THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

HOW TO SAVE THE PLANET
LSE FESTIVAL 2026

Sustainable cities: **Sounds of urban climate adaptation**

These soundscapes capture crucial parts of city life in Jordan, Uganda and Ghana – from waste management to transport congestion, to living with water scarcity.

Research by the International Growth Centre (IGC) explores their environmental impact and considers the potential of more climate-friendly and equitable urban policies.

IGC

Click to listen to the sounds of water management in Jordan

Water scarcity in Amman, Jordan

The Middle East and North Africa region is one of the most water-scarce in the world.

The Mujib Dam supplies around 20 million cubic metres of water each year to Jordan's capital, Amman, as well as tourist resorts, nature reserves and agricultural lands. The nearby Nukheila Valley experiences flash flooding, causing sediment build-up that decreases the dam's water storage capacity annually.

In countries like Jordan, water scarcity, worsened by climate crisis, is a chronic problem. Amman may not be able to eliminate scarcity but the city can come up with strategies to manage it.

82 gallons — **Average daily supply of water per head in the United States**

33 gallons — **Average daily supply of water per head in Amman, Jordan**

How can institutions ensure fair water allocation in Amman?

In Amman, piped water is delivered only 24-36 hours per week, on designated "water days".

IGC research by **Abdulrazzak Tamim** finds striking differences in household use. When the duration of the water supply increases, high-rent households respond, while low-rent households do not.

This is not because lower-income households use less water. Instead, they have limited private storage capacity and cannot save water for later use.

Policies that focus on subsidising household water storage are likely to ensure more equitable water allocation than extending supply hours or using pricing.

Transport congestion in Kampala, Uganda

In theory, a person can travel across Kampala in an hour. In practice, congestion makes daily life slow, costly and stressful, with high air pollution levels. Informality shapes how the city moves.

Over 90%

Motorised trips in African cities that occur in informal transport markets; in Uganda, these are mostly via motorcycle taxis (bodas bodas)

US $ 1.5 million

Daily cost of Kampala congestion, equivalent to 1.9% of Uganda's GDP

IGC research estimates that 2 planned BRT lines in Kampala could decrease the daily cost of total travel time by around $173,000

How can we reduce congestion in Kampala?

Strategic investment in efficient public transport could reduce congestion, improve health, raise productivity, and support more inclusive urban growth.

IGC research by **Laurenz Baertsch** combined Google Maps data on travel speeds and congestion since 2019 with street-level surveys to capture invisible parts of Kampala's urban economy. This revealed large inequalities in access to schools, hospitals and government services due to congestion and road quality, not distance alone.

Bus rapid transit (BRT) systems, where buses have priority or sole use on dedicated lanes, could help in high-density urban areas like Kampala.

191 cities have BRT systems – only 6 in Africa, compared to 64 in Latin America

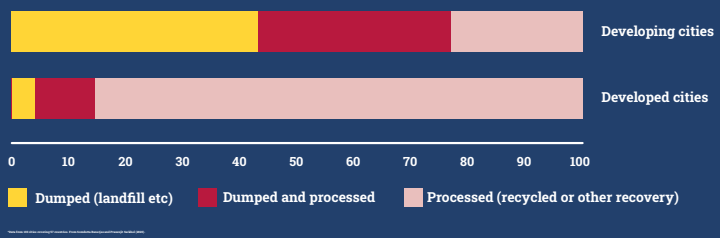
Click to listen to the sounds of transport congestion in Kampala

Waste management in Accra, Ghana

When cities expand and waste collections fail to keep pace, the consequences are visible – blocked drains, deteriorating air quality and higher flood risk.

In developing cities like Accra, Ghana, informal waste workers have stepped in where formal systems fall short. These workers, often among the poorest residents, play an essential role.

Waste disposal type in developing and developed cities*



900,000 **Metric tonnes of solid waste generated by Accra residents a year**

10% **Reclaimable waste that is recycled in Accra, mainly by informal pickers**

Over 50% **Accra's household waste that is collected by informal collectors, mainly Borla Taxis**

How can we improve waste management in Accra?

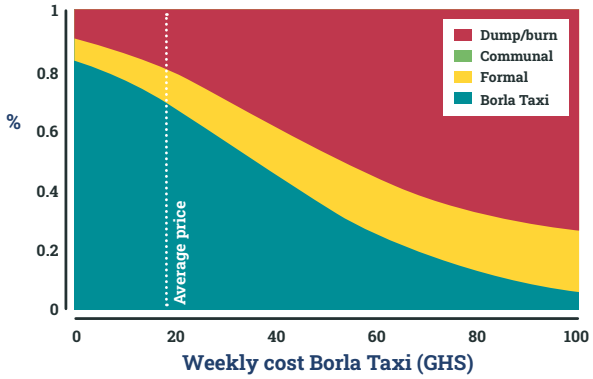
Informality is not a problem to eliminate in Accra. Small pricing measures could help the informal market deliver waste management more sustainably at scale.

IGC researchers **Ignacio Banares Sanchez** and **Yoshiki Wiskamp** surveyed 1800 households in Accra about their choice of waste collection.

The research shows households choose informal services that collect waste more frequently and at lower cost. Small cost reductions and increased collections make households less likely to dump waste informally, decreasing the probability of blocked drains and flood damage.

However, collectors still often use illegal dumpsites for final disposal, affecting air and water quality. The research finds that subsidies encouraging collectors to use formal, environmentally controlled disposal sites reduce pollution and are less costly than expanding waste infrastructure.

Waste disposal choices at different Borla Taxi prices



125 **households have no access to collection services, leading to dumping or burning waste**

1150 **households only have access to informal collection services**

Over 80% of households rely on informal waste collection, even when formal services are available

Click to listen to the sounds of waste management in Accra