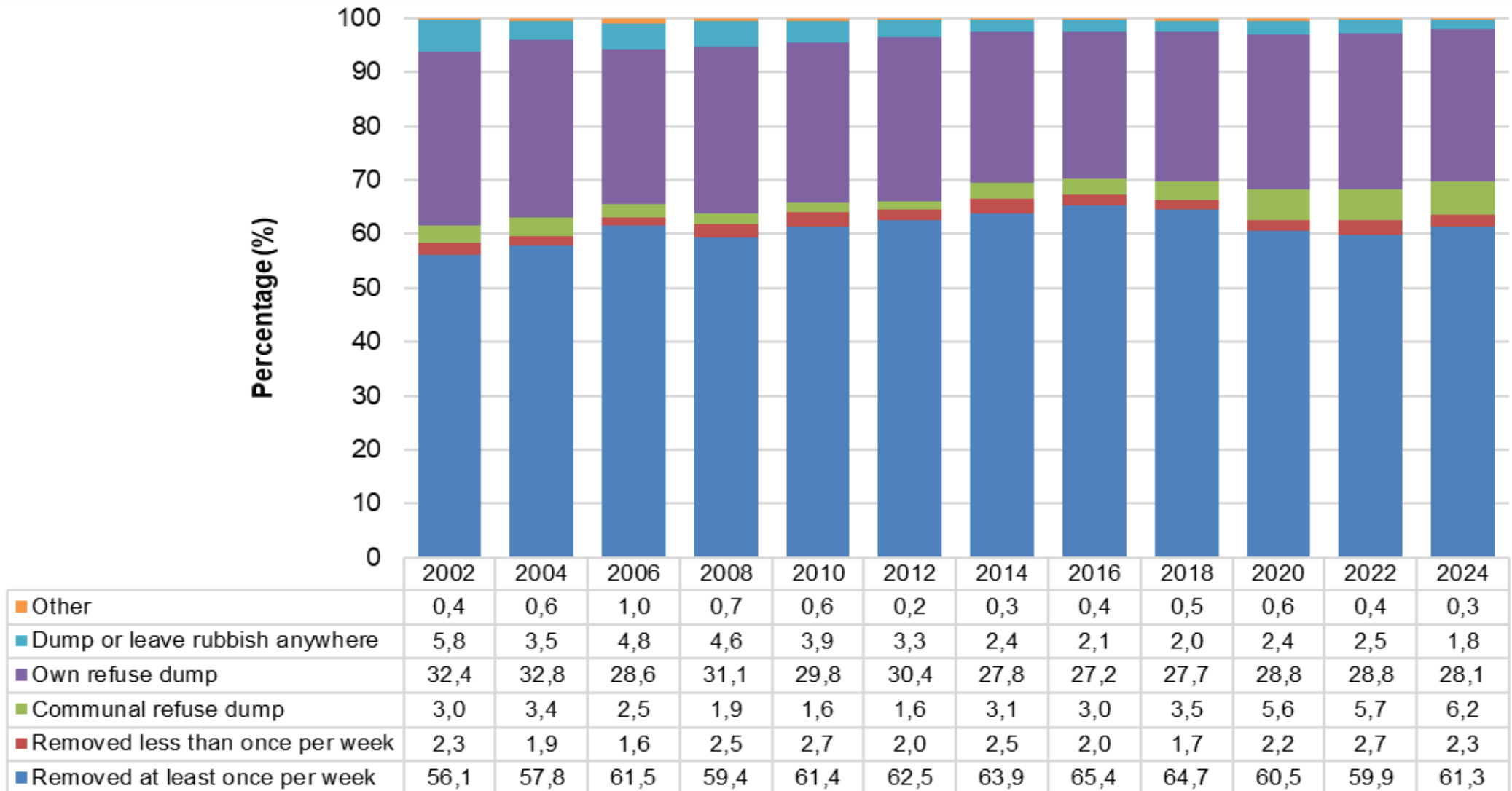
GGT2030
GROWING GAUTENG TOGETHER

Layout of the presentation

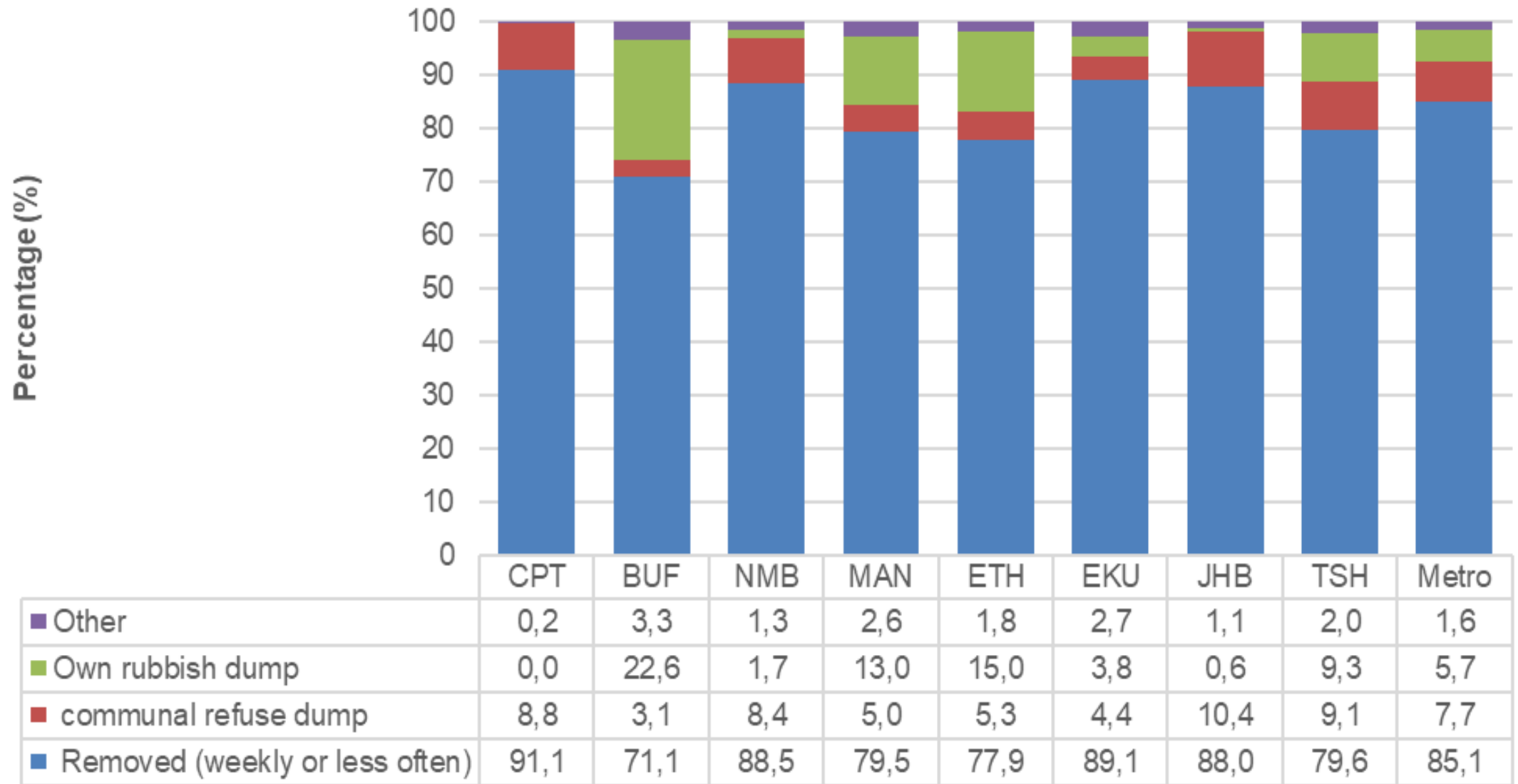
- Wider view: Key waste management findings from General Household Survey, 2024
- The system is broken: Gauteng status quo analysis
- Fix the system: Proposed changes to the GP waste system
- Pathway to circular economy
- The future we want
- In the end: Conclusion



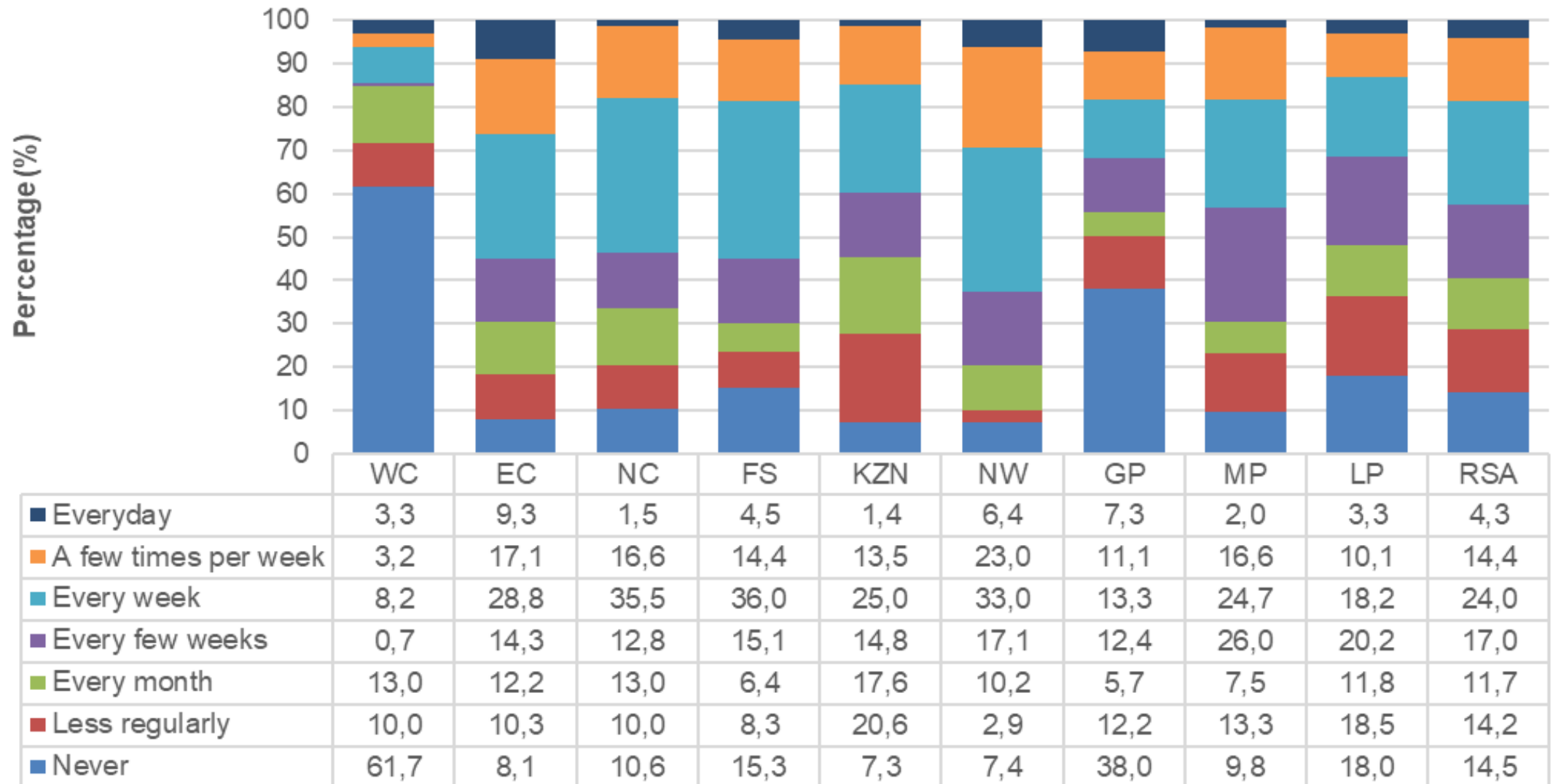
Percentage distribution of household refuse removal



% distribution of household waste removal areas by metros, 2024

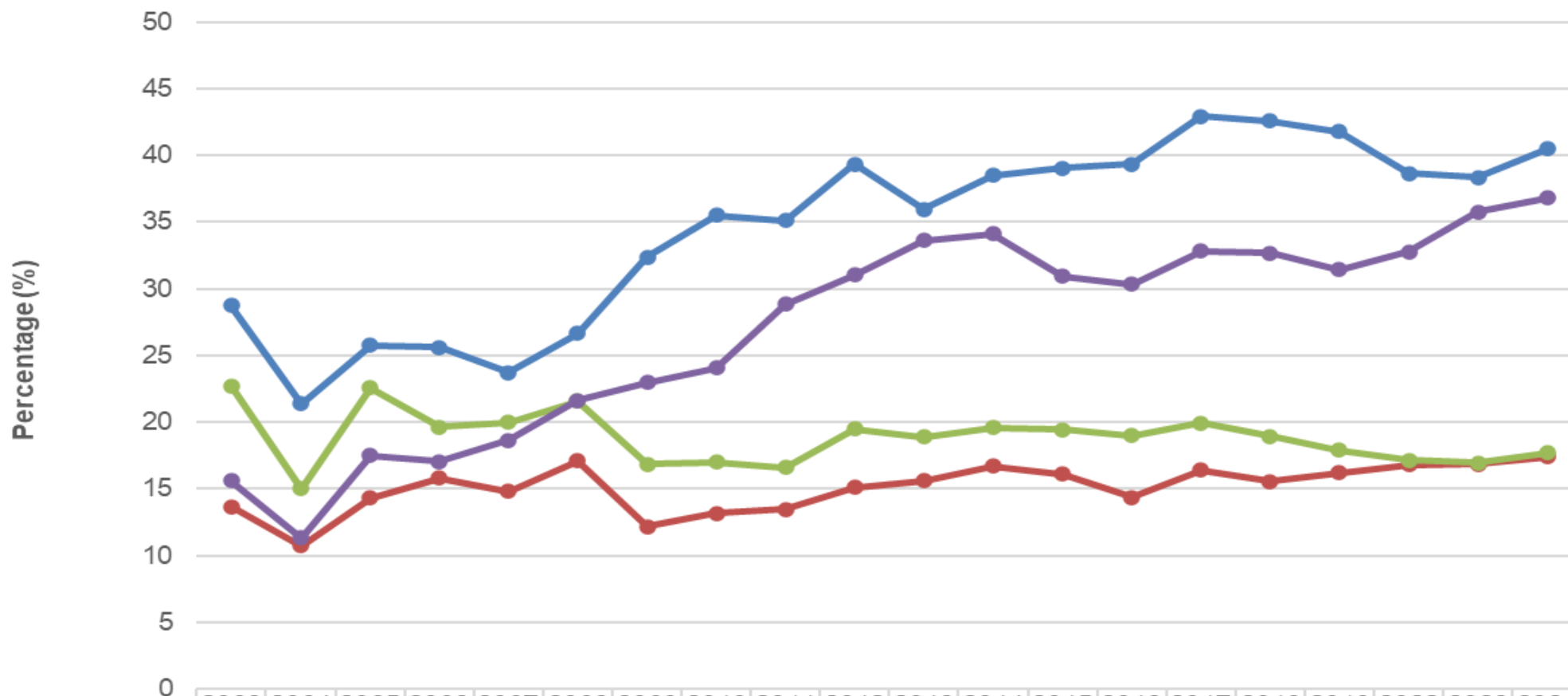


Percentage distribution of households that burn solid waste - metros





Percentage of households that experience enviro problems, 2003/24



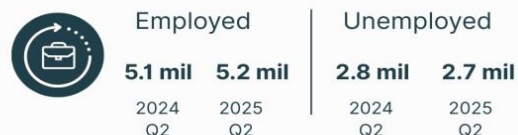
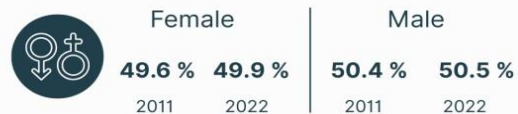
● Waste & Litter	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2022	2023	2024
● Water pollution	13,7	10,8	14,3	15,8	14,8	17,1	12,2	13,2	13,5	15,1	15,6	16,7	16,1	14,4	16,4	15,5	16,2	16,8	16,8	17,4
● Air pollution	22,7	15,0	22,6	19,7	20,0	21,6	16,8	17,0	16,6	19,5	18,9	19,6	19,5	19,0	19,9	18,9	17,9	17,2	16,9	17,7
● Land degradation	15,6	11,3	17,5	17,1	18,6	21,6	23,0	24,1	28,8	31,0	33,6	34,1	30,9	30,3	32,8	32,7	31,4	32,8	35,8	36,8



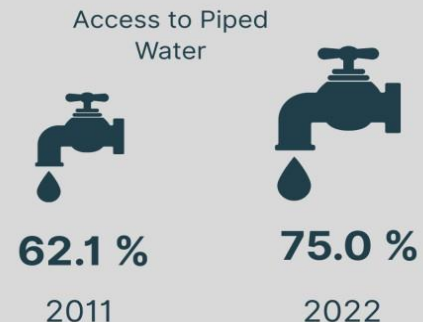
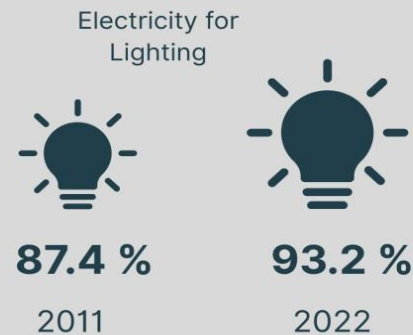
Status of basic services in GP

- Stats SA indicated a decline in weekly waste services from 2011 (88.3%) against 2021 census (85.0%)

Demographics



Access to Basic Services



Gauteng Province



Key issues: Waste Management in the Province

- Following extensive stakeholder consultation, the following were raised as key issues on waste in the province :

Waste System is Approaching Crisis Point

- Landfill airspace is rapidly declining, with insufficient alternatives being developed
- Waste collection services are unreliable, especially in townships and informal areas
- Illegal dumping is widespread and increasingly organised

Recycling and Circular Economy Are Underperforming

- Recycling rates remain low despite existing recycling capacity
- Separation-at-source programmes have not been fully implemented
- Valuable recyclable materials are still being landfilled

Planning and Decision-Making are Severely Compromised

- No reliable, integrated provincial waste data system
- Poor data is weakening planning, accountability, and enforcement

Institutional & Governance Failures Are Blocking Progress

- Political interference and procurement systems are preventing innovation
- Weak provincial coordination and municipal oversight

Waste Management is Not Financially or Institutionally Sustainable

- Waste services are underfunded and not treated as a priority
- Waste funds are often not ring-fenced or reinvested into waste services
- Ageing infrastructure & fleet failures are limiting service delivery

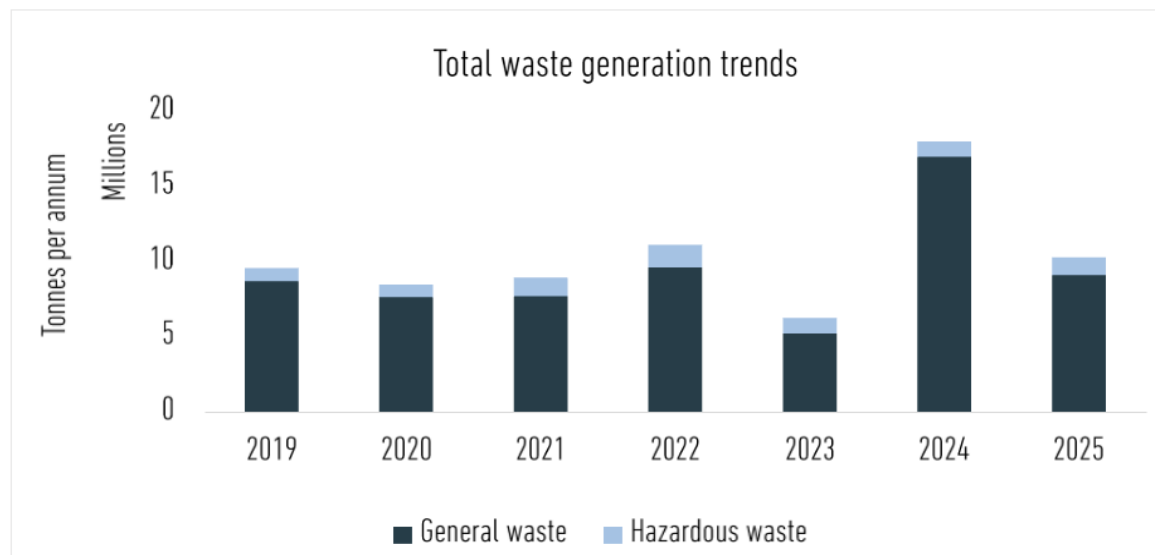
Informal Sector is Critical but Unsupported

- Waste reclaimers recover most recyclables but lack support and formal recognition
- Informal recyclers face barriers accessing land, funding, and equipment

Waste Generation

- The waste generation is increasing, 2024 data and current GWIS data at the end of 2025 rates show continuous increase in waste generation

Total waste generated	2019	2020	2021	2022	2023	2024	2025
GWIS reported	9 585 672	8 482 731	8 967 774	11 144 626	6 257 741	18 051 398	10 300 173



- Current domestic waste generation rates & quantities saw an **unstable** trend with significant fluctuations in the period **2019 – 2025**.
- General waste dominates at approx. **83.3%** of the total, while hazardous waste accounts for **16.7%**.
- However, hazardous waste has increased significantly over the last decade due to increased adoption of technology.
- 2024** experienced the highest waste generation at 18.05 million, while **2023** saw lower volumes at 6.26 million.
- Exact reasons unknown for the peak and dip. Research suggests irregularities in waste reporting.
- Rates informed by **GWIS** and therefore may not be a true reflection due non-reporting, under-reporting and inaccuracies as faced by the system



Gauteng generates significant waste volumes, requiring improved waste minimisation, diversion, and planning.

Waste Composition

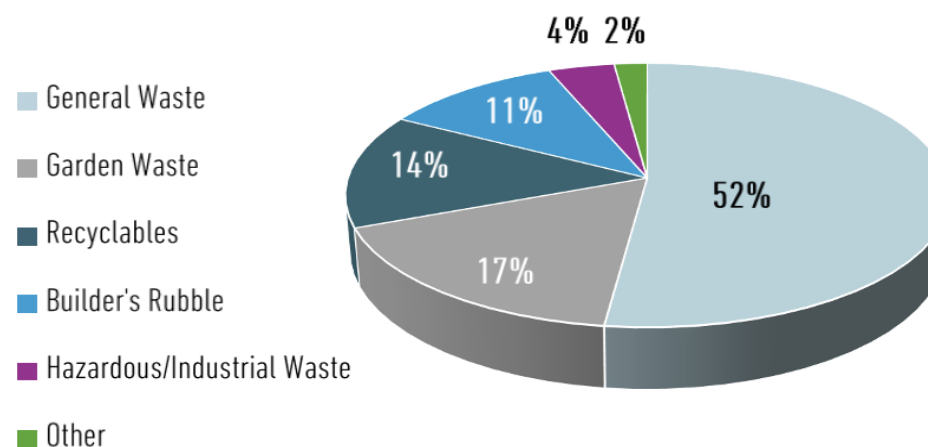
- General waste dominates (52%); Organic waste component (17%) and builders rubble (14%) waste streams still constitute the highest waste streams in the general waste
- This presents a major opportunity for separation of waste at source and waste diversion especially of organics and recyclables

- General waste dominates the waste stream (52%)
- Organic (garden) waste is the second largest component (17%)
- Recyclables represent significant diversion potential (14%) Builder's rubble accounts for 11% but is likely under-reported due to illegal dumping
- Hazardous waste represents 4% but may be underestimated due to limited tracking
- Reliable waste composition data remains limited across municipalities and these data gaps hinder effective planning for recycling and landfill diversion

Strategic Insights:

- Improved S@S Uptake can increase accuracy in recyclables, while organic waste represents a major opportunity for diversion
- Illegal dumping distorts accurate waste composition data
- Lack of updated waste characterisation studies is a major planning constraint

Average waste composition by major waste stream across Gauteng's municipalities (2021 - 2025)



Waste composition shows high potential for recycling and organics diversion, critical for achieving Zero Waste to Landfill. Increased investment in waste characterization studies needed to ensure reliable and true reflection of waste composition data for improved planning and informed decision making

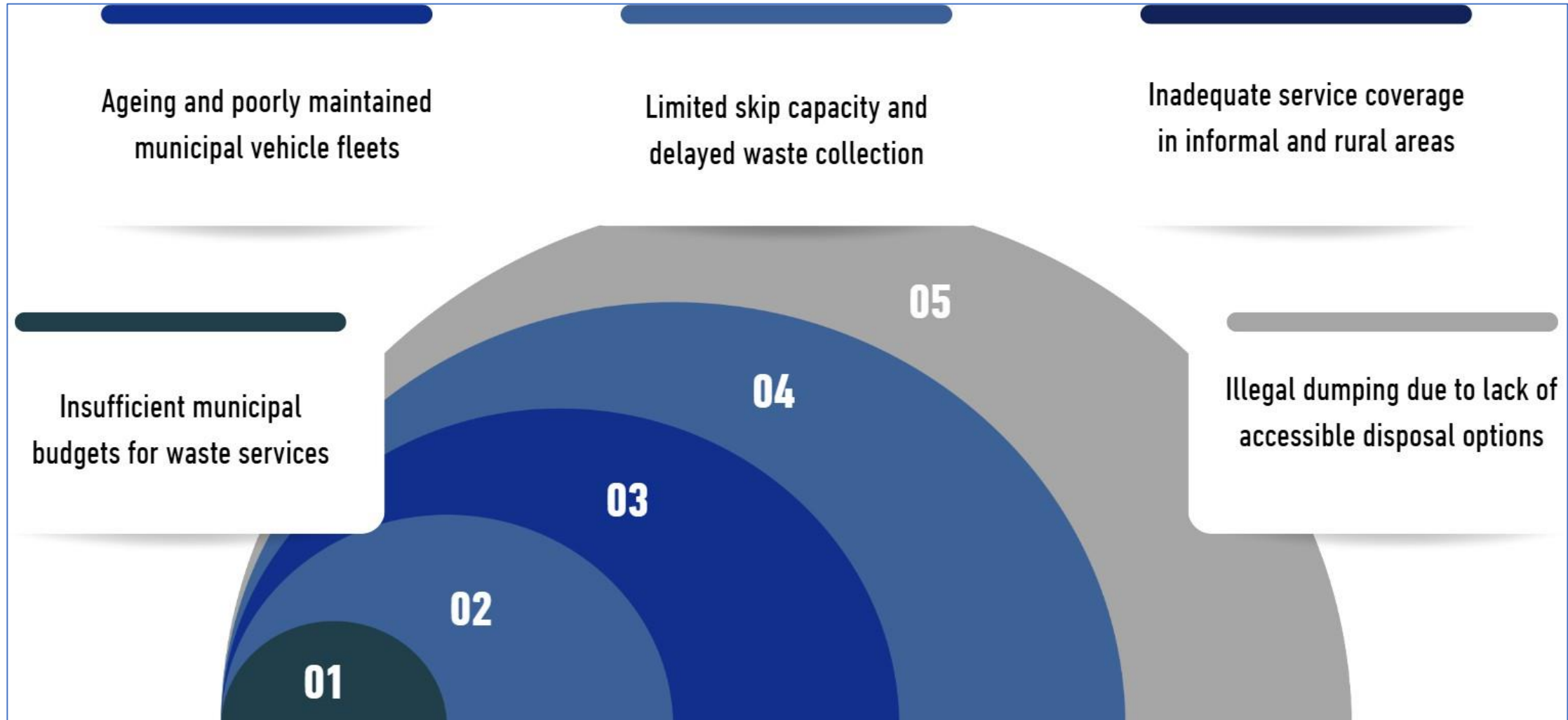
Waste Collection

- Current collection rates and backlog
- High backlog rates, especially in informal settlements- Merafong and Emfuleni currently do not provide a service to informal areas

Municipality	Household type	Current services	Households served (#)	Households targeted (#)	Households not serviced (#)	Household not serviced (%)
CoT (2018)	Formal & Informal	Weekly kerbside & communal skips	1.1 million	Data unavailable	23 568	3.3%
CoE (2022)	Formal & Informal	Weekly kerbside collection & communal skips/containers	1.45 million	Data unavailable	42 786	3%
CoJ (Q1, 2024)	Formal	Weekly collection	1.63 million	Data unavailable	285 000	15%
Rand West City (2019/20)	Formal	Weekly kerbside collection	39 919	Data unavailable	3000	4.8%
	Informal	Communal skip	8 275	Data unavailable	Data unavailable	Data unavailable
Merafong	Informal	Not fully serviced	Data unavailable	18 000	67 058	54%
Mogale City	Formal and Informal	Weekly kerbside collection	89 759	Data unavailable	Data unavailable	Data unavailable
Emfuleni	Formal and Informal	Weekly kerbside collection through	Data unavailable	Data unavailable	Data unavailable	Data unavailable
Lesedi (2024)	Formal	Weekly kerbside collection	46 411	50 120	6 601	16.8%
Midvaal (2016)	Formal and Informal	Weekly kerbside & communal skips	44 549	Data unavailable	6 503	17.1%

Key issues on waste collection

- The following are the main key issues identified:



State of illegal dumping hotspots

- Closing landfills, lack of infrastructure exacerbating the rate of illegal hotspots and criminality in terms of establishment of illegal dumping sites

Illegal dumping has become a widespread issue in the province as it occurs across open spaces, river corridors, road reserves, vacant land, and informal settlement edges.

Main Drivers of Illegal dumping



Lack of Infrastructure and Inconsistent waste service delivery, especially in informal areas



Weak enforcement and low penalties make dumping a low-risk activity



Socio-economic challenges limiting ability to pay for services.



Informal recycling activities leading to residual waste dumping



Lack of C&D waste disposal facilities in some municipalities



Limited public awareness of environmental & health impacts

Governmental Interventions

- Cleanup campaigns and community engagements
- Strengthened by-law enforcement to curb illegal dumping.
- Infrastructure provision and hotspot management: Municipalities have invested in additional skip containers and community drop-off sites to provide alternatives to illegal dumping.
- The province supports buy back centres with equipment and infrastructure, aiming to reduce secondary dumping by strengthening collection points for recyclables. Integration of informal waste pickers into municipal waste management systems is also being advanced

Persistent Challenges & Required interventions

- Despite efforts to reduce illegal dumping, the scale of illegal dumping continues to outpace interventions.
- Sustained impact will require a combination of expanded infrastructure, effective enforcement, and targeted education and awareness, with stronger formalisation of informal sector.

Street Cleaning and Cleansing

- Regular street cleaning is almost none existent in most parts of municipalities
- Province and National interventions now play a cleaning role of municipalities in this regard; a sustainable cleaning model is necessary

The status of area cleaning and street sweeping in Gauteng province is currently supported by several active provincial and municipal initiatives aimed at urban cleanliness and waste management



On-going Provincial & Municipal Cleaning Initiatives

- Active campaigns support area cleaning and street sweeping across Gauteng.
- **Key programme:** Clean Cities and Towns Campaign (launched June 2025) focusing on community clean-ups, urban waste reduction, and promoting civic responsibility.
- Emphasis on voluntary participation rather than permanent municipal employment.
- Some municipalities (e.g., Johannesburg) contract local community members, especially in informal areas, for daily cleaning, waste collection, and illegal dumping clearance.
- The **Cleaning and Greening EPWP (2023)** created ±6,000 temporary jobs for litter removal and environmental maintenance in townships and informal settlements.

Street Sweeping Operations



- Gauteng uses mechanised sweeping trucks on main roads and urban centres to maintain hygiene and reduce pollution.
- Operations are integrated with waste disposal systems for proper processing.
- Efficiency occasionally impacted by contractor performance issues and community disruptions.

Governance

- Financial limitations, coordination gaps among service providers, and inadequate monitoring & evaluation continue to reduce overall service reliability.

Education and Awareness

- There are no effective education and awareness programmes both in national, provincial and municipal level

Environmental education and awareness are essential components of Gauteng's waste management strategy, aimed at empowering communities, schools and businesses to understand the environmental and health impacts of poor waste practices and to promote responsible waste management behaviour.

Eco-Guides and Youth Environmental Education

- The CoJ runs the "Eco-Guides" training for community-based environmental education facilitators, which was introduced in 2011.
- These eco-guides are typically members from NGOs and youth groups and are trained in topics such as waste separation, biodiversity, climate change, water and natural resource conservation and green living.
- Upon completion of training, the eco-guides serve as ambassadors in schools, communities, homes, shopping centres etc., doing door-to-door outreach and school activations.

Training of Waste Enterprise and Cooperatives

- The province supports training and skills development of cooperatives and buy-back centres in specific areas including, financial management, project management, health and safety and fire safety and first aid.
- These trainings are ongoing and aim to serve the broader community in improving the rollout of waste management services

Bontle ke Botho and the Green Army Education & Awareness Drives

- Public education campaigns under the BkB programme improved awareness on separation at source, promoting recycling and discouraging waste incineration. The deployment of the Green Army youth drives has led to the identification, mapping and clearance of thousands of illegal dumpsites.
- The programme supports greening and biodiversity conservation, which saw approximately 132 914 trees and shrubs planted across townships and informal settlements in the 2024/25 financial year.

School and Community Composting & Greening

- CoE partnered with Mpact Plastic Containers in 2020 to donate 10 composters to Phelang LSEN School in Springs to enable food and garden waste composting on-site.
- These school-based initiatives focus on composting of organic waste, greening projects such as tree planting to build environmental awareness and provide tangible environmental benefits to students and surrounding communities.

Waste Facilities

- There is a backlog in terms of waste infrastructure and facilities in the Province

- There are various waste management facilities in the province, dealing with different waste categories.
- The table below focuses on waste facility distribution across province based on type, including landfill sites, transfer stations, garden refuse facilities, recycling & buy-back centres, drop-off facilities and material recovery facilities. The data indicates that the province has a relatively considerable amount of waste management facilities totalling at **166** based on secondary research.

Waste Facility type	CoE	CoJ	CoT	Emfuleni	Midvaal	Lesedi	Mogale City	Rand West City	Merafong City	Total
Landfill sites	5	4	4	1	2	1	1	2	1	21
Transfer stations	4	0	2	2	*	1	1	3	1	14
Garden refuse facilities	31	42	9	2	3	0	0	0	N/A	87
Recycling & buy-back centres	7	6	4	1	1	2	20	1	N/A	42
Drop-off facilities	*	0	0	0	*	0	2	0	N/A	2
Material recovery facilities	0	0	0	0	0	0	0	0	N/A	0
Total	47	52	19	6	6	4	24	6	2	166

* = Total combined with Garden refuse facilities

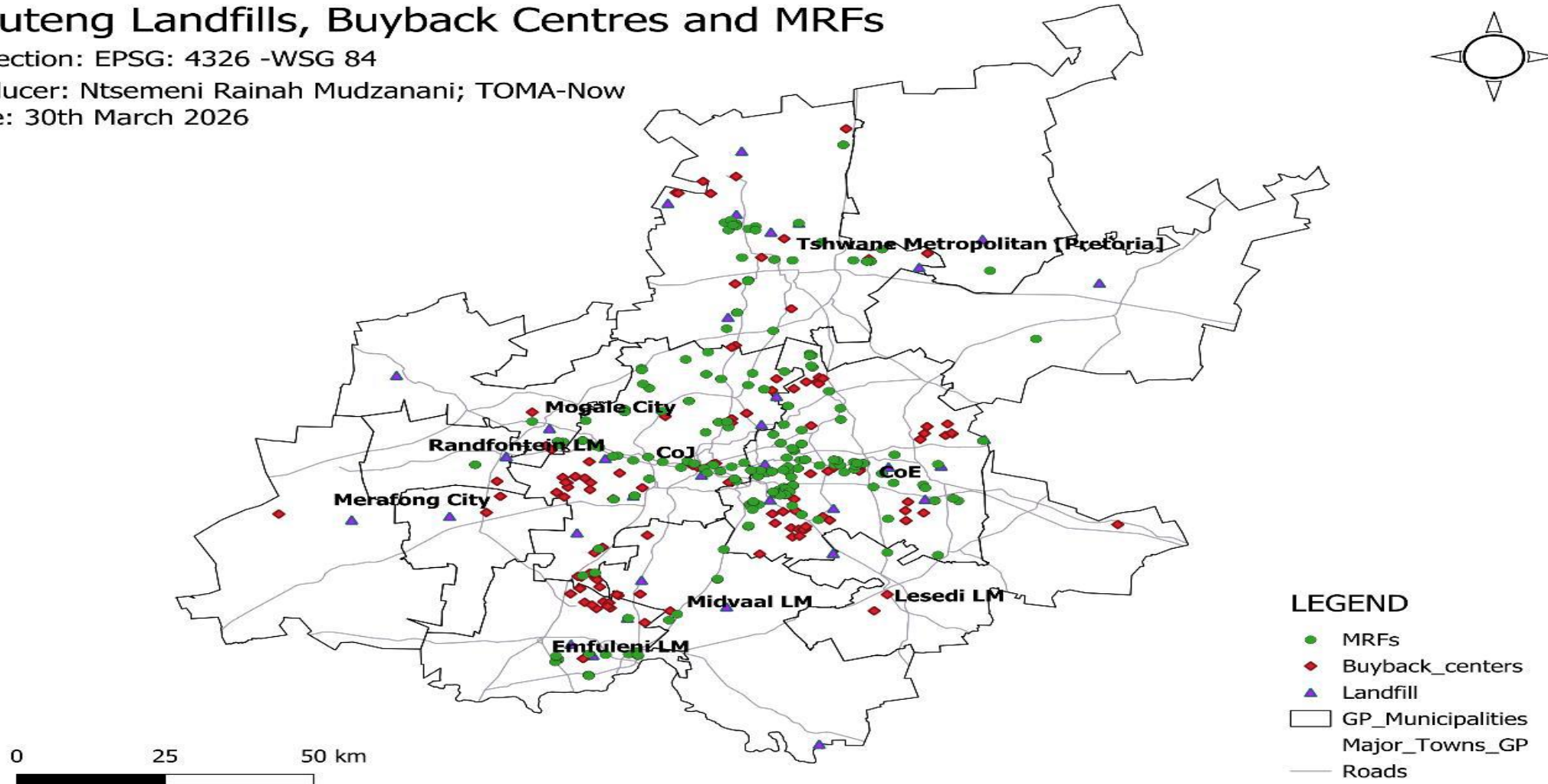
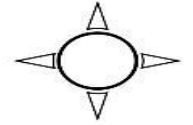
Geographic spread of waste facilities

Gauteng Landfills, Buyback Centres and MRFs

Projection: EPSG: 4326 -WSG 84

Producer: Ntsemeni Rainah Mudzanani; TOMA-Now

Date: 30th March 2026



Status of landfill sites

- Although most landfill in the Province are licensed, they continue to be non-compliant with the requirements;
 - Most landfills are running out of landfill airspace and there has been delayed planning by municipalities to ensure establishment of transfer stations, waste recovery infrastructure etc.
- Waste management facilities are required to comply with relevant legislation such as the Minimum Requirements for Landfill Disposal. Several struggle with full compliance.
 - Common problems across failing sites include broken weighbridges, a lack of access control and security, and dumping of un-authorised and harmful waste due to a lack of load inspections.
 - A general lack of compaction and covering of waste is also common at these sites, as is the occurrence of fires, absent staff and the presence of informal recyclers operating in unsafe conditions without protective equipment or municipal registration.
 - In Gauteng, the GDEnv has committed itself to undertaking regular compliance audits of general waste landfill sites for the following reasons:
 - To evaluate the environmental performance of the landfill sites to make recommendations for improved operations.
 - To monitor the impacts of the landfill site activities on the environment with a view to request corrective actions where necessary.
 - To gather information for use in provincial waste management planning.
 - Following these audits, the department produces audit reports, outlining the legal status of the site, findings and recommendations on how the site can improve their compliance. The table below provides a summary of compliance outcomes of municipal owned landfills as informed by audits reports from the GDEnv

Total waste generated	Number of Landfills
Total landfills permitted to operate	23
Total landfills not permitted to operate	1
Total landfills who are fully compliant	1
Total landfills who are partially compliant	23

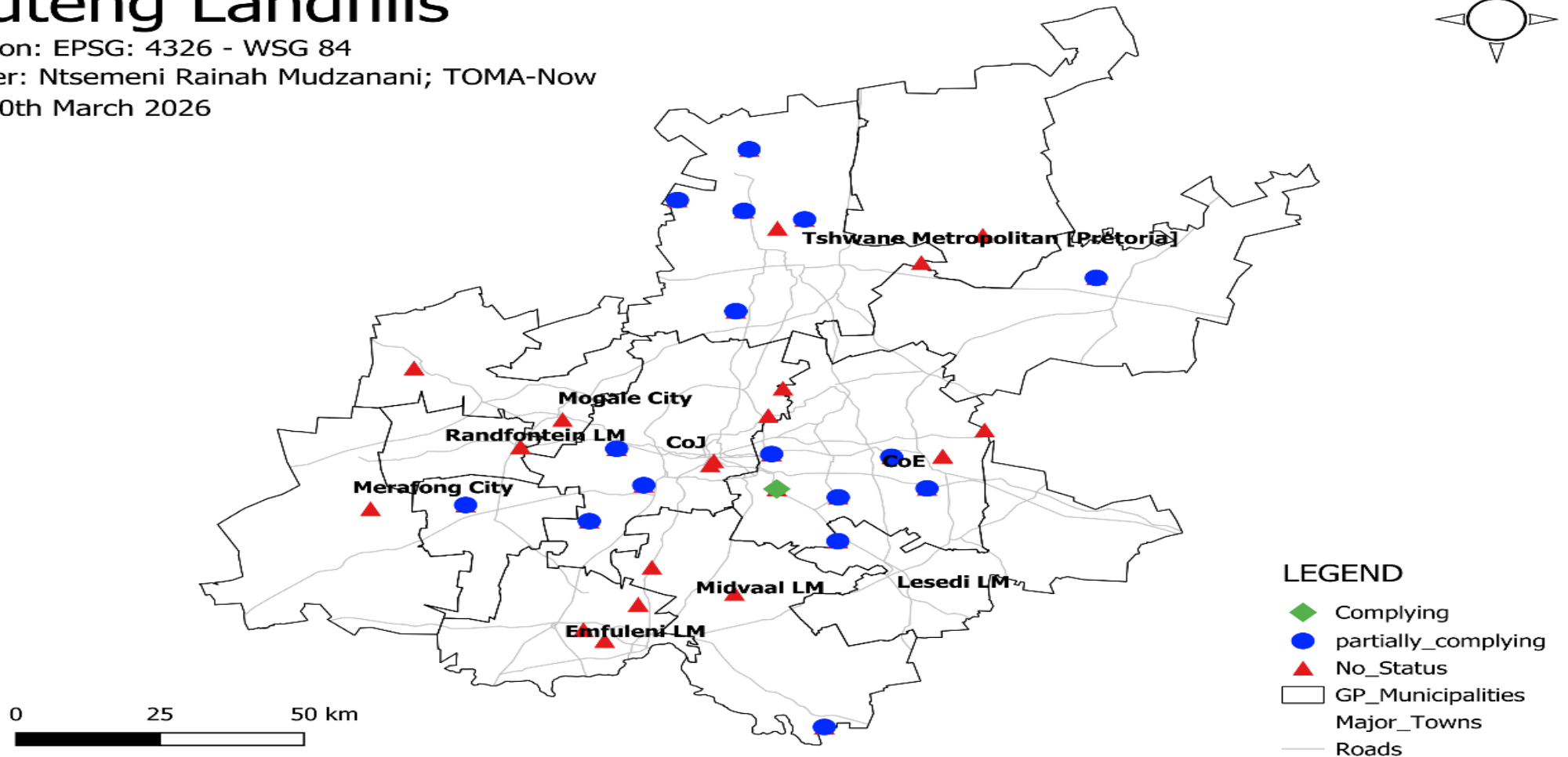
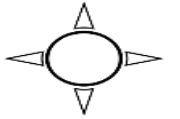
Landfills: spatial distribution and compliance

Gauteng Landfills

Projection: EPSG: 4326 - WSG 84

Producer: Ntsemeni Rainah Mudzanani; TOMA-Now

Date: 30th March 2026



Waste Minimisation

- There is a critical need to drastically increase waste minimization in the Province. The current intervention are not having an effect in term of reducing both generation as well as diversion of waste from landfills

- The Gauteng province generates the highest proportion of South Africa's waste, accounting for approximately 45 percent of the national total.
- The Gauteng Environmental Outlook Report (2025) identifies the pressure on landfill airspace as one of the most critical environmental risks. Of the total permitted municipal sites, 12 are projected to reach capacity within the next 10 years.

Waste stream	Estimated diversion (%)	Main interventions	Key challenges
General waste	10-15	Most diversion comes from packaging (paper, plastics, metals, glass) recovered through municipal separation at source programmes and informal sector recycling.	• Limited participation • Weak end-markets
Organic waste	<5	Primarily through small-scale composting projects and garden waste drop-off sites.	• Lack of infrastructure • Low market uptake
Hazardous waste	8-10	Licensed facilities and industrial initiatives. Largely due to private sector treatment facilities serving industry and healthcare sectors.	• Inconsistent reporting • Capacity gaps

Stakeholder insights indicate that waste minimisation and recycling initiatives exist but are fragmented and inconsistently implemented as per the below:

- Programmes are often pilot-based or donor-driven
- Limited integration with collection systems
- Heavy reliance on informal reclaimers without structured support



Gauteng's high waste generation and low diversion rates are accelerating landfill depletion, requiring urgent scale-up of recycling and waste minimisation.

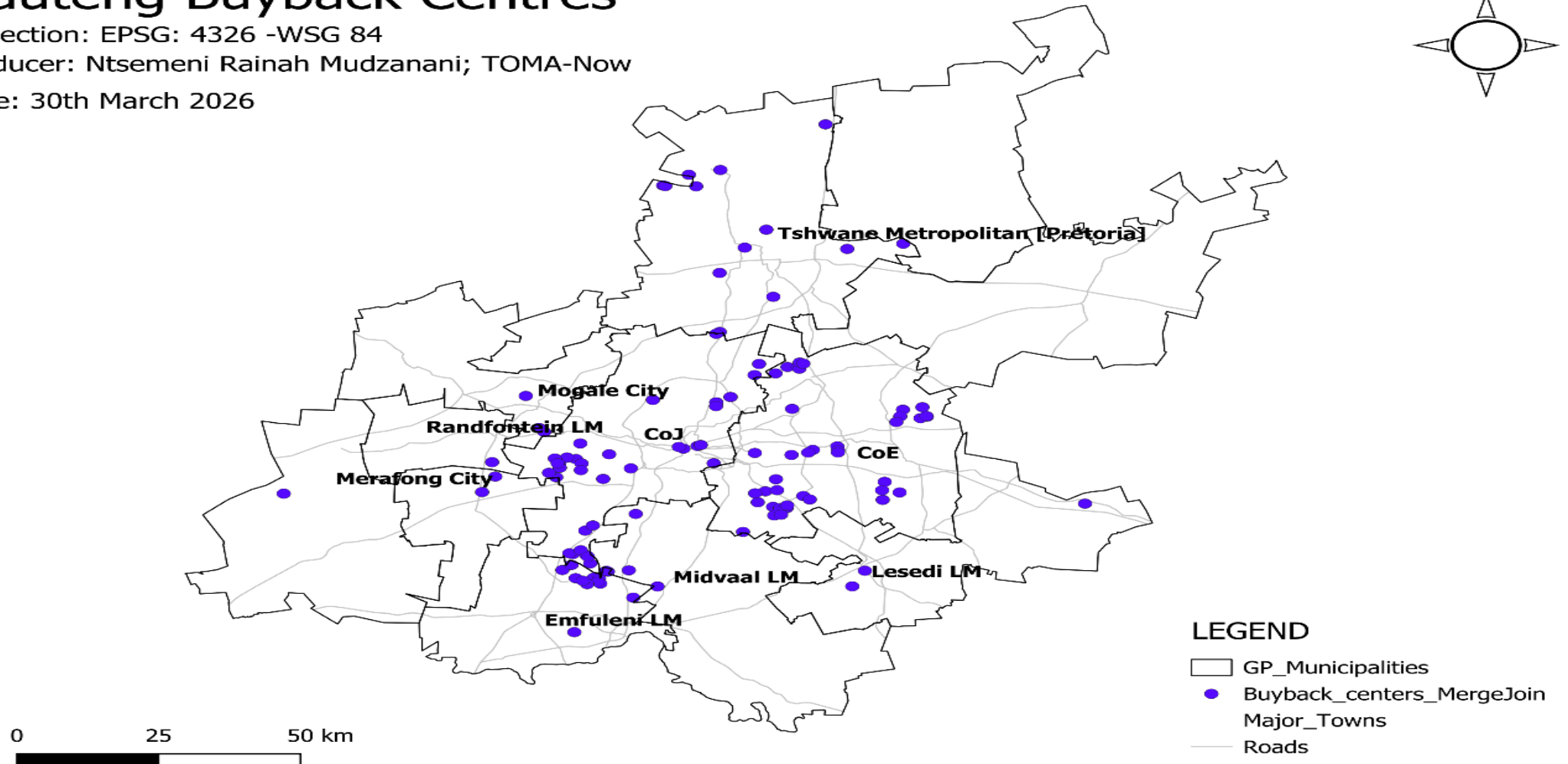
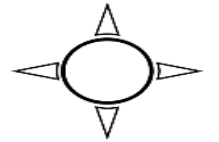
Buy-back centres: spatial distribution

Gauteng Buyback Centres

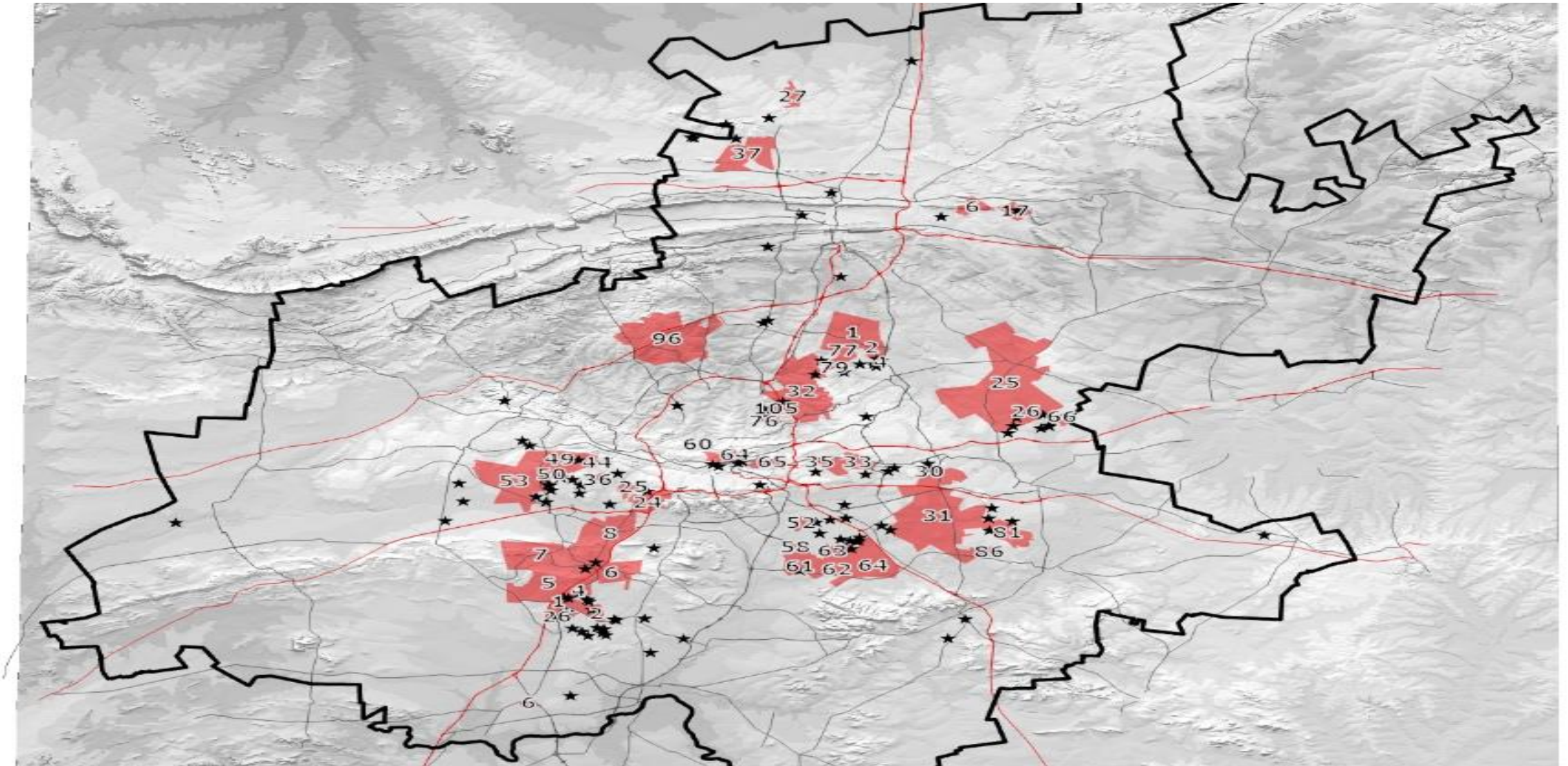
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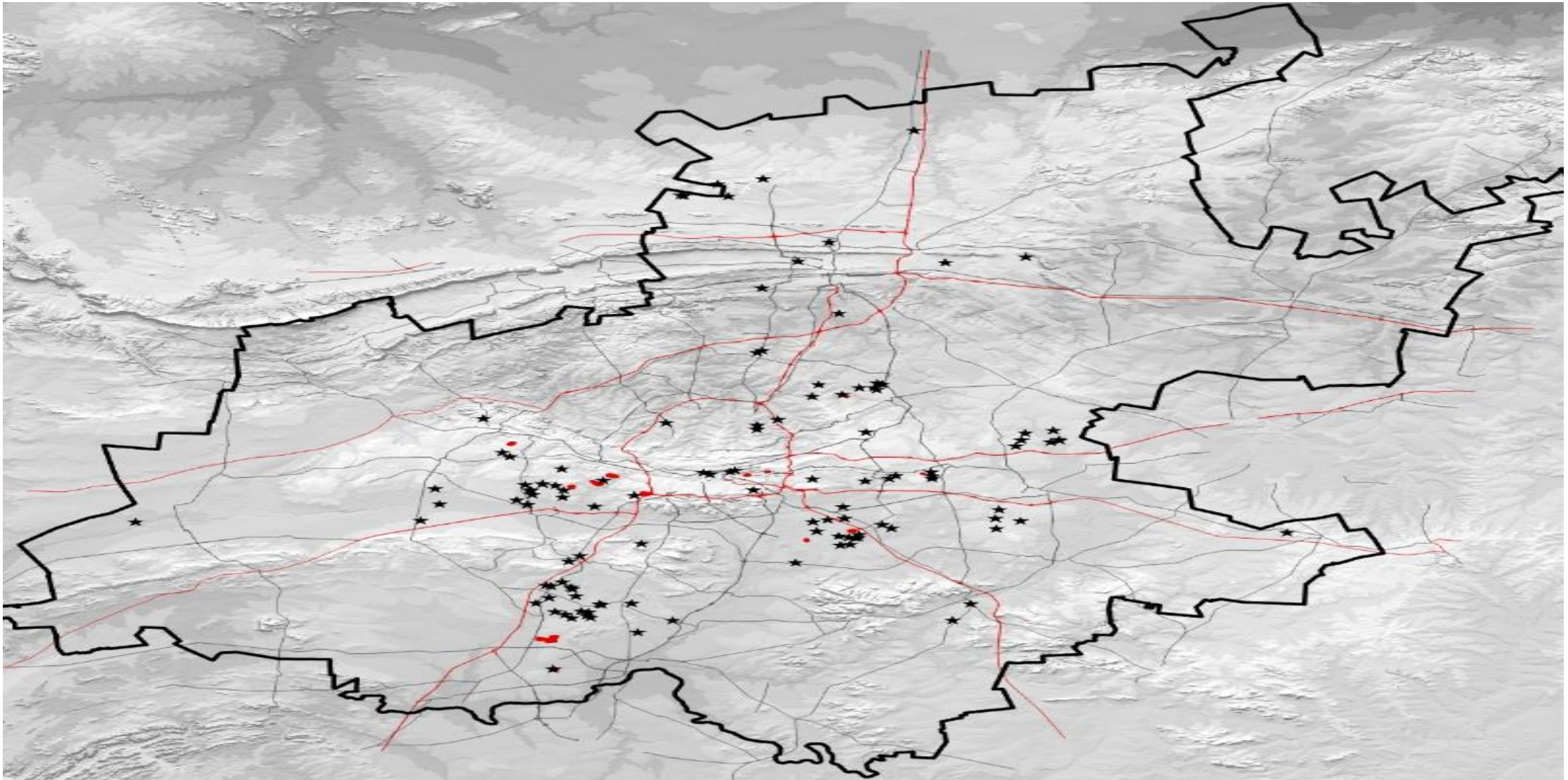


Buy-back centres in 50 poorest wards



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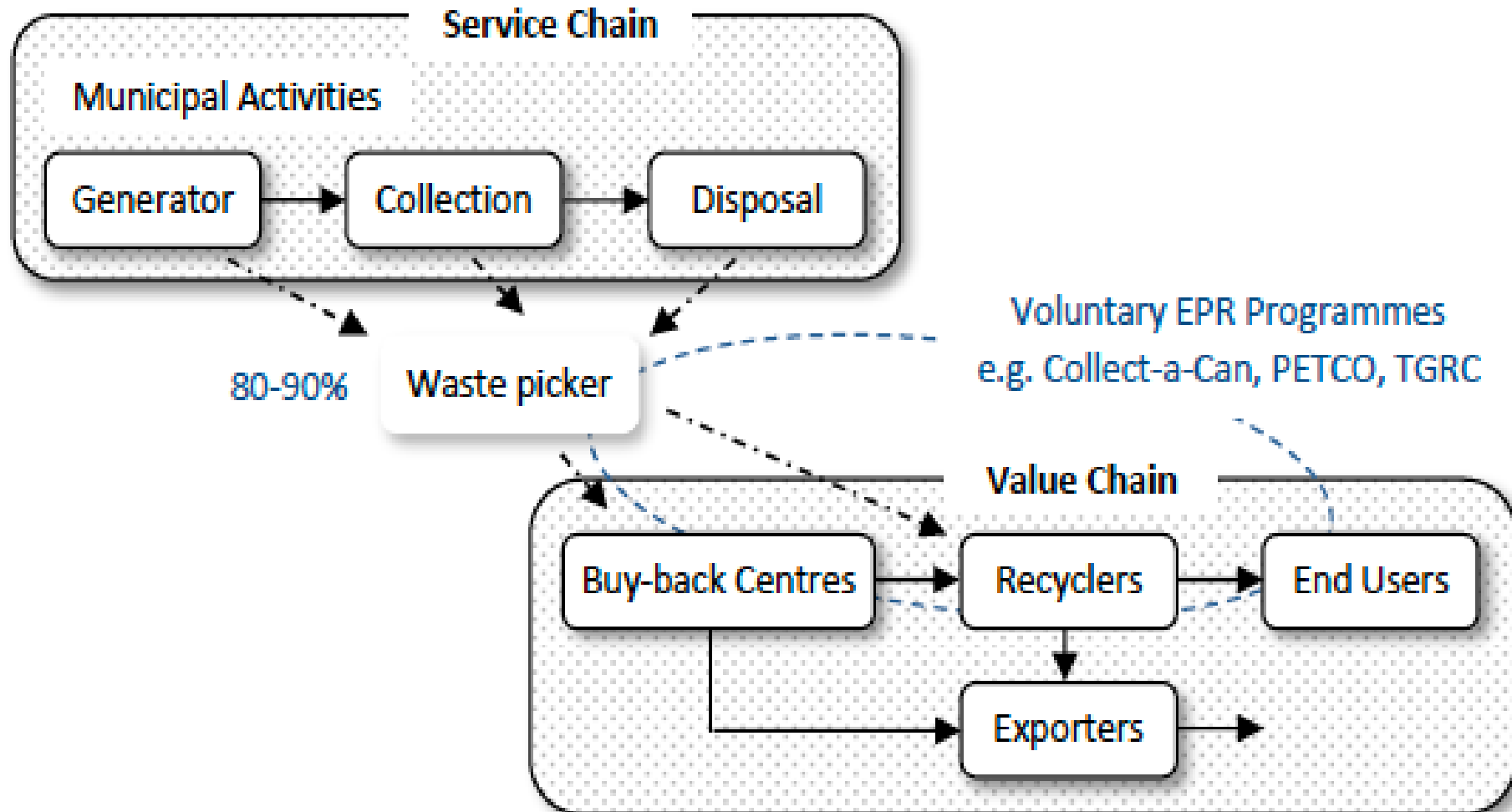
Buy-back centres in or nearby hostels



What we ought to change

- Gauteng has to shift its focus from service chain model to a value chain model:
 1. Circular Economy and Waste Minimisation
 2. Effective and Sustainable Waste Services
 3. Capacity Building and Awareness
 4. Compliance Monitoring and Enforcement
- In order to facilitate this shift to value chain, we doing the following:
 - I. Gauteng Waste Minimisation Regulations (Source Separation)
 - II. Feasibility for a mega Integrated Waste Management Facility
 - III. Ban landfilling of selected waste streams, 2027-2028

Service chain vs. Value chain



Recycling value chain





The Extended Producer Responsibility (EPR)

Waste stream	Producer	Producer Resp Organisation
Electrical and Electronic Equipment Sector	306	13
Lighting Sector	83	8
Lubricant Oils Sector	46	9
Paper and Packaging Sector	1437	50
Portable Batteries Sector	25	5
Pesticides Sector	112	1
Grand Total	2009	86

Pathway to waste economy

- The following are the proposed strategic pillars for the long-term plan towards a circular waste economy:



Compliance & Enforcement: State of Gauteng Landfill Sites

Municipal landfill sites are licensed environmental infrastructure. When a landfill is poorly operated, the consequence is not only a dirty site; it becomes a risk to public health, fire safety, water quality, air quality, municipal finances and the credibility of government service delivery.

1. Licence and operational compliance remain under pressure

Municipal landfill sites monitored by the Department continue to reflect recurring non-compliance with Waste Management Licence conditions. Common findings include poor daily cover and compaction, blocked drainage, compromised leachate systems, fires, odour and nuisance impacts, and weak monitoring of water and air quality.

2. Infrastructure failure is now an enforcement concern

Non-functional weighbridges, limited yellow fleet, damaged fire infrastructure and broken fencing are not only operational shortcomings. They directly affect legal compliance, environmental protection, the safety of workers and reclaimers, and the ability of the municipality to account for waste entering and leaving the site.

3. Administrative action must be followed through

Where notices and directives are issued, compliance must be verified and escalated when corrective action is not implemented. Continued failure to comply may require criminal investigation and referral to the National Prosecuting Authority (NPA), while respecting prosecutorial independence.

4. Criminality and site control undermine lawful operations (Hijacking of sites by waste lords/zama-zamas)

Uncontrolled access, undocumented recyclers, vandalism and the influence of waste lords or zama-zamas can compromise site safety and the ability of EMIs to inspect. Enforcement therefore requires security planning, municipal leadership and clear intergovernmental escalation.

Compliance risk has become operational risk. The same sites that are expected to receive, control and safely dispose of waste are also experiencing recurring infrastructure, safety, security and licence-compliance pressures.



Compliance and Enforcement: Illegal waste dumping / disposal sites

PROVINCIAL RISK PICTURE

The provincial risk is that small dumping incidents can mature into entrenched unlawful disposal areas with criminal, land-use and public-health dimensions.

Illegal dumping in Gauteng is increasingly presenting as a managed system of unlawful disposal, sorting, burning, informal trading and land occupation. In known hotspots, what may begin as a by-law offence can become a large illegal disposal site that is expensive to clean, unsafe to access and difficult to permanently close.

Why Illegal Dump hotspots become entrenched:

The drivers include service gaps, distance to lawful disposal points, deliberate avoidance of lawful disposal costs, informal recycling activity, weak land management, low visible by-law enforcement and poor protection of sites after clean-up. Once established, these sites create accountability disputes between municipalities, landowners, generators, transporters and informal operators.

Why the risk is bigger than waste:

Persistent dumping and burning create air pollution, water and stormwater impacts, infrastructure damage, public-health concerns, illegal service connections, land invasion and conflict over recyclable material. In some areas, armed criminal elements and waste-lord activity make ordinary inspection and clean-up unsafe without policing and security support.

Informal Settlement resulting from illegal Waste Activities

The Focal areas when the operation took place was within the Msawawa and Cholocho informal Settlements. The picture below shows the area of infilling with waste with the aim of selling to develop residential dwellings



The future we want : outcomes

OUTCOME 1

- Prevent waste, and where waste cannot be prevented ensure that waste is **recovered, reused, recycled, reduced** and that 40% of waste is diverted from GP landfill within 5 years.

OUTCOME 2

- Gauteng residents live in **clean communities** with waste services that are well managed and financially sustainable.

OUTCOME 3

- Enhance **education and awareness** while promoting advocacy in environmentally sound management of waste.

OUTCOME 4

- Mainstreaming a culture of compliance resulting in **zero tolerance of waste pollution** / Zero tolerance against waste pollution



Conclusion

- Gauteng stands at a critical transition point, where leveraging opportunities can significantly improve waste outcomes, but failure to act will intensify environmental, social, and economic risks.