

Bridging the Gap

*A Study on Access to Basic Necessities
in the Philippines*

Banquerigo, Del Carmen, Menorca, & Yepes

Learning Team 1

Introduction to Geo-Spatial Analysis Final Project Presentation

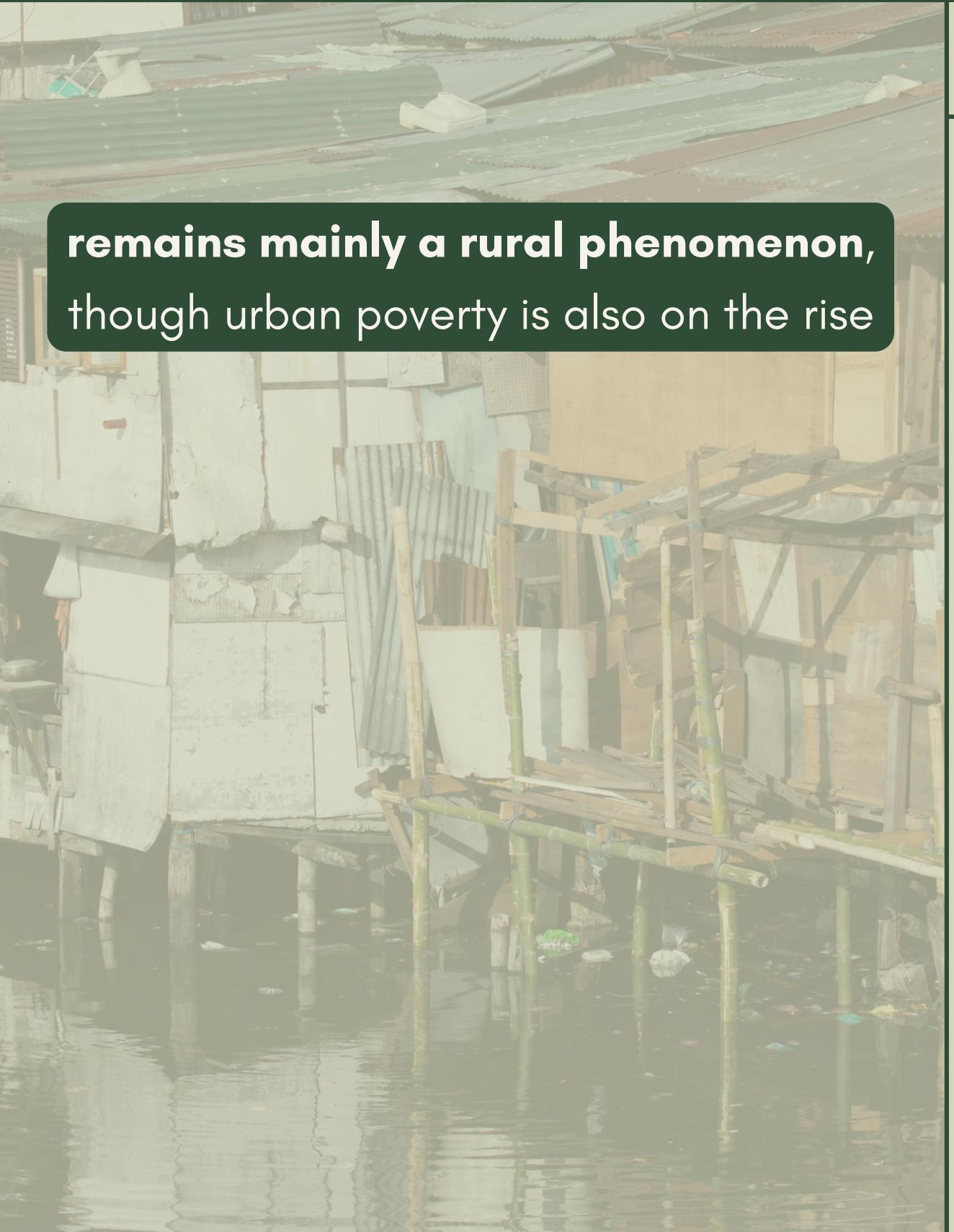


BACKGROUND

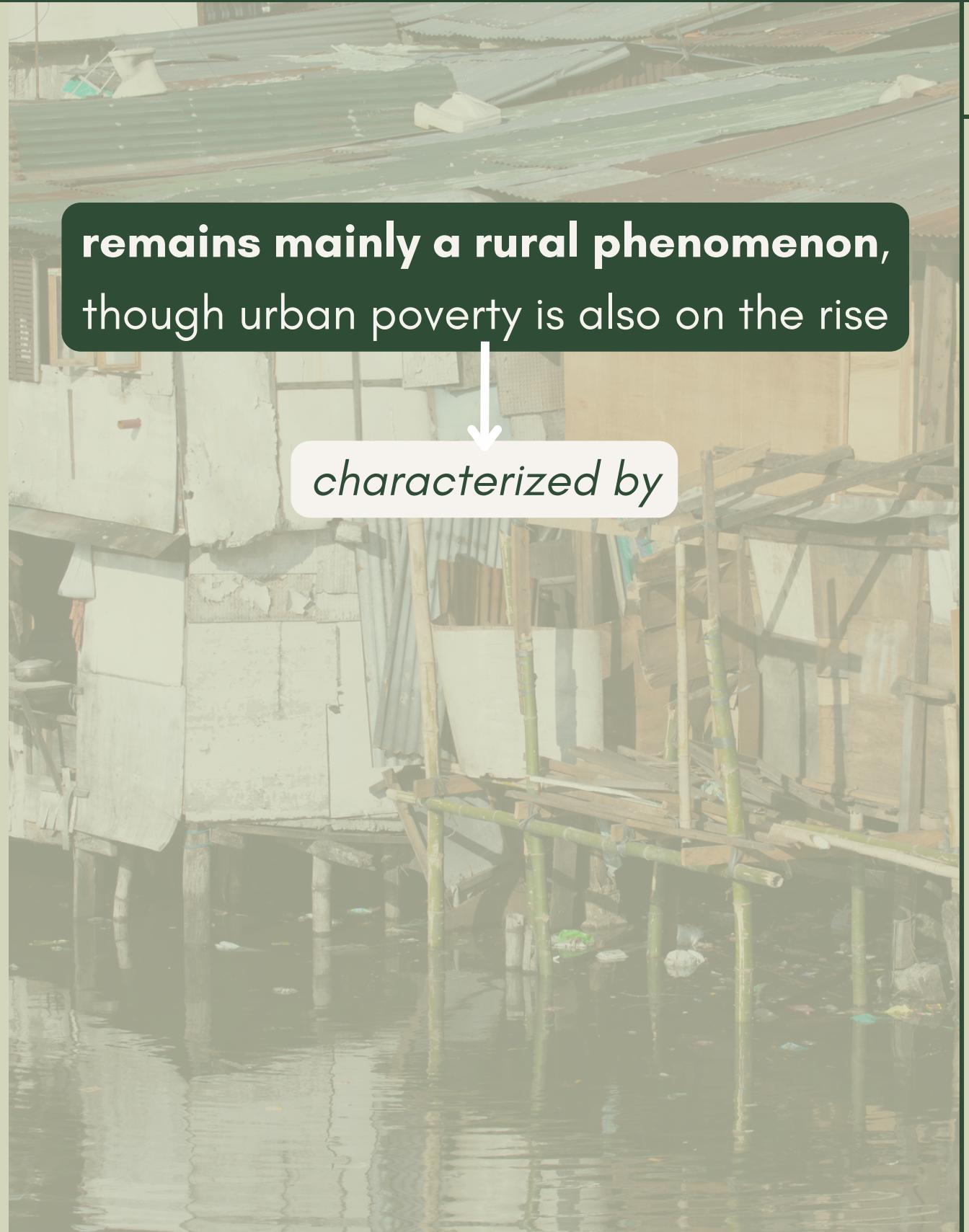
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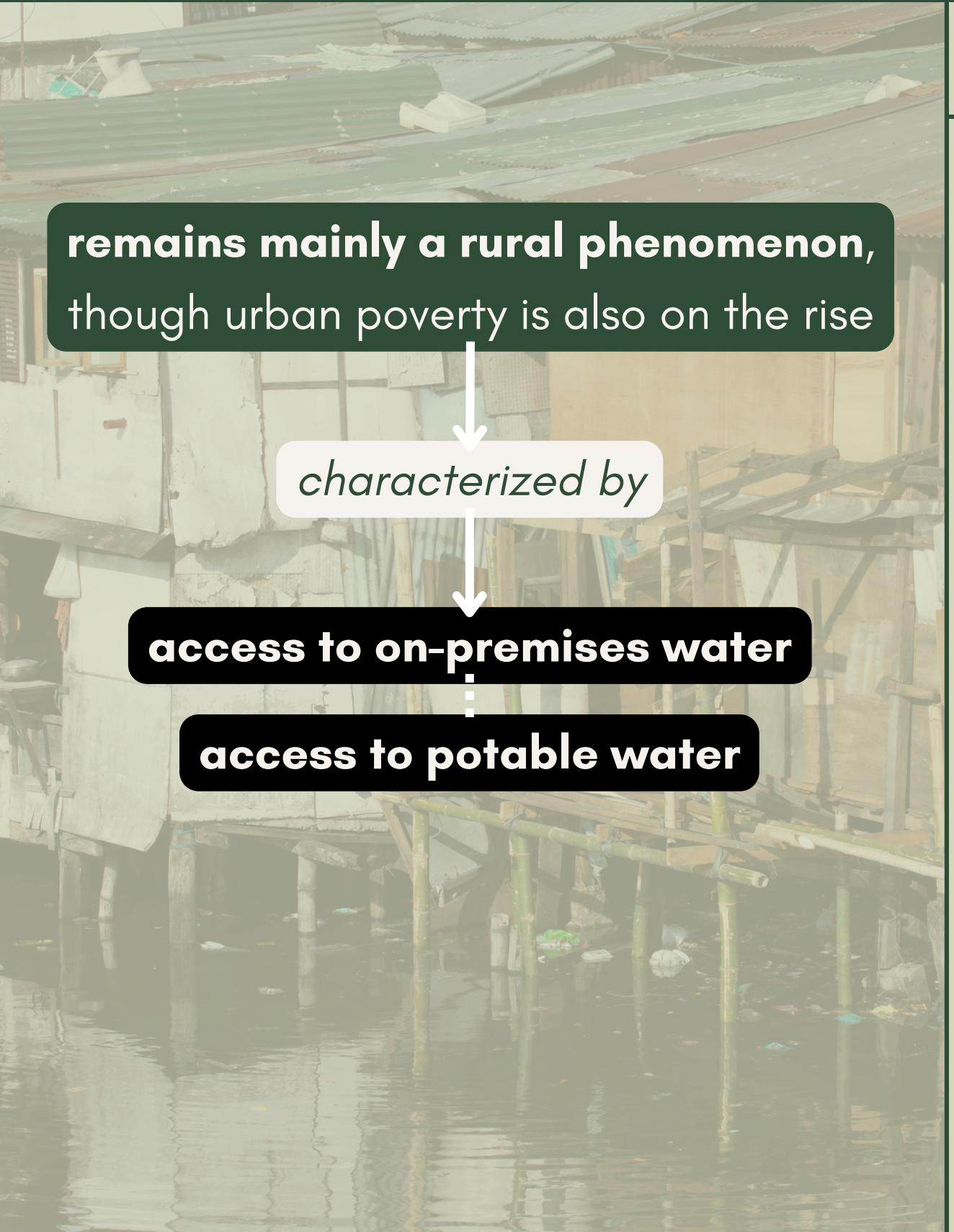
remains mainly a rural phenomenon,
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52% of the PH population in 2020 **lacked access**
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access to on-premises water

access to potable water

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BACKGROUND

52% of the PH population in 2020 **lacked access**
to a reliable, safely managed source of water

39% lacked access to safely managed household
sanitation facilities while 25% **used limited or**
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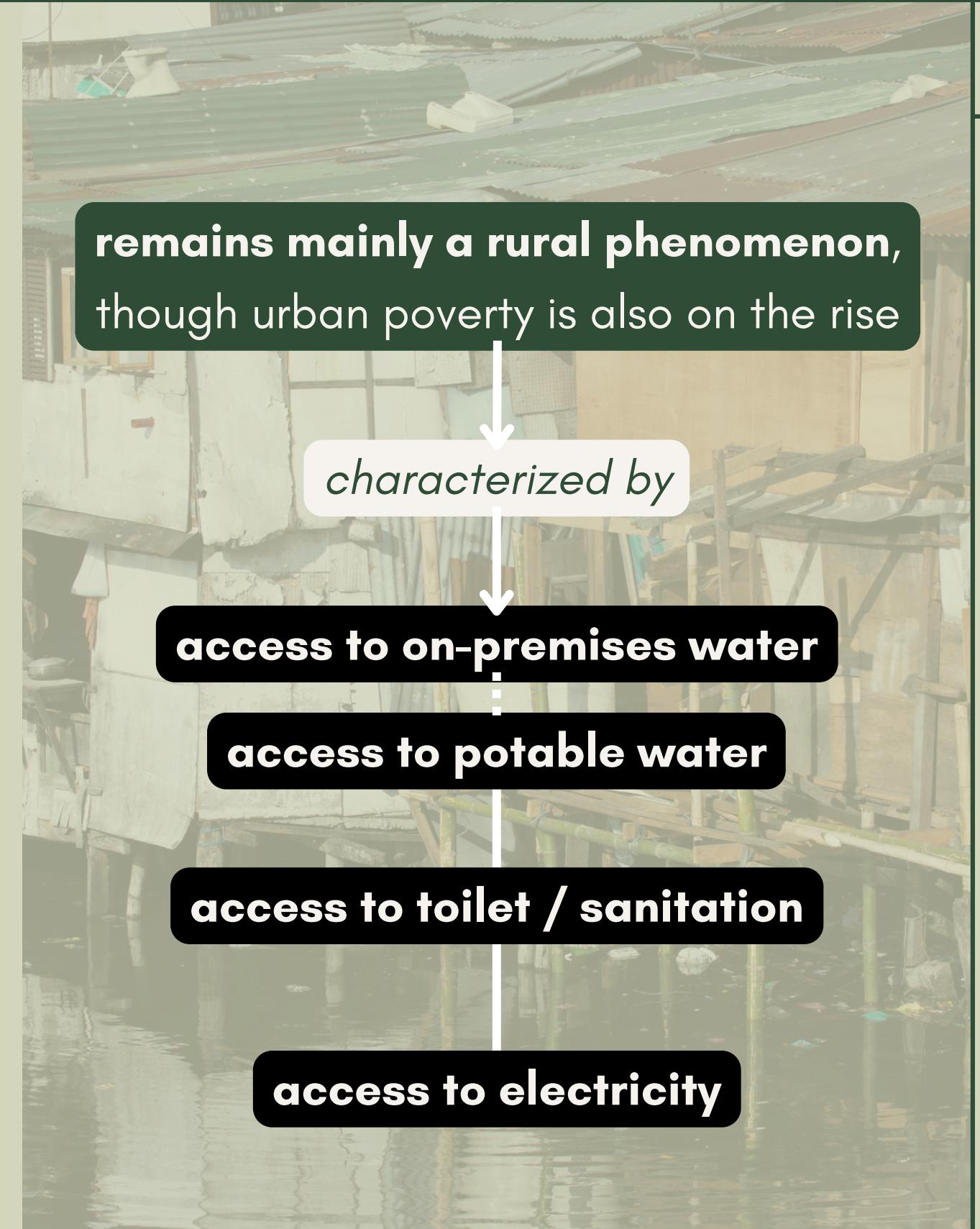
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BACKGROUND

52% of the PH population in 2020 **lacked access to a reliable, safely managed source of water**

39% lacked access to safely managed household sanitation facilities while 25% **used limited or unimproved or even no toilets at all**

96.84% had access to electricity



CHALLENGES

Challenges of Government's Effort on Poverty Reduction

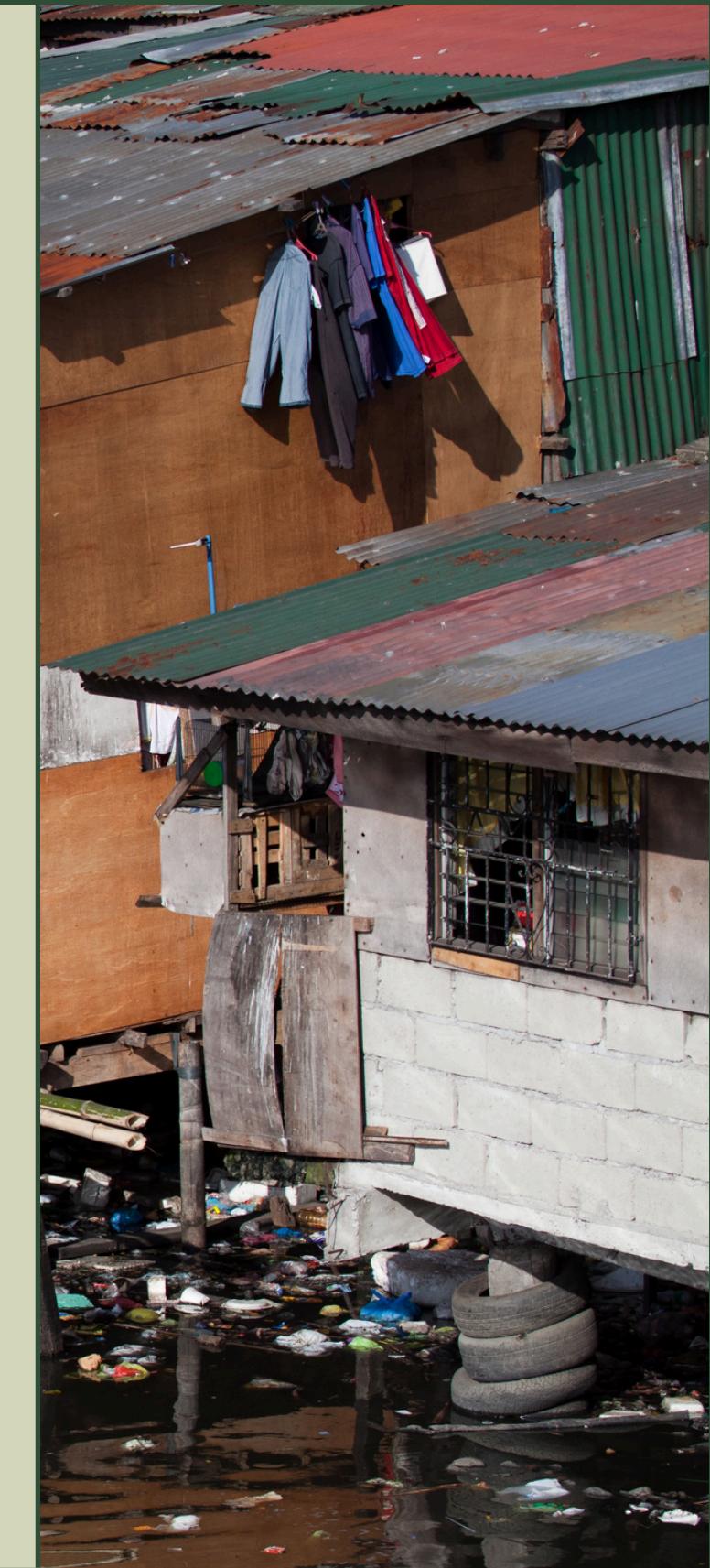
governance and institutional constraints

weak local government capacity

deficient targeting in poverty programs

serious resource gaps for poverty reduction

multidimensional responses as prerequisite to poverty reduction



Challenges of Government's Effort on Poverty Reduction

CHALLENGES

governance and institutional constraints

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deficient targeting in poverty programs



the study focuses on this

serious resource gaps for poverty reduction

multidimensional responses as prerequisite to poverty reduction



MOTIVATION

We want to help the government...



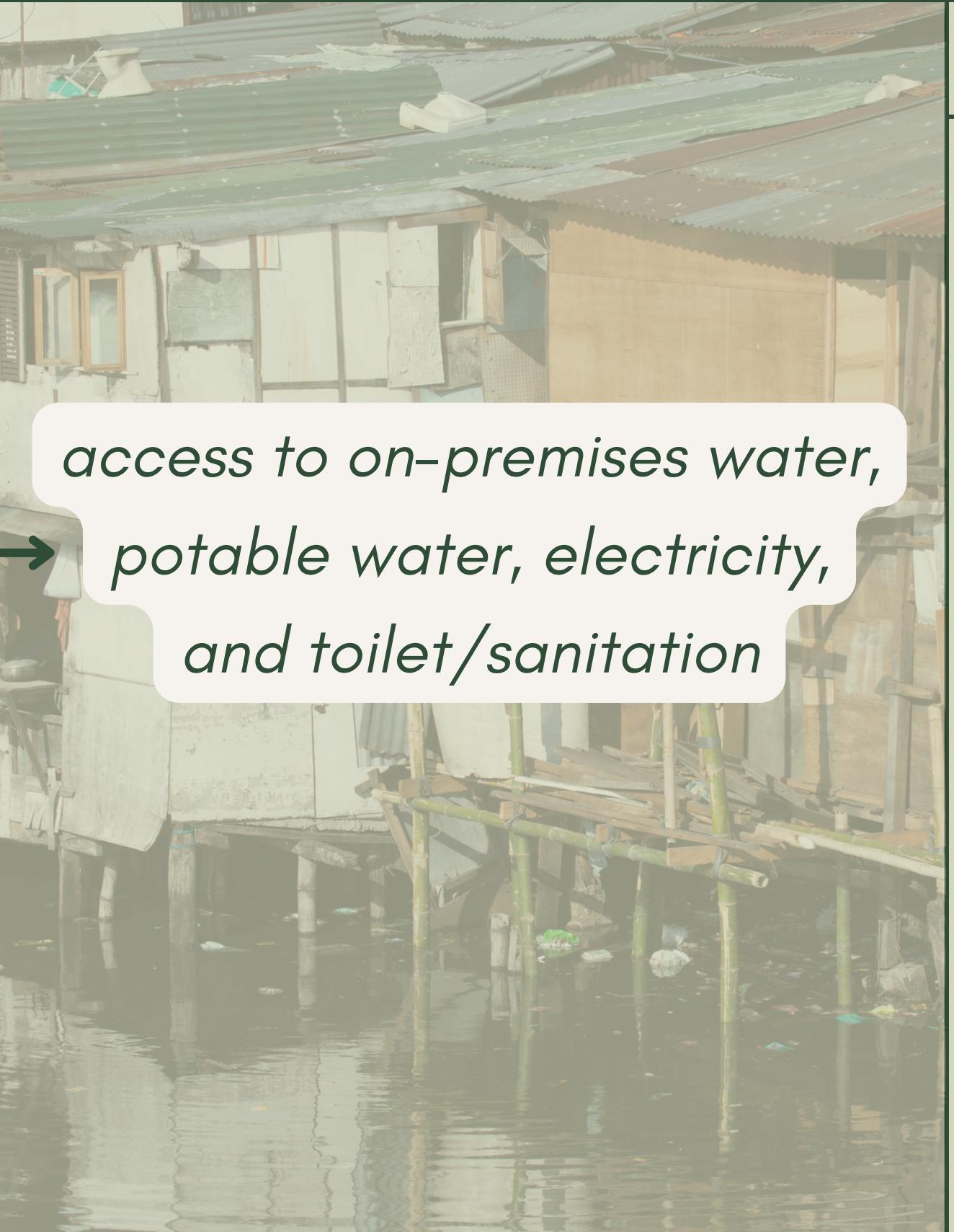
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DATASET

USAID's Demographic and Health Surveys Program

Number of Observations: 27,496

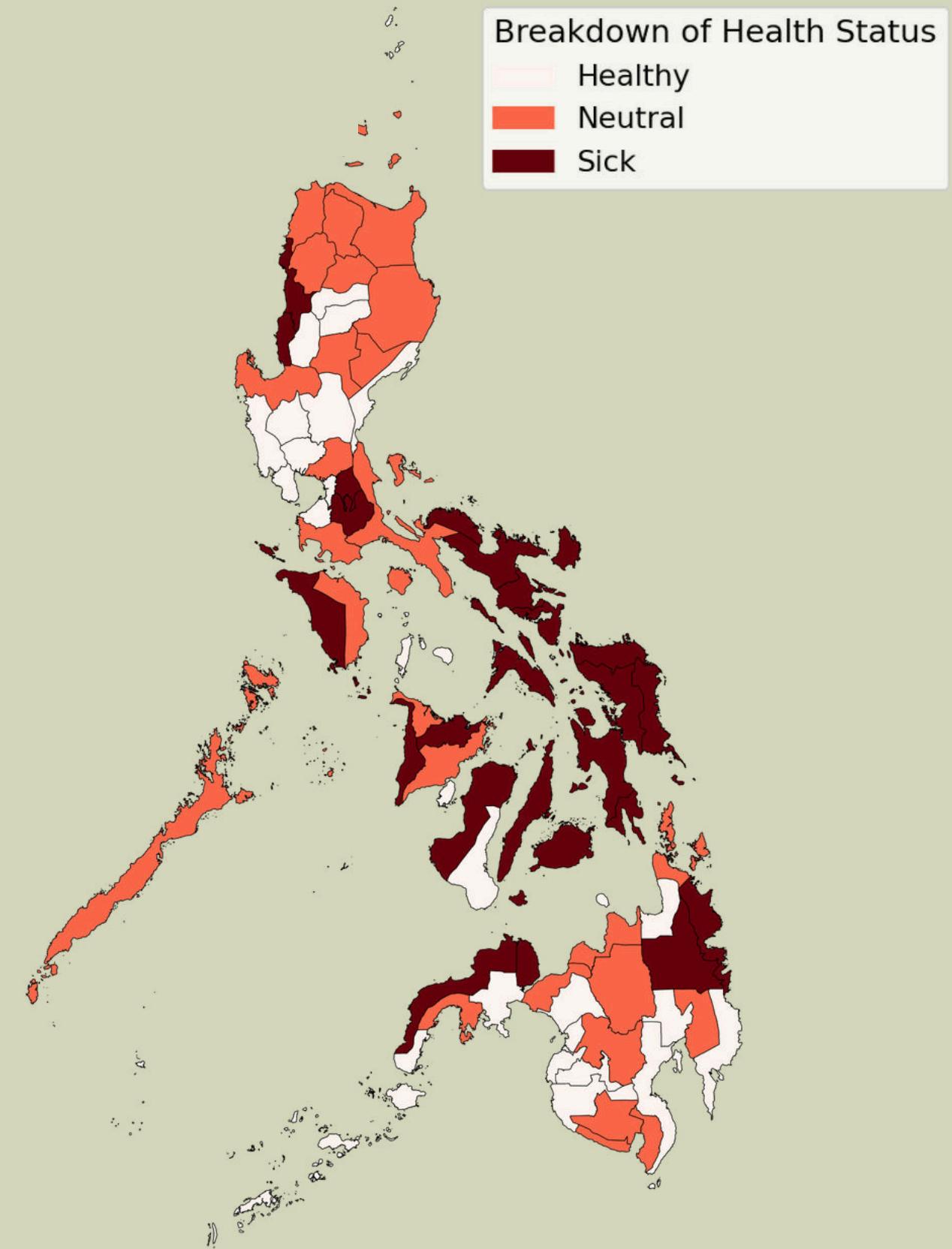
Unit of Observations: Household



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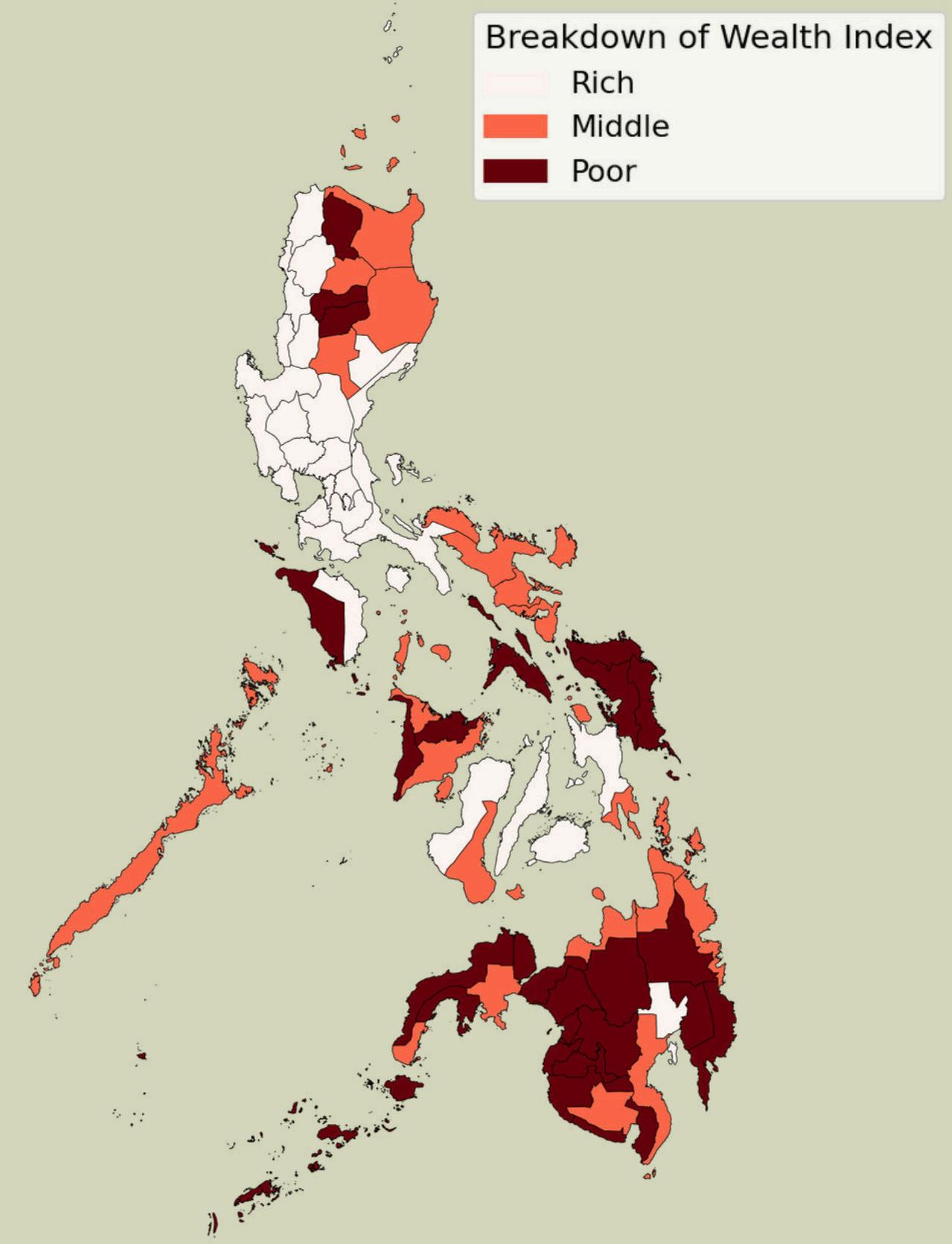
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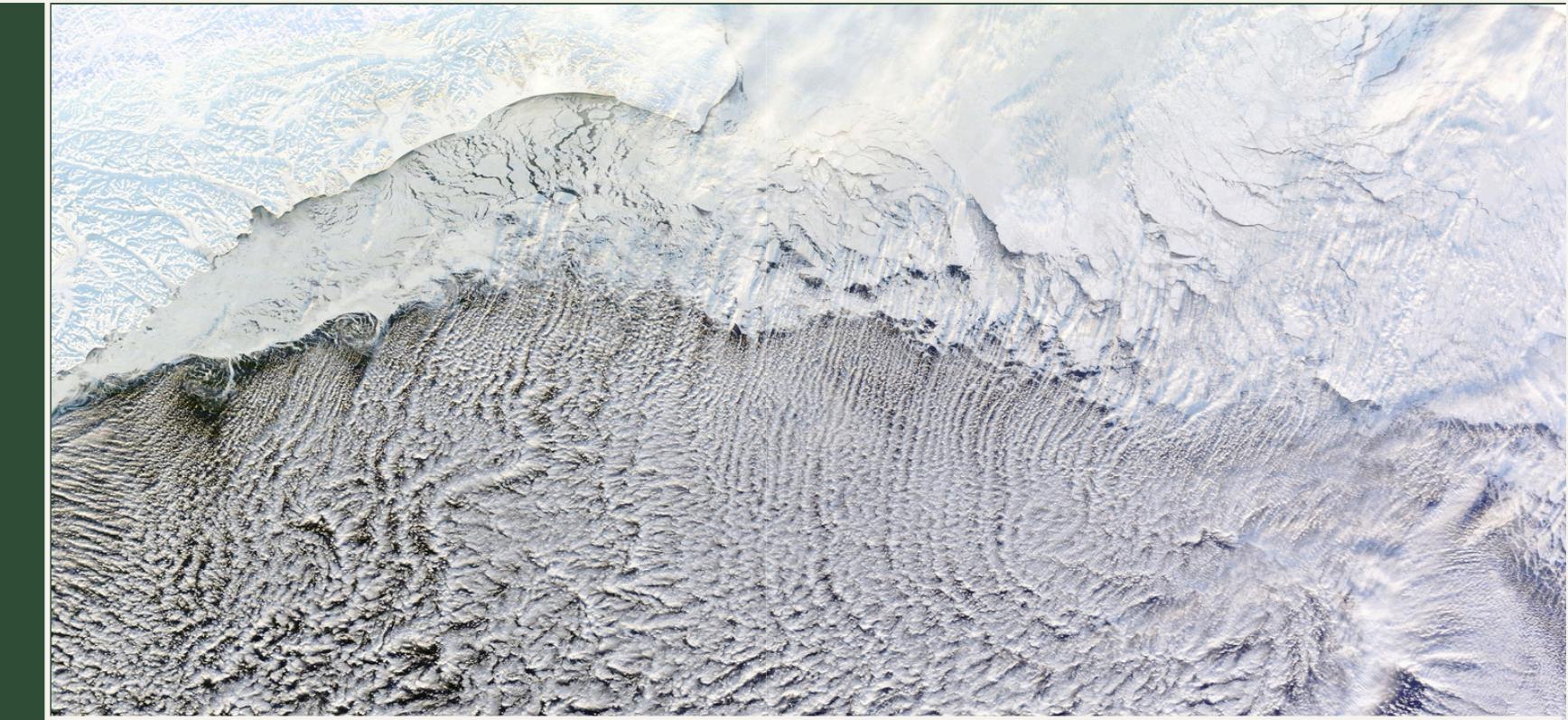


SIGNIFICANCE

**Does poverty contribute
to sickness?**

Is there a significant difference?

We have sufficient evidence to **reject** the **null hypothesis** that the proportions of sick people among the poor and non-poor populations are equal. **More poor people get sick** than non-poor.



A/B Testing

$$H_0 : \hat{p}_{\text{poor}} = \hat{p}_{\text{non-poor}}$$

$$H_1 : \hat{p}_{\text{poor}} > \hat{p}_{\text{non-poor}}$$

PROBLEMS TO SOLVE?

ON-PREMISES WATER

ACCESS TO WATER



A mother using a public faucet to wash her daughter's hand.



Filipinos line up to get water from a public pump.



Filipinos use public deep well to do their laundry.



A poor community without on-premises water.

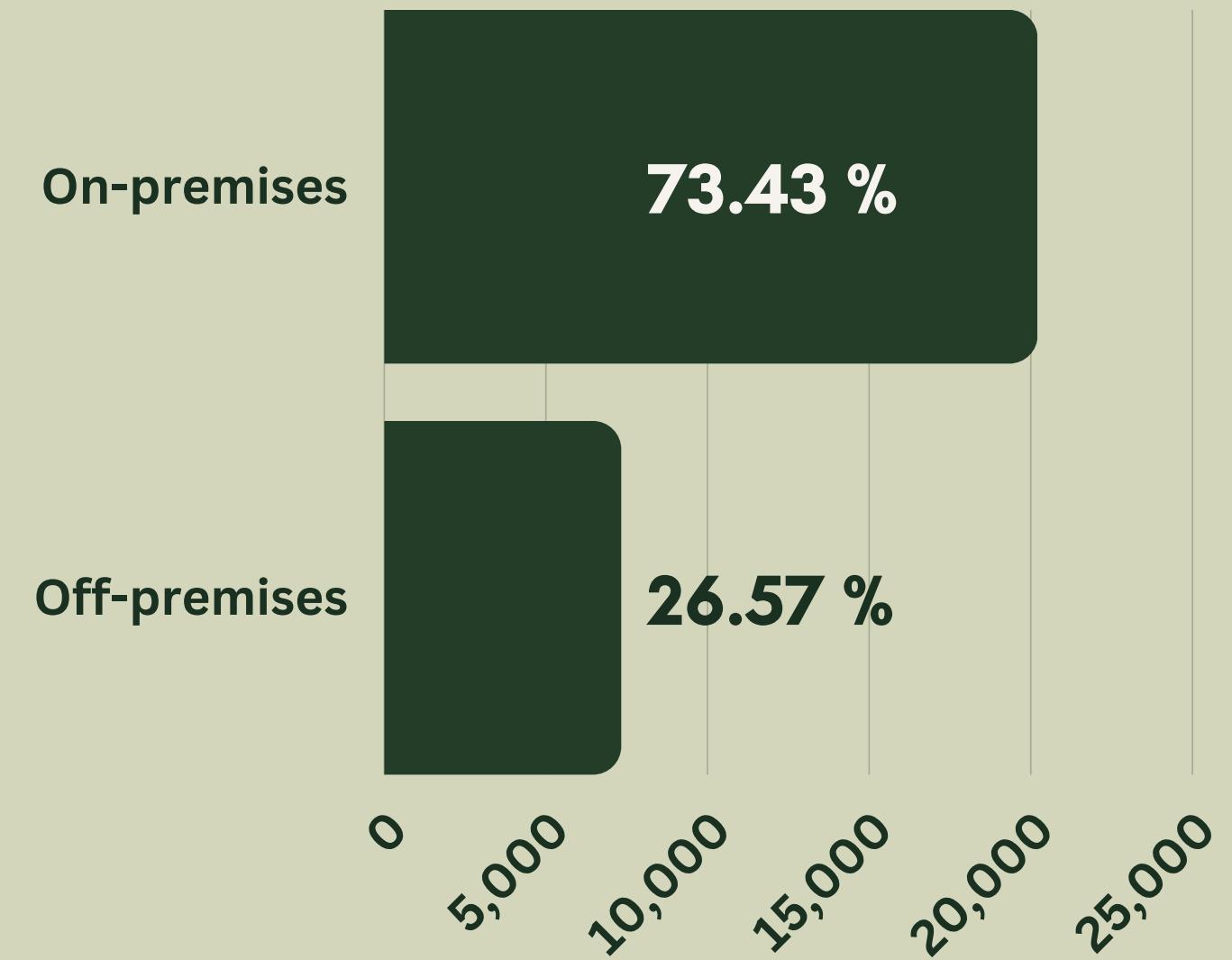
USAID's Demographic and Health Surveys Program

ACCESS TO WATER

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Breakdown of Water Source



Access to On-Premises Water

ACCESS TO WATER

PROVINCE	PERCENTAGE
MOUNTAIN PROVINCE	84.31 %
MASBATE	77.89 %
EASTERN SAMAR	77.48%
LANAO DEL SUR	71.30 %
NORTHERN SAMAR	68.26 %

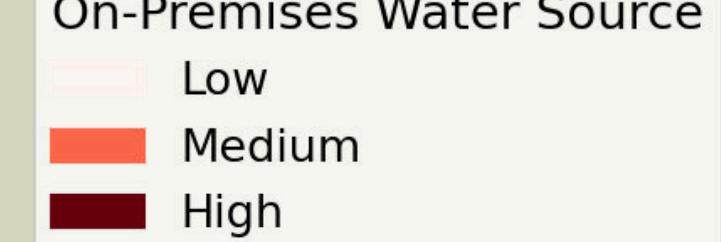
MOUNTAIN PROVINCE

MASBATE

NORTHERN SAMAR

EASTERN SAMAR

LANAO DEL SUR



POTABLE WATER



Filipino kids drinking water straight from a public well.



Filipino kids drink directly from public faucet.



Kid spends his day collecting water for his family.



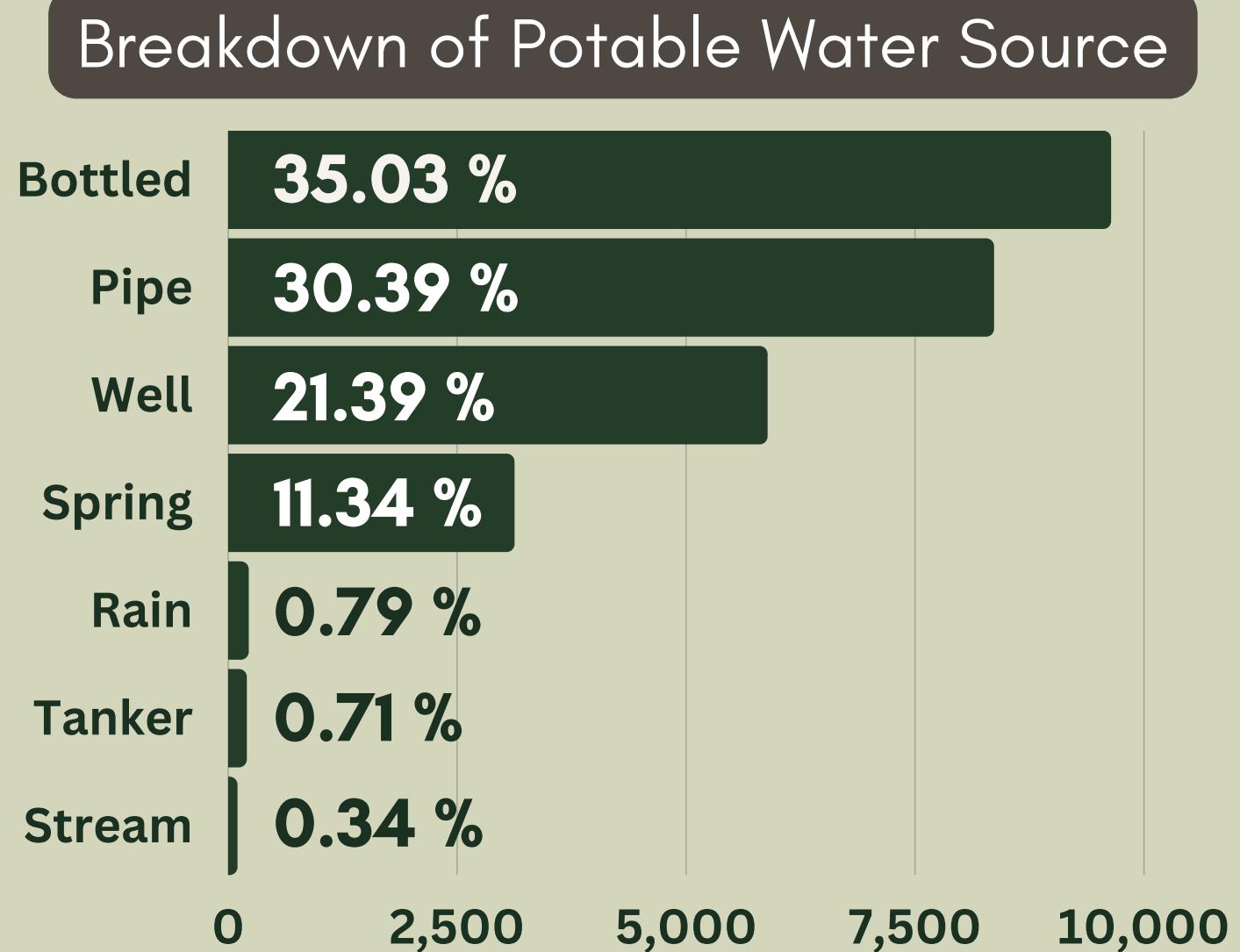
A young Filipino collects water for her from the public hose.

USAID's Demographic and Health Surveys Program

ACCESS TO WATER

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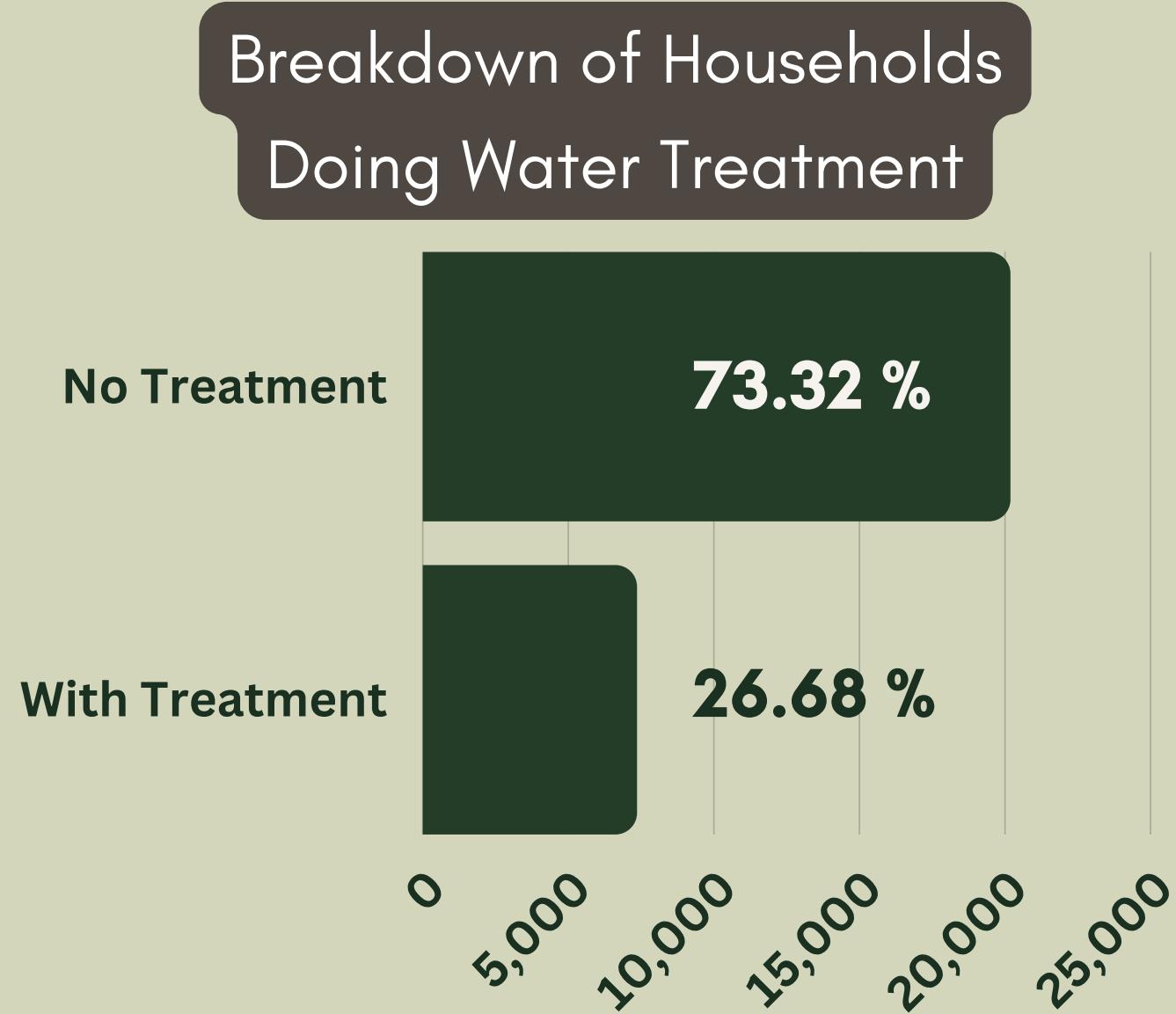


USAID's Demographic and Health Surveys Program

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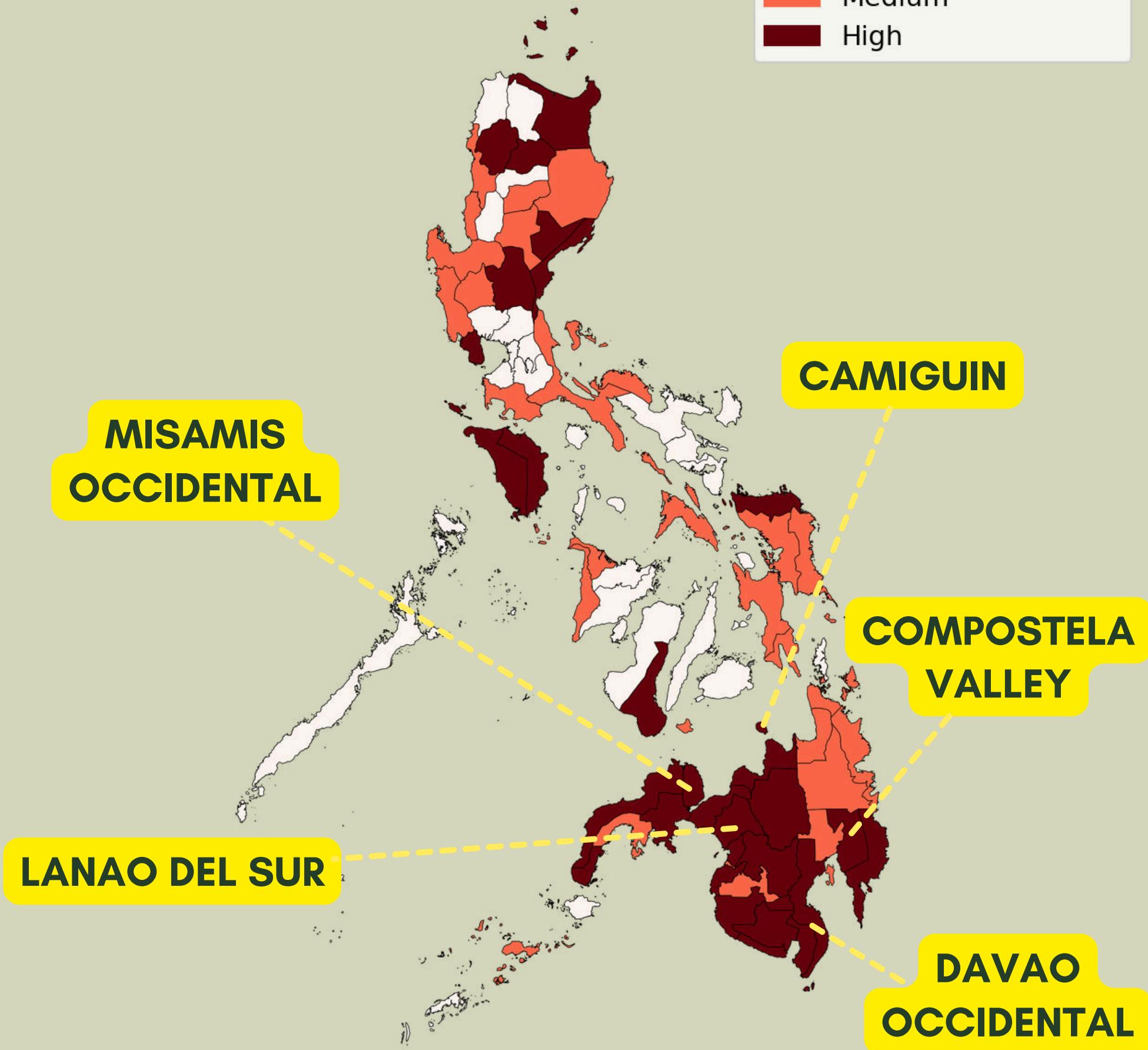
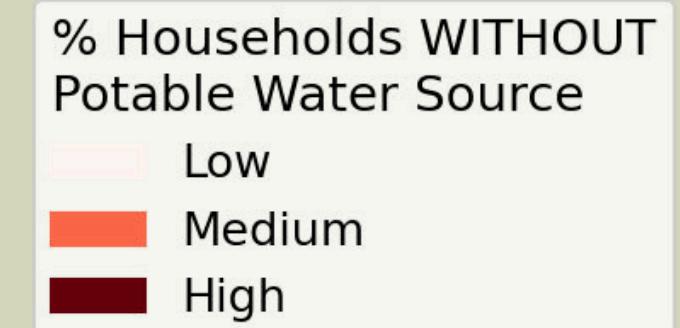
Unit of Observations: Household



Access to Potable Water

ACCESS TO WATER

PROVINCE	PERCENTAGE
DAVAO OCCIDENTAL	82.31 %
MISAMIS OCCIDENTAL	81.09 %
CAMIQUIN	80.70 %
COMPOSTELA VALLEY	78.65 %
LANAQ DEL SUR	73.04 %



ACCESS TO ELECTRICITY



A typical poor Filipino household without access to electricity.

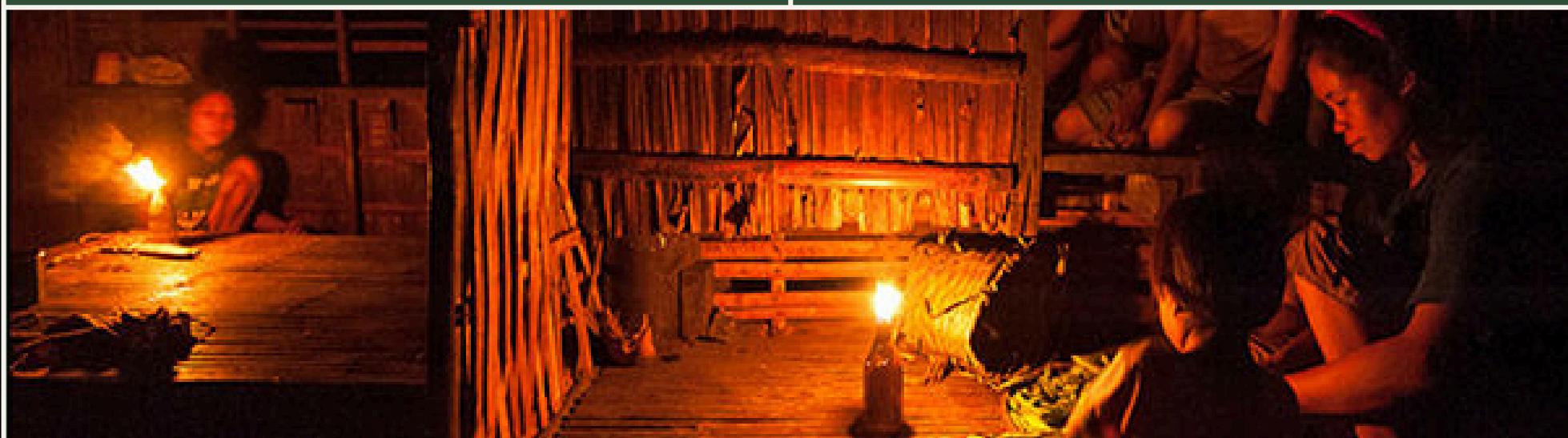
ELECTRICITY



Filipino household uses a portable lamp.



Portable lamp used to read blood pressure.

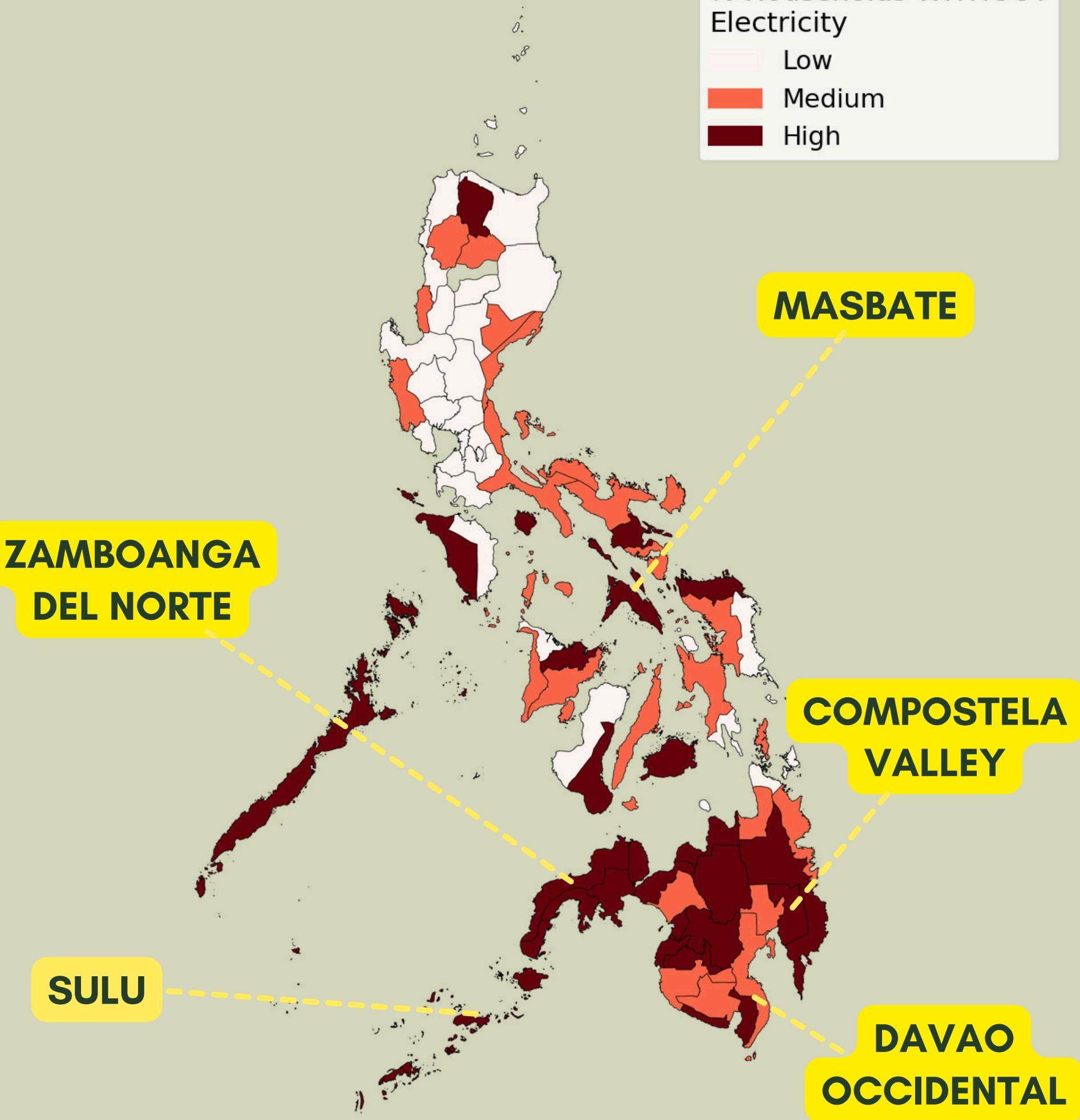
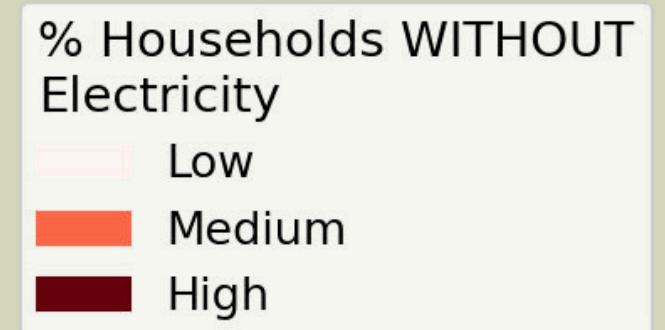


Filipino household use gas lanterns to light up their homes.

Access to Electricity

ACCESS TO ELECTRICITY

PROVINCE	PERCENTAGE
DAVAO OCCIDENTAL	45.24 %
COMPOSTELA VALLEY	37.08 %
SULU	34.48 %
MASBATE	32.65 %
ZAMBOANGA DEL NORTE	24.00 %



TOILET PRACTICES



Poor community using a hanging latrine for their defecation needs.



A hanging latrine surrounded by trash.



Seven families use this pit as their toilet.



Three Filipino kids defecating in severely polluted water.

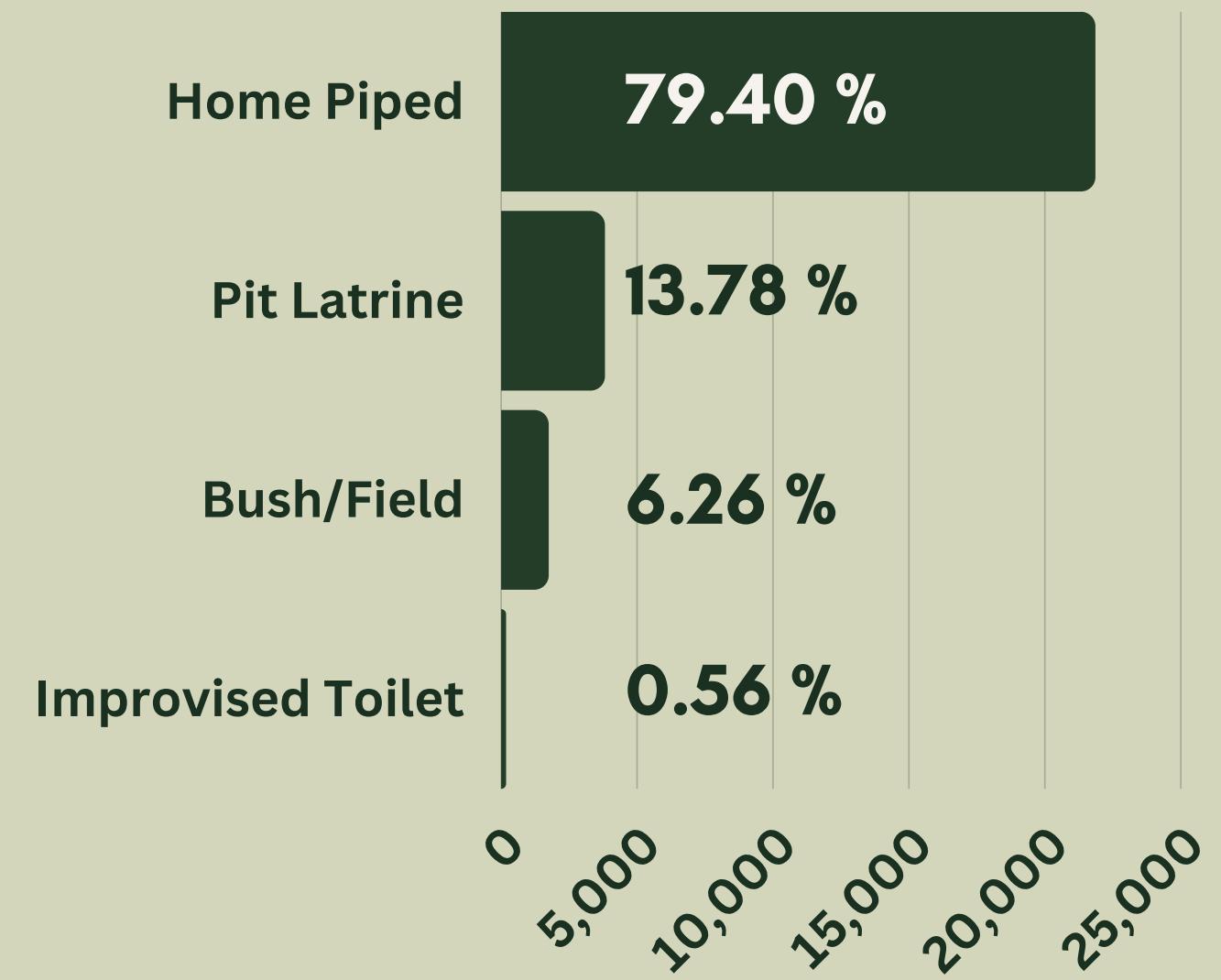
USAID's Demographic and Health Surveys Program

ACCESS TO SANITATION

Number of Observations: 27,496

Unit of Observations: Household

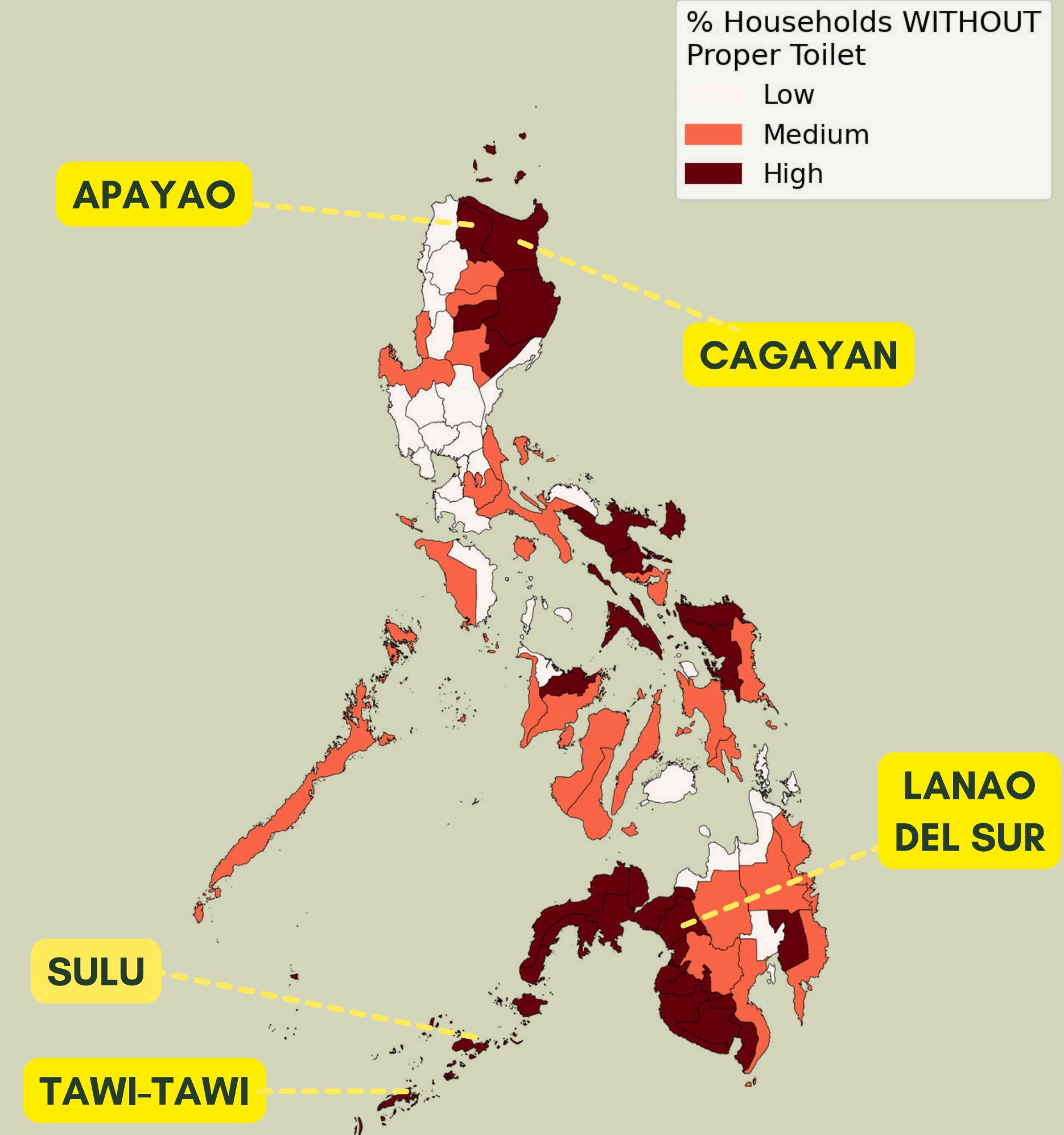
Breakdown of Toilet Practices



Access to Proper Toilet

ACCESS TO SANITATION

PROVINCE	PERCENTAGE
LANAO DEL SUR	94.49 %
SULU	85.27 %
TAWI-TAWI	78.40 %
APAYAO	64.96 %
CAGAYAN	57.91 %



NEWS

Wao town first to achieve zero defecation status in Lanao del Sur

Published on: December 20, 2022

By Apipa Bagumbaran



"My dream for Wao is for everyone, especially the children, to have access to clean and safe water and sanitation facilities. I hope children grow healthy so they can achieve their dreams."

Gwen Manzanilla, Rural Sanitary Inspector

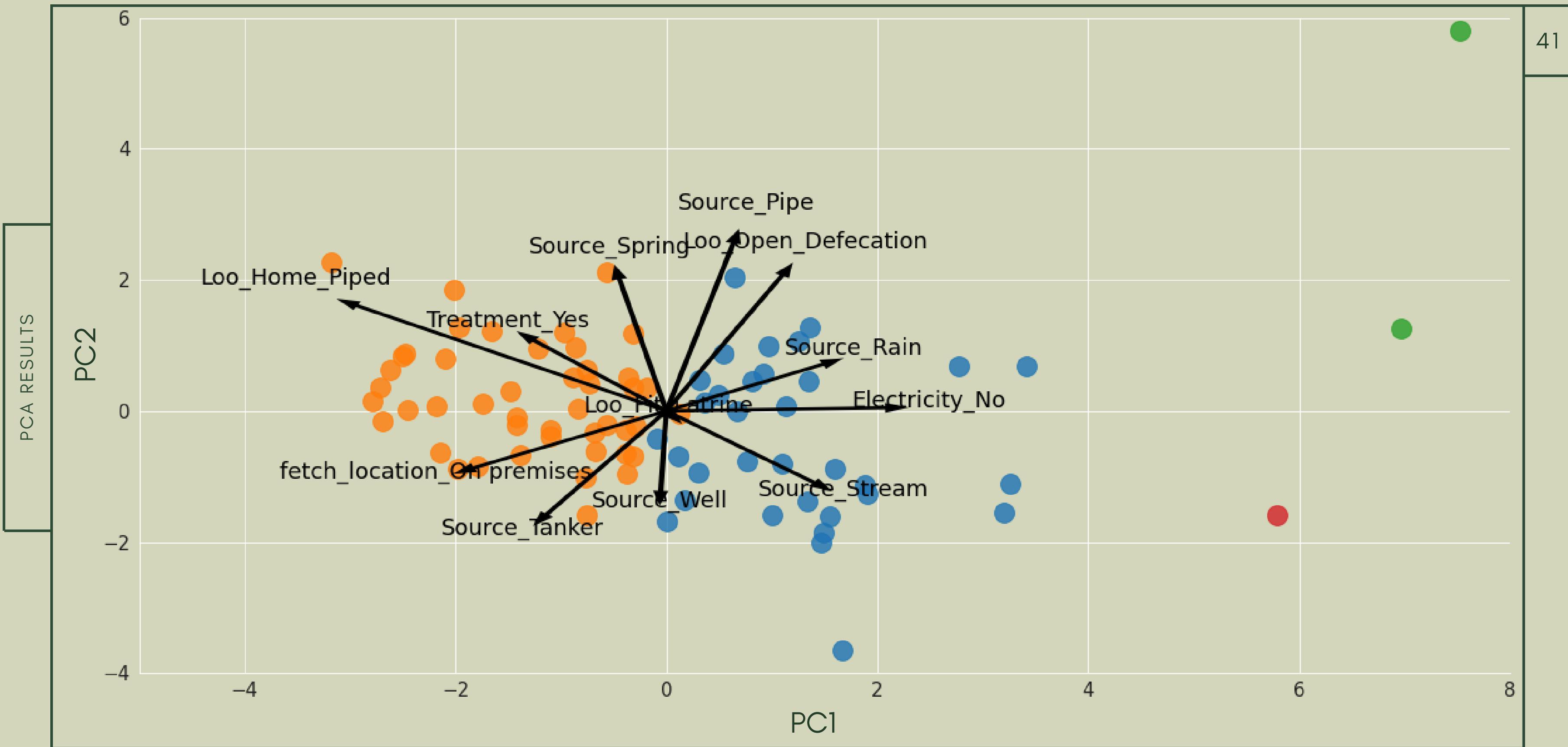
Press release

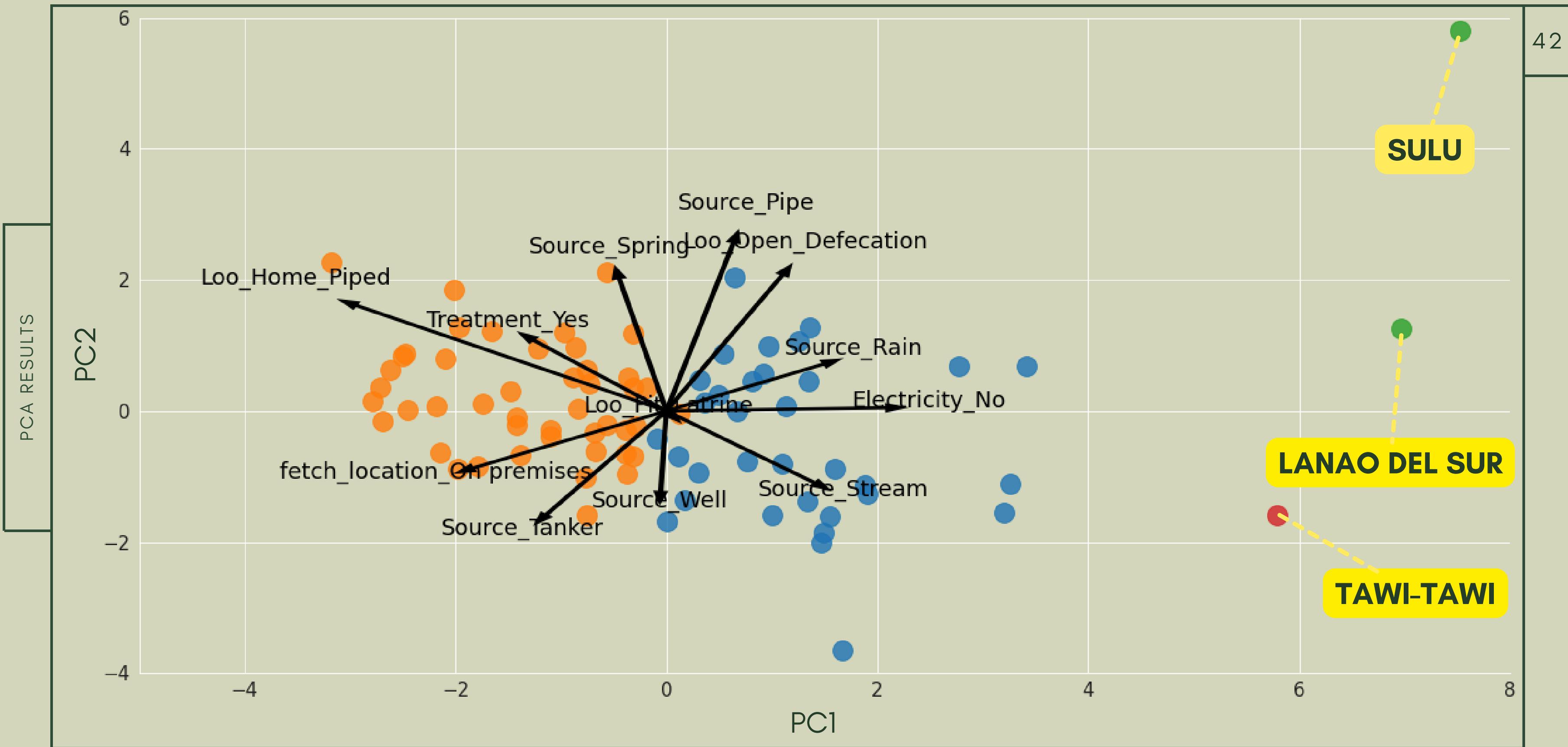
Five-fold increase in municipal targets needed to end open defecation by 2025

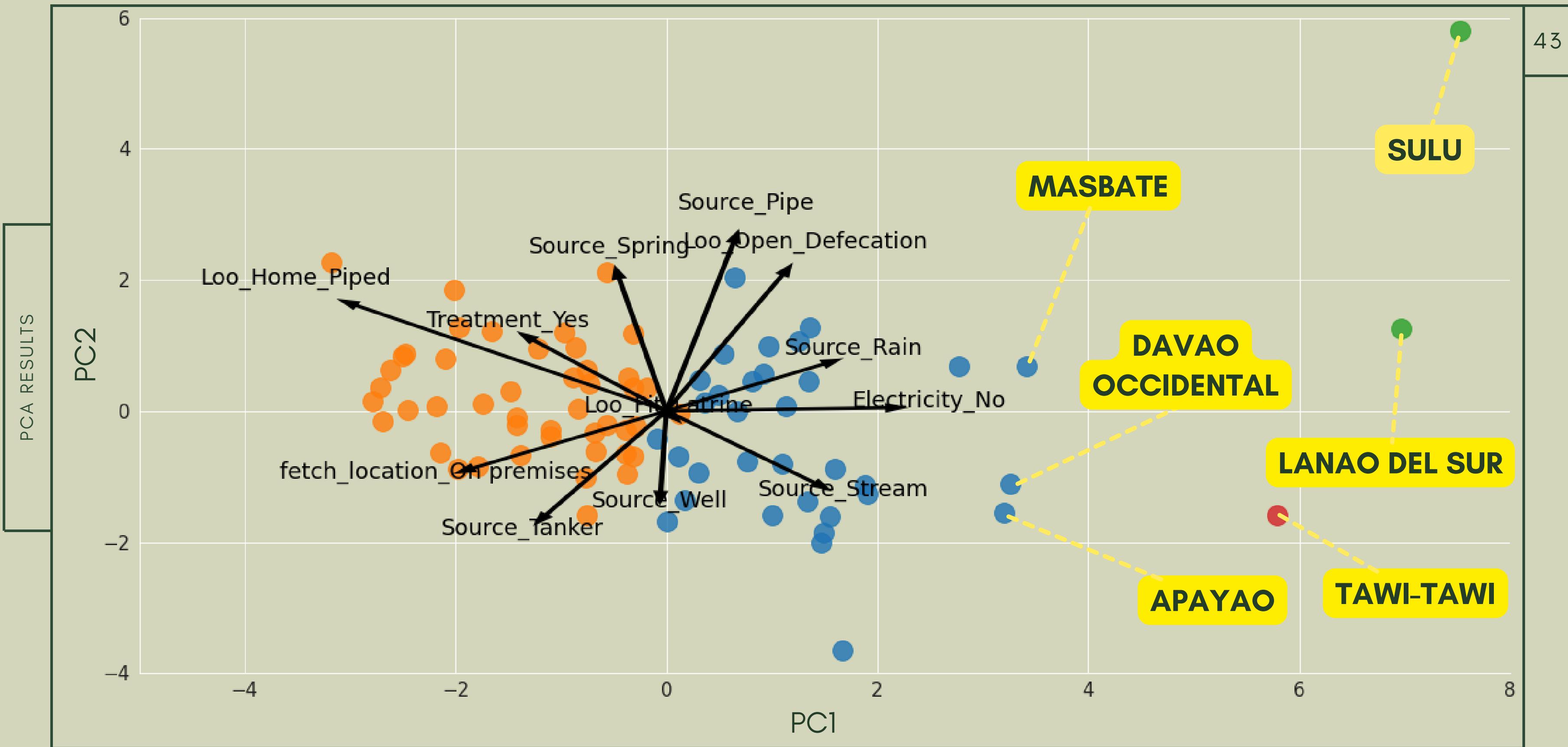
Joint press release

19 November 2021

PRIORITIZATION WITH CLUSTERING







CLUSTERING RESULTS

Assistance Priority

CLUSTERING

SULU

access to electricity

access to sanitation facilities

LANAO DEL SUR

access to sanitation facilities

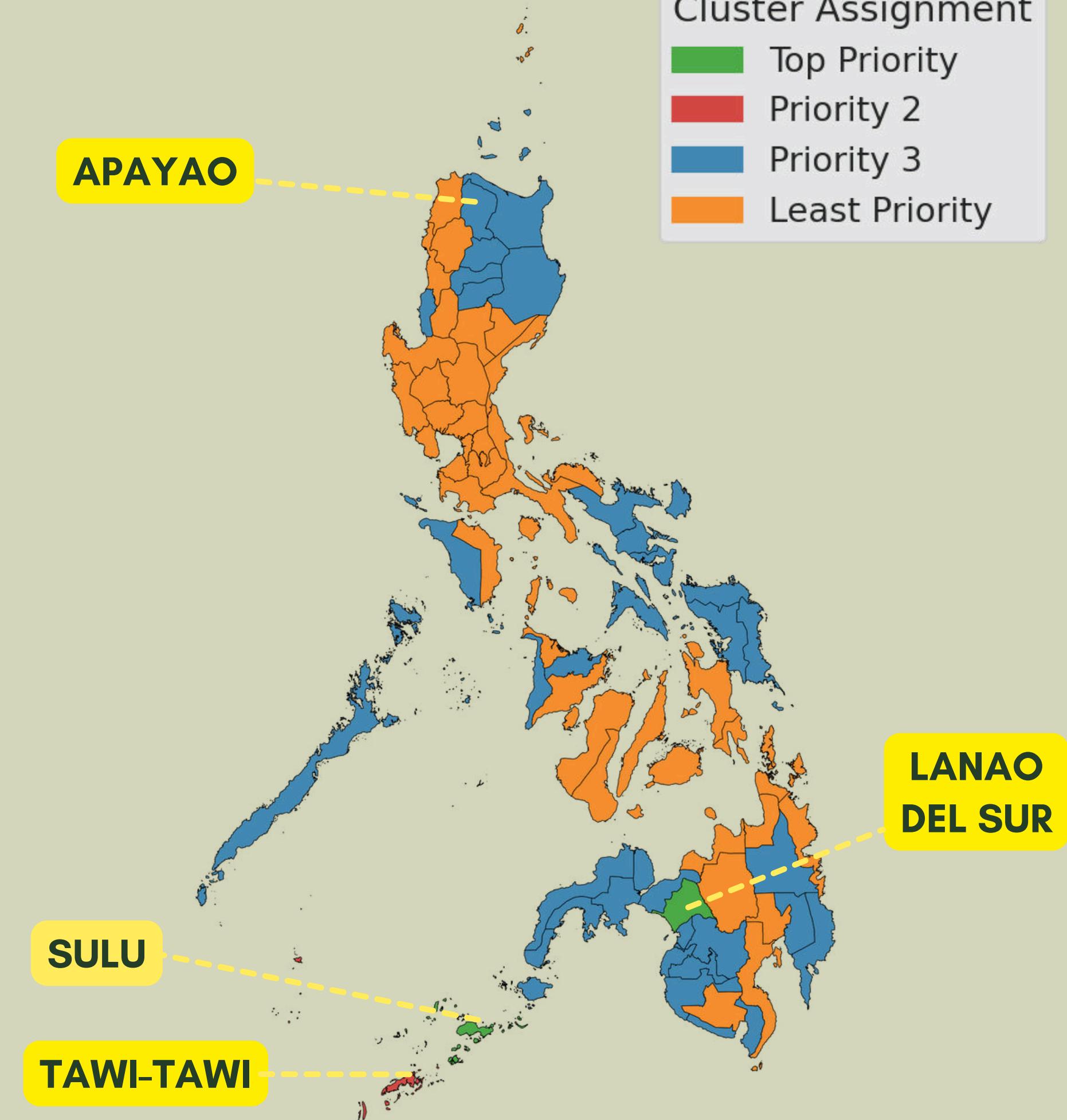
access to nearer water sources

access to clean and safe water

TAWI-TAWI

access to sanitation facilities

46



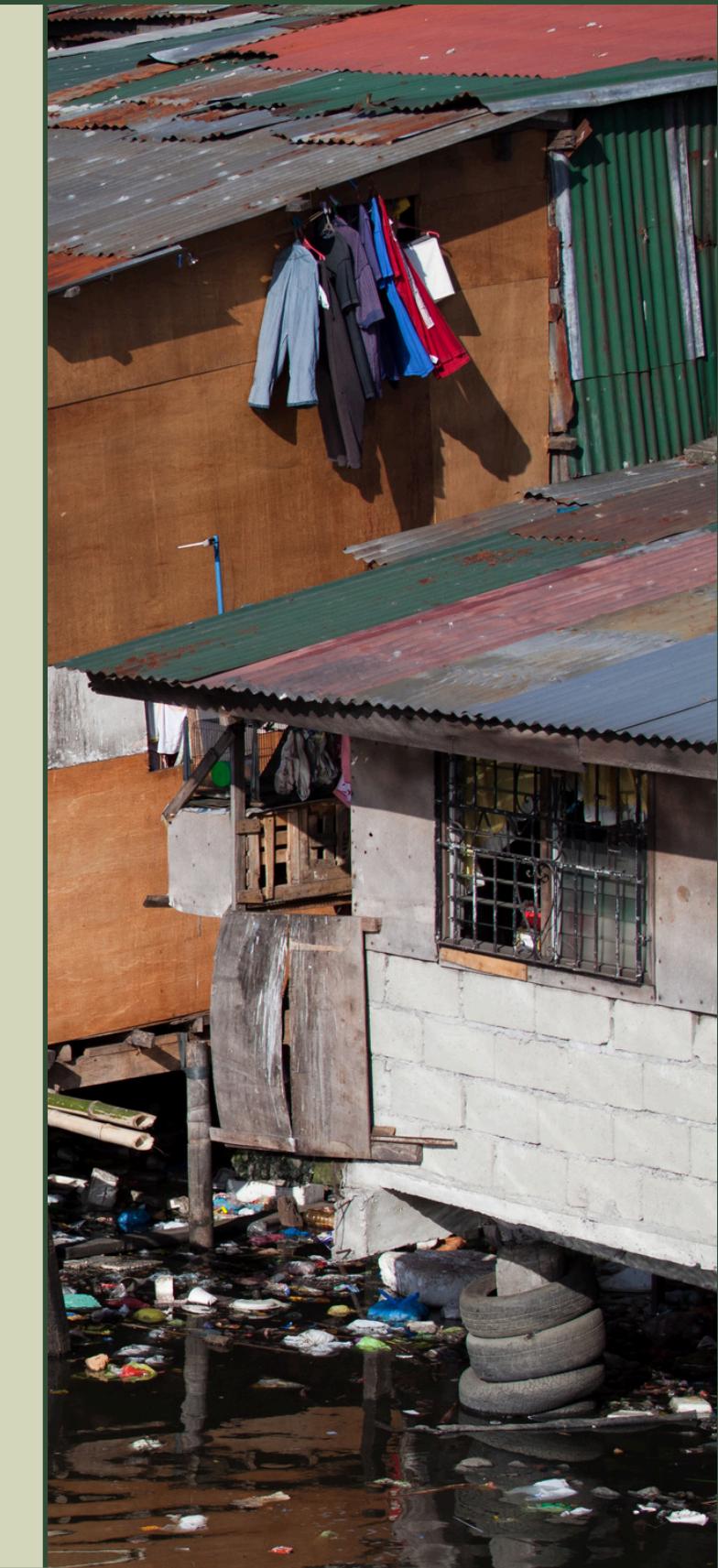
KEY TAKEAWAYS

Key Takeaways

Poverty reduction initiatives should be prioritized in **the southern regions of the country** (mostly in the Mindanao island).

Top Priority Cluster (Lanao del Sur, Sulu) **requires greater assistance** in terms of poverty reduction than any other provinces in the Philippines.

High priority areas need access to **safe water sources** and **sanitation facilities the most**. Access to electricity comes second.



THANK YOU!

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