

# 2024 Global Methane Forum

## Mobilizing Methane Action

18-21 March 2024, Geneva, Switzerland

# Zero Waste Systems Dar es Salaam and Zanzibar

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# About Nipe Fagio



[Nipe Fagio](#) (NF) is an NGO founded in 2013. Nipe Fagio exists to drive systemic change in Tanzania and East Africa. Systemic problems require systemic solutions that are socially inclusive, address historical social injustice, and are environmentally built and climate resilient.

We work in a three-pillar strategy, aligning **DATA** gathering, **POLICY** advocacy, and **ACTION** to achieve systemic change.



## Impactful data

We produce reliable and verifiable data to support data-driven decision making. We develop data collection systems that are tailored to national and regional reality. Nipe Fagio's database on waste holds over 10 years of data entries.



## Effective policy

We engage in national, regional and global policy advocacy to support positive systemic change in the waste sector and build the framework for a socially-just and climate-resilient world.



## Transformative Action

We implement transformative projects to enable positive systemic change in the waste management sector. Systemic problems require systemic solutions that are replicable and impactful.

# Cooperative-led Model



# Achievements



<15% annual  
projected official  
budget



> 40,000 people  
engaged



33 times more jobs in  
one neighbourhood  
than in the city



95% compliance to  
segregation at  
source



75-85%  
reduction  
in waste to  
dumpsite





# Monthly Average in one Neighborhood (2,800 houses)

Organic Waste: 30,635 kg (79.2%)

Recyclables: 2,720 kg (7.08%)

Domestic hazardous: 4,023 kg (10.4%)

Residual: 1,285 kg (3.32%)

**TOTAL: 38,663 kg**

# Feasibility

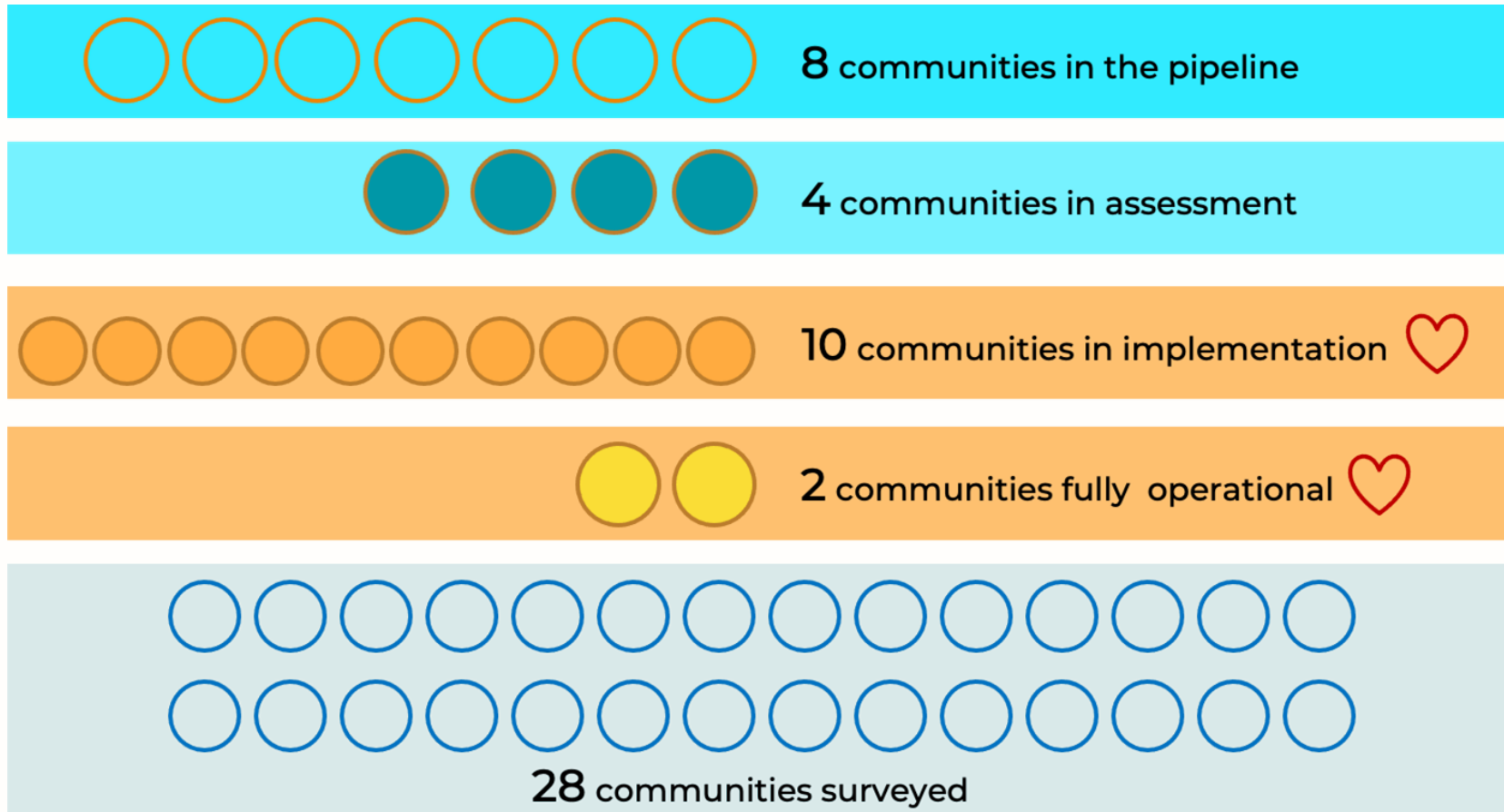


**38 tons**



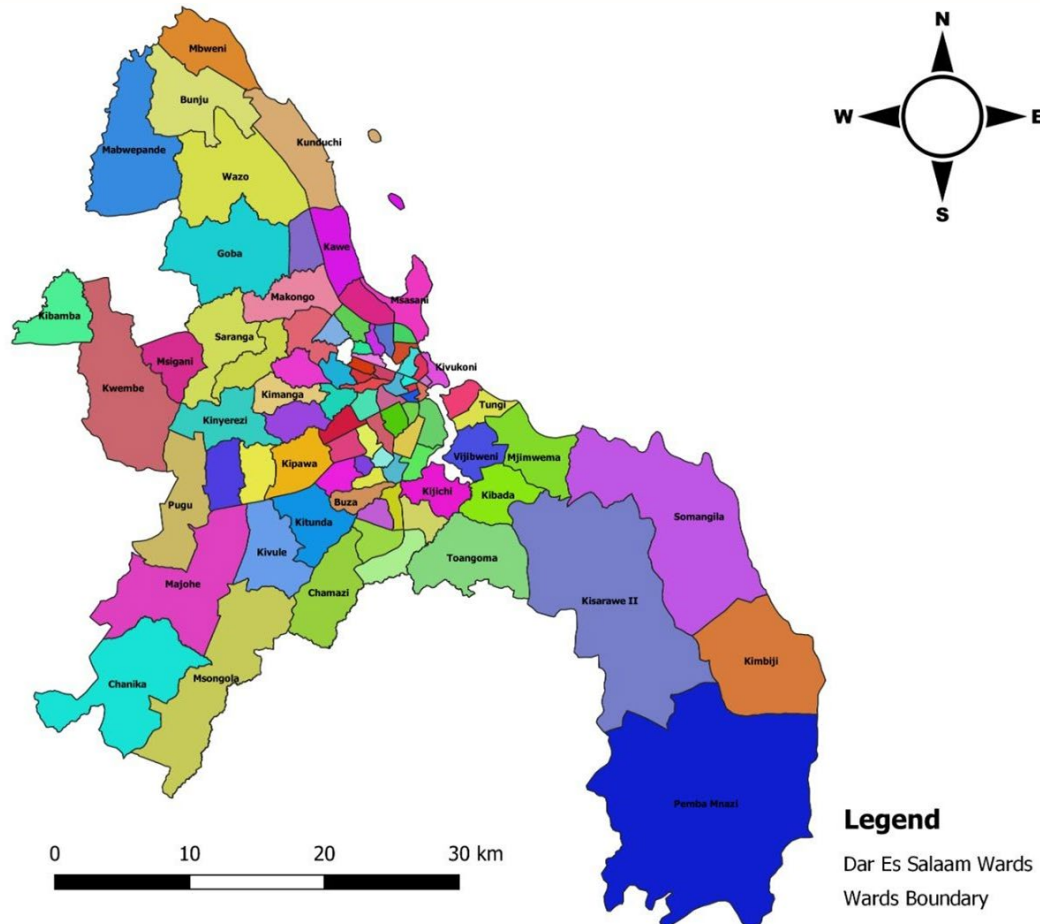
**168,000 tons**

# Scalability





# Projected Impact



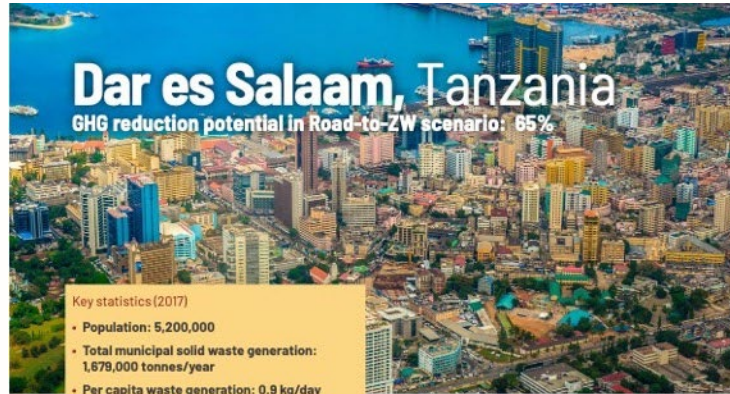
- 565 neighborhoods
- 102 Wards
- 5 Municipalities



- 21.2 thousand tons of waste a day\*  
being at least 60% organic waste

\* Projection for 2025 by the Government of Tanzania

# Potential: 65% reduction in GHG emissions



### Key statistics (2017)

- Population: 5,200,000
- Total municipal solid waste generation: 1,679,000 tonnes/year
- Per capita waste generation: 0.9 kg/day
- Waste collection: 40% collection rate (no statistics for separation)
- Waste diversion rate: no statistics

Dar es Salaam is the third fastest growing city in Africa and the ninth fastest growing in the world, with a population projected to be nearly 11 million by 2030. The growth of urbanization, industrialization, and population in Dar es Salaam city has increased the solid waste generation rate.

Poor waste collection, lack of reliable disposal sites, inadequate solid waste infrastructure, and insufficient guidelines on waste separation at source are among the major challenges in the waste sector. The city generates an estimated 5,600 tonnes of solid waste daily, and only between 900 and 1,500 tonnes are taken to the dumpsite by the city. The waste is transported and dumped at the only official dumpsite, Pugu-Kinyamwezi, which does not have gas collection or other mitigation measures. The rest of the waste is dumped onto vacant land or waterways, and much is burned in the open.

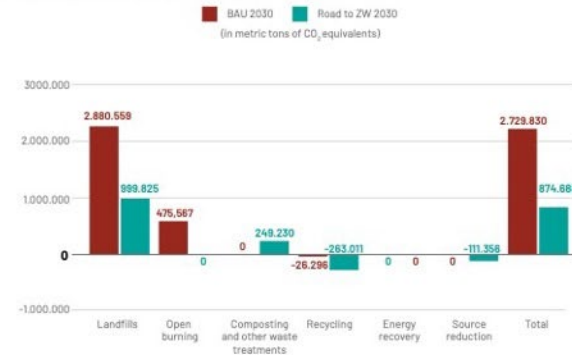
In Dar Es Salaam, recycling is currently spearheaded by the efforts of an informal army of self-employed, micro-entrepreneurial waste pickers. According to the Tanzania Investment Guide on Waste Management 2020, a total of 15 informal recycling transfer stations and one official government-managed dumpsite are mapped out across the city, supporting the operations of

approximately 1,237 waste pickers. Waste pickers collect recyclables from houses and streets and work at the dumpsite as well, collecting an average of 20 kilograms per day.

Nipe Fagio, a local group that has been building cooperative-led zero waste systems in Dar es Salaam since 2019, sees great potential in formation and formalization of waste collection cooperatives in reducing the city's waste and carbon footprint. As an example, Wakusanya Taka Bonyokwa Cooperative Society's contribution to separate collection helped to divert more than 80% of the waste generated in a low-income sub-ward of Bonyokwa, in the Ilala district in Dar es Salaam through composting, reuse, and recycling, reducing the waste to 10-20%.

### Dar es Salaam in 2030 – Business as Usual vs. Road to Zero Waste

The below chart shows estimates for annual GHG emissions associated with waste management in eThekweni by 2030 in two scenarios: 1) Business as Usual (BAU) based on the data from 2016, and 2) Road to Zero Waste based on consultations with local groups including Nipe Fagio. Assumptions that informed each scenario are detailed in the table below.



Treatment	BAU 2030	Road-to-ZW 2030
Landfill (dumpsites)	2,739,300 tonnes of municipal solid waste disposed, including open burning and open dumping	1,123,481 tonnes of municipal solid waste. Open burning is ended. Landfill gas emissions drop by 47%
Incineration	Open burning is prevalent; we estimate 508,023 tonnes CO <sub>2</sub> e	none
Composting & other treatments	none	1,192,801 tonnes composted
Recycling	Informal sector active but no data available	423,018 tonnes recycled, resulting in 371,654 tonnes CO <sub>2</sub> e reduction
Energy recovery	none	none
Source reduction	none	Single-use plastic bans reduce plastic waste by 129,514 tonnes, resulting in 111,356 tonnes CO <sub>2</sub> e avoided (a 35% reduction in total plastic waste generation)
Overall diversion rate	0%	53%

**GHG reduction potential in Road-to-ZW scenario: 65%**

# Zanzibar: Pledge to be a ZW Archipelago



Picture: A Waste Collector at Chumbuni Material Recovery Facility (MRF) centre ©Nipe Fagio, 2024



# Want to know more?



## INTERNATIONAL ZERO WASTE CITIES CONFERENCE

[JULY 2-5, 2024, DAR ES SALAAM, TANZANIA](#)

The International Zero Waste Cities conference (IZWCC), co-hosted by GAIA and GAIA local member Nipe Fagio, will bring together government leaders, zero waste practitioners, financial institutions and philanthropic organizations to learn best practices and implementation successes in the zero waste world in a highly interactive environment for mutual inspiration and further replication. The program includes two days of conference plus a site visit to a zero waste neighborhood in Dar es Salaam, Tanzania.

# Bonus

Mount Kilimanjaro

## Karibu Tanzania!

It is a country of natural splendour, astounding wildlife, seductive beaches, charming ancient towns, archaeological sites and geological wonders. The scenery, topography and very friendly people make Tanzania one of the best places to visit and promise the best wildlife photographic safaris on the continent.

## Welcome to Tanzania!

Zanzibar

Ngorongoro

Serengeti

Tarangire

# Asanteni sana / Thank you

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