



# TECH-ENABLED WASTE MANAGEMENT FOR SLUM COMMUNITIES: EMPOWERING URBAN POOR TOWARDS SUSTAINABLE LIVING

11 SUSTAINABLE CITIES  
AND COMMUNITIES



13 CLIMATE  
ACTION



PATHEINDER PIONEERS

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The Guardian

<https://www.theguardian.com/environment/may/pl...>

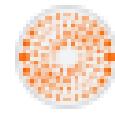
Plastic waste puts millions of world's poorest at higher risk ...

May 24, 2023 — It showed that plastic pollution in slums in many low and middle-income countries was making flooding more severe by blocking drainage systems, ...

**The world is producing more waste than ever before. In the Asia Pacific region, waste generation is expected to rise from approximately 802 million tonnes in 2016 to 1.1 trillion tonnes by 2030.**

- Data based on South Asia, East Asia and Pacific from World Bank publication What A Waste 2.0 - A Global Snapshot of Solid Waste Management to 2050





Reuters

[https://www.reuters.com › article](https://www.reuters.com/article/article) ::

## Slave to sachets - How poverty worsens the plastics crisis ...

Sep 2, 2019 — In Manila's slum areas which are inaccessible to garbage trucks, sachets and other waste are thrown in estuaries or dumped on the street ...

**In Southeast Asia alone, waste volume has been increasing rapidly since 2000, reaching about 150 million tonnes in 2016. By 2030, the amount is estimated to more than double**

- United Nations Environment Programme: Summary Report of Waste Management in ASEAN Countries (2017)



Eco-Business

[https://www.eco-business.com › news › why-southeast-as...](https://www.eco-business.com/news/why-southeast-as...) ::

## Why Southeast Asia's growing waste problem presents ...

Feb 29, 2024 — There is also an inadequate ecosystem for waste disposal, collection, treatment, and recycling among Southeast Asian countries, where 90 per ...

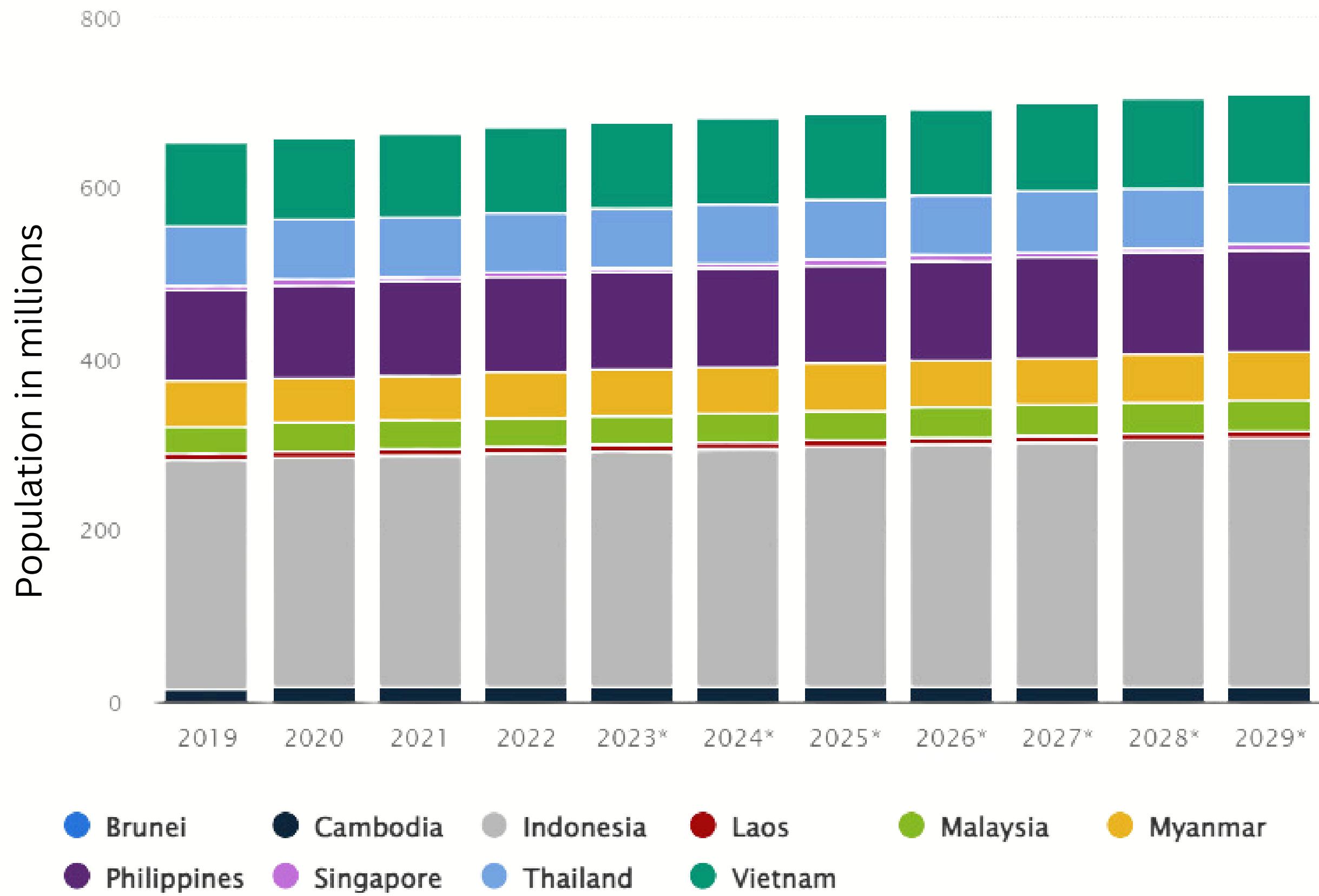
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Total population of the ASEAN countries from 2019 to 2029(in million inhabitants)



**There is a consistent increase in the population across all ASEAN countries**

**Each year shows a higher total population than the previous one, indicating growth.**

# With more people...

The volume of municipal solid waste will rise. This includes household waste, which is projected to grow.

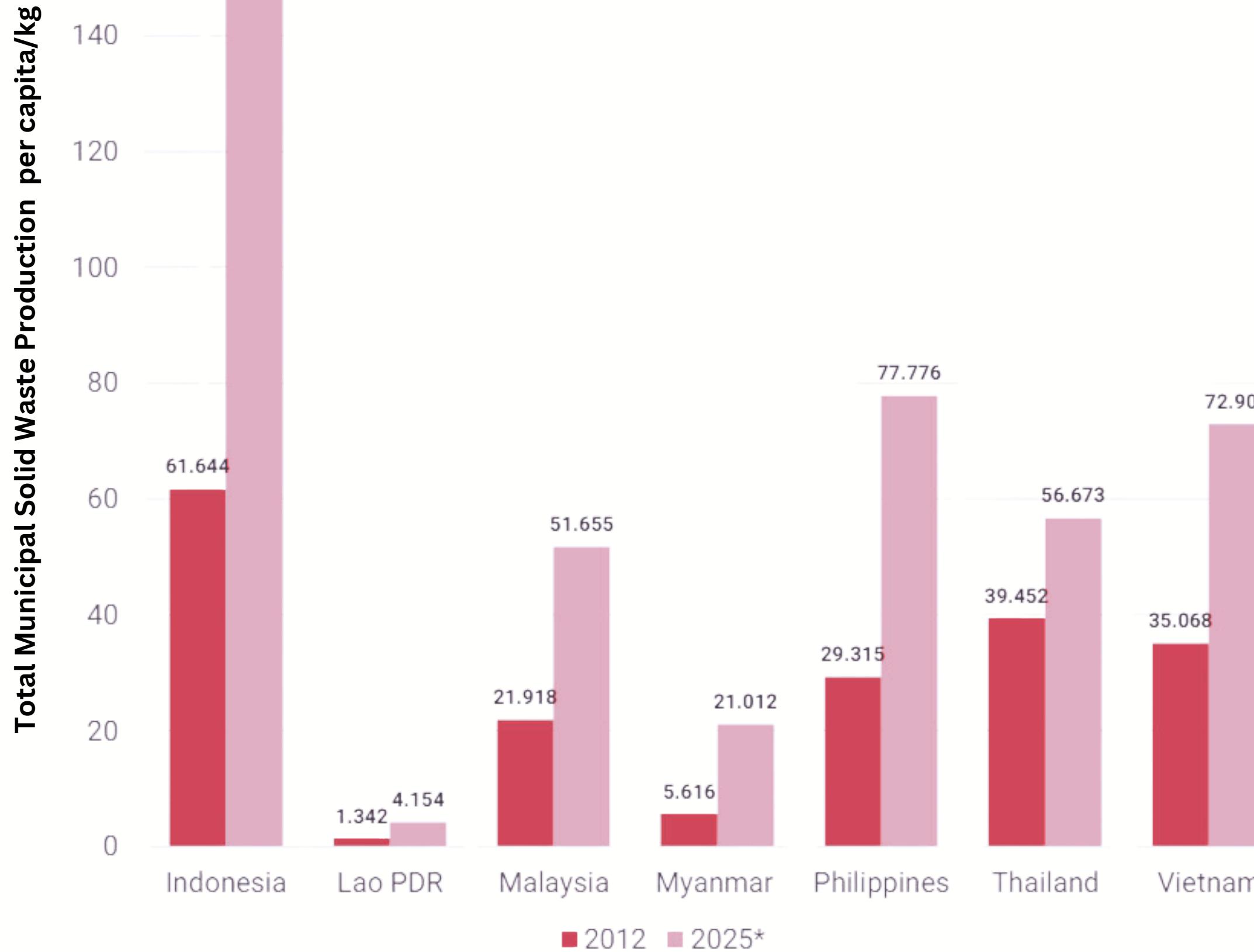


The rise in population and consumption will likely lead to more plastic waste and ocean plastic pollution.

Improper waste disposal practices, such as open dumping and burning, are prevalent in several ASEAN countries.



Expected Total Municipal Solid Waste Production in select ASEAN nations spanning from 2012 - 2025



**Environmental preservation relies heavily on effective waste management, as The overall production of municipal solid waste is expected to double by the year 2025.**



**The Indonesia, Philippines, and Vietnam are projected to experience increases**

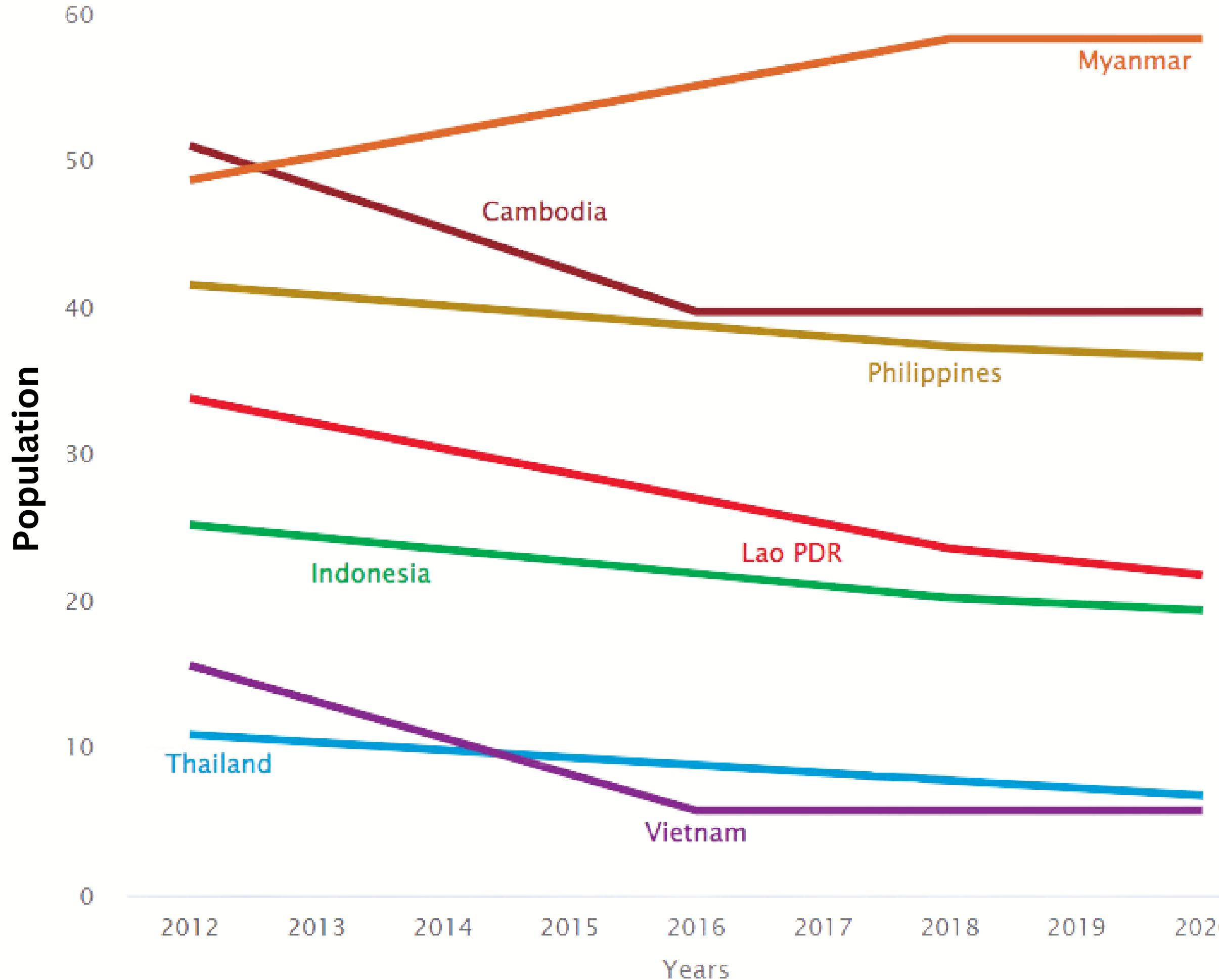
# **Generating waste is easy, but managing it is difficult**

**- TRASHING IT OUT: WASTE MANAGEMENT IN ASIA**



Image Source: asean.org

## Population living in slums (% of urban population)



**Myanmar had the highest percentage of the urban population living in slums**



**INCOME INEQUALITY**



**LACK OF ECONOMIC GROWTH**



**IN-MIGRATION**

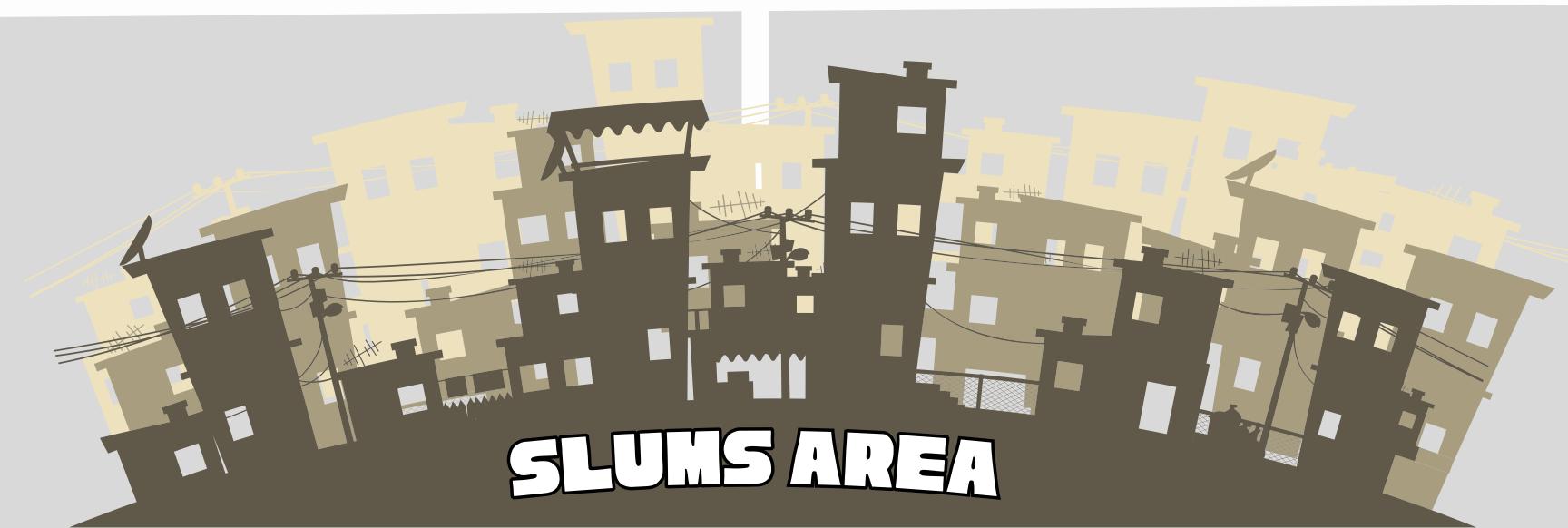


**POVERTY**

## **ROOT CAUSES OF SLUM FORMATION AND URBAN POVERTY**



**LACK OFF AFFORDABLE HOUSING**



**SLUMS AREA**



**Pathfinder Pioneers recommend a mini kiosk and mobile application that facilitates waste collection and segregation, connecting households with waste management services and recyclers**



# **Trash2Treasure:**

# **Empowering Urban**

# **Poor Communities**

# **Through Waste**

# **Management**

# Trash2Treasure

## Mini Kiosk



## Mobile Application



# Trash2Treasure: Empowering Urban Poor Communities Through Waste Management

The image displays five mobile application screens for the "Trash2Treasure" platform, overlaid on a background photograph of a slum area. Each screen is marked with a red circular icon containing a white letter "G".

- Screen 1: Welcome**

Welcome

Hi there, please fill out and submit this form.

7 Questions

START →
- Screen 2: Welcome to Trash2Treasure!**

Welcome to Trash2Treasure!

At Trash2Treasure, we believe that effective waste management is the key to healthier, cleaner, and more sustainable urban communities. Our mission is to transform the way slum areas manage waste, turning everyday trash into valuable resources.

13 Questions

NEXT →
- Screen 3: Scheduling Pickups \***

Welcome to Trash2Treasure

Scheduling Pickups \*

Select your preferred date and time for waste pickup!

05/20/2024

Asia/Manila (05:31 PM)

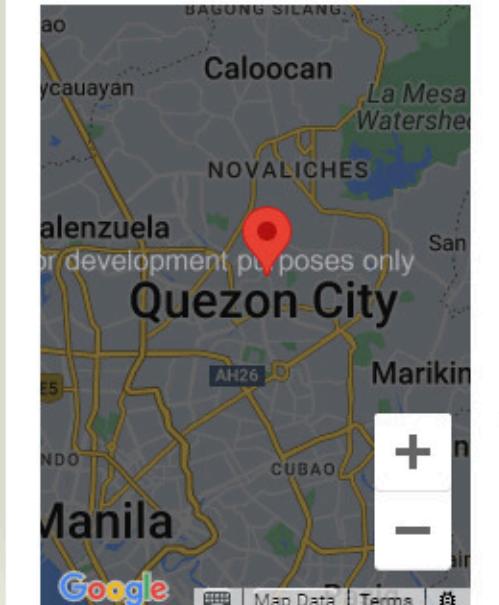
Monday, May 20

9:00 AM 10:00 AM  
11:00 AM 2:00 PM  
3:00 PM 4:00 PM

1 of 7 >
- Screen 4: Locating Recycling Centers \***

Locating Recycling Centers \*

Choose a recycling center near you



< 2 of 7 >
- Screen 5: Proper Waste Disposal**

Learn more about effective waste management

Offers interactive guidance on waste segregation, composting, and minimizing waste production, fostering environmentally friendly practices

Proper Waste Dis...



< 3 of 7 >

# Trash2Treasure: Empowering Urban Poor Communities Through Waste Management

The image displays four sequential screens from a mobile application designed to empower urban poor communities through waste management. Each screen features a green header with a circular 'G' icon.

- Screen 1: Reporting community issues \***  
Allows users to report issues like illegal dumping, facilitating collaboration with local authorities to maintain cleanliness.  
Describe the issue and location:  
[Text input field with rich text editor icons (T, B, I, U, etc.)]  
[Image upload field: BROWSE FILES Max. file size: 10.6MB]
- Screen 2: Reporting community issues \***  
Upload here the problem in your community  
[Image upload field: BROWSE FILES Max. file size: 10.6MB]
- Screen 3: Which incentive programs are you interested in participating in?**  
Select the programs you wish to participate in. By opting in, you commit to engaging in these sustainable practices and contributing to a cleaner community.  
[Checkboxes]:
  - I agree to participate in the recycling initiative.
  - I agree to participate in the composting program.
- Screen 4: Are You Satisfied with Our Services? \***  
We value your feedback!  
Please take a few moments to complete our survey and let us know how we are doing.  
Your input helps us improve our services and better serve our community.  
How satisfied are you with the waste pickup scheduling service?  
[Radio buttons]:
  - Not Satisfied
  - Somewhat Satisfied  
[Submit button]



**thank you!**