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Stakeholders' Roles, Perceptions and Behaviour towards Waste Management Infrastructure, and Services along the Mathare River

POLICY BRIEF



Stakeholders' Roles, Perceptions and Behaviour towards Waste Management Infrastructure and Services along the Mathare River

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Key Messages

- Household waste management remains heavily gendered: women and wives account for 52.22% of reported responsibility, while men/husbands and children account for 24.44% and 23.33% respectively. Policy design must recognise this distribution of labour.
- Source separation is low (22% of households), with marked spatial variation. Formal collection services are under-utilised relative to community-led recycling and clean-ups.
- Residents prioritise reliable collection, awareness, recycling facilities and drainage/sanitation infrastructure over purely community-driven solutions, signalling demand for stronger public-service delivery.
- Fragmented institutional roles and weak coordination between county agencies, national bodies, private operators and community actors continue to undermine service effectiveness and behavioural change.
- Targeted, gender-responsive and spatially differentiated interventions are required to close the gap between stakeholder awareness, existing community practices and formal service provision.

Context and Policy Problem

Effective waste management along the Mathare River depends not only on physical infrastructure but on the roles, perceptions and daily behaviours of multiple stakeholders. Households generate the bulk of waste; women predominantly manage it within the home; informal waste pickers and community groups recover materials; private collectors and county services provide formal collection; and regulatory agencies (NEMA, Nairobi River Commission, county environment department) set and enforce standards.

Current arrangements are characterised by uneven service coverage, low adoption of source separation, reliance on community self-help, and limited institutional coordination. These patterns allow mixed waste to enter drainage systems and the river corridor, undermining riparian conservation objectives and public-health outcomes.

Evidence on Roles, Perceptions and Behaviour

Household-level roles and responsibility

Women and wives are the primary actors in household waste management (52.22%), followed by men/husbands (24.44%) and children (23.33%). This distribution reflects entrenched domestic gender roles. Any policy that ignores women's central position risks limited uptake, while interventions that fail to engage men and children miss opportunities to redistribute responsibility and sustain behavioural change.

Source separation and disposal behaviour

Only 22% of households report separating waste at source; 78% dispose of mixed waste. Separation rates vary sharply by location: highest in Village 4B (9%), followed by Gitathuru (7%) and Village 3C (6%), and near-absent in Village 2, Village 3A, Village 3B and Kosovo. Low and uneven separation increases the volume of mixed waste entering collection points, drains and the river, reducing recovery potential and raising disposal costs.

Prevailing practices

Community-based actions currently outweigh formal services. Recycling (26.72%) and community clean-up activities (25.00%) are reported more frequently than formal waste-collection services (11.21%). Composting stands at 13.79%, while a small minority (3.45%) report no engagement in listed practices. These figures indicate existing social capital and willingness to act, yet also reveal the limited reach and perceived reliability of formal infrastructure and services.

Stakeholder preferences and perceived priorities

When asked about strategies to improve waste management and riparian protection, respondents ranked improved waste collection highest (15.73%), followed by awareness creation (15.09%), provision of recycling grounds (14.44%), drainage cleaning and repair (14.22%), and sanitation facilities (14.01%). Support for community waste initiatives ranked lowest (3.88%). This hierarchy signals that residents view public-service delivery and infrastructure as the primary levers for change, while community efforts are seen as complementary rather than sufficient.

Policy Implications

1. Gender-blind service design is likely to under-perform. Women, as primary managers, must be central to programme design, messaging and feedback mechanisms.
2. Low and spatially uneven source separation reduces the effectiveness of any downstream collection or recovery system. Uniform city-wide approaches will not close these gaps.
3. Over-reliance on community self-help without corresponding investment in formal collection, recycling facilities and drainage/sanitation infrastructure places an unsustainable burden on residents and informal actors.
4. Weak institutional coordination and limited visibility of formal services contribute to the perception–action gap and to continued dumping in the riparian zone.
5. Residents' clear preference for collection, awareness, recycling grounds and sanitation provides a mandate for prioritising these investments within the Nairobi Rivers regeneration agenda.

Policy Recommendations

Short-term (0–12 months)

1) Design and roll out gender-responsive awareness and behaviour-change campaigns that target women as primary household managers while actively promoting shared responsibility among men and children.
2) Expand reliable collection routes and place additional bins/skips in low-separation and high-dumping clusters, with priority given to areas currently underserved.
3) Pilot source-separation schemes in higher-performing locations (Village 4B, Gitathuru, Village 3C) and document lessons for scale-up.
4) Formalise support for existing community recycling and clean-up groups through basic equipment, market linkages and recognition within county waste systems.
5) Establish a functional multi-stakeholder coordination mechanism (county environment department, NEMA, Nairobi River Commission, private collectors, women's groups, CBOs and informal waste-picker representatives) with clear roles, meeting schedules and shared monitoring indicators.

Medium to long-term (1–5 years)

1. Integrate gender analysis into all waste-management and riparian programmes, including service design, tariff structures, employment opportunities and performance monitoring.
2. Invest in accessible recycling grounds and organic-waste recovery facilities to capture the substantial biodegradable and recyclable fractions identified in household waste streams.

3. Strengthen formal collection coverage and reliability so that community efforts complement rather than substitute for public services.
4. Align drainage, sanitation and solid-waste investments within a single corridor-based planning framework for the Mathare and Gitathuru rivers.
5. Institutionalise continuous monitoring of stakeholder behaviour (separation rates, service satisfaction, gendered responsibility) and feed results into adaptive management of the Nairobi Rivers regeneration programme.
6. Harmonise institutional mandates and enforcement protocols so that roles and accountabilities of county, national agencies and private operators are clear and mutually reinforcing.

Closing the gap between stakeholder roles, perceptions and the performance of waste-management infrastructure requires deliberate gender-responsive design, spatially targeted service improvements, stronger formal–community linkages, and sustained institutional coordination. These measures are essential if waste-management systems are to support, rather than undermine, the conservation of the Mathare River riparian zone

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