Relating Rural Access Index and Poverty in the Philippines

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Outline

I.   Introduction

II. Methodology

III. Results and Discussion

IV. Ways Forward

1. Introduction

- The Sustainable Development Goals (SDGs) is a set of goals, targets, and indicators that the UN member states agreed to pursue attainment by the year 2030.
  - ✓ Primary aim: inclusive and sustainable life for every people, regardless of their gender, age, race, and other vulnerabilities and the protection of the planet and the environment

- One of the many SDG indicators is SDG 9.1.1. - "Proportion of the rural population who live within 2 kilometer of an all-season road" or **RURAL ACCESS INDEX (RAI).**

1. Introduction (cont.)

- RAI is an indicator that can help policymakers craft plans and projects towards rural development in terms of road accessibility which may help in poverty alleviation.

- This presentation aims to provide the following:
  1. Rural access index for the Philippines (regional and provincial level)
  2. Comparison of RAI with the poverty statistics of the Philippines

2. Methodology

| What data and software are needed?	
1. Administrative boundary maps (regional and provincial level)	PSA
2. Map with urban-rural classification	PSA
3. Road network map	PSA
4. Gridded population map (2015)	WorldPop
5. QGIS software	
6. 2015 Poverty Estimates (regional and provincial level)	PSA

2. Methodology (cont.)

- The generation of RAI is divided into three parts:
    1. Estimation of the rural population at the desired administrative level
    2. Estimation of the rural population living within the 2-km radius from an all-season road
    3. Actual computation of RAI from the results of the two prior procedures

2. Methodology (cont.)

- For the comparison of RAI and poverty statistics, correlation coefficient will be calculated on the regional and provincial level.
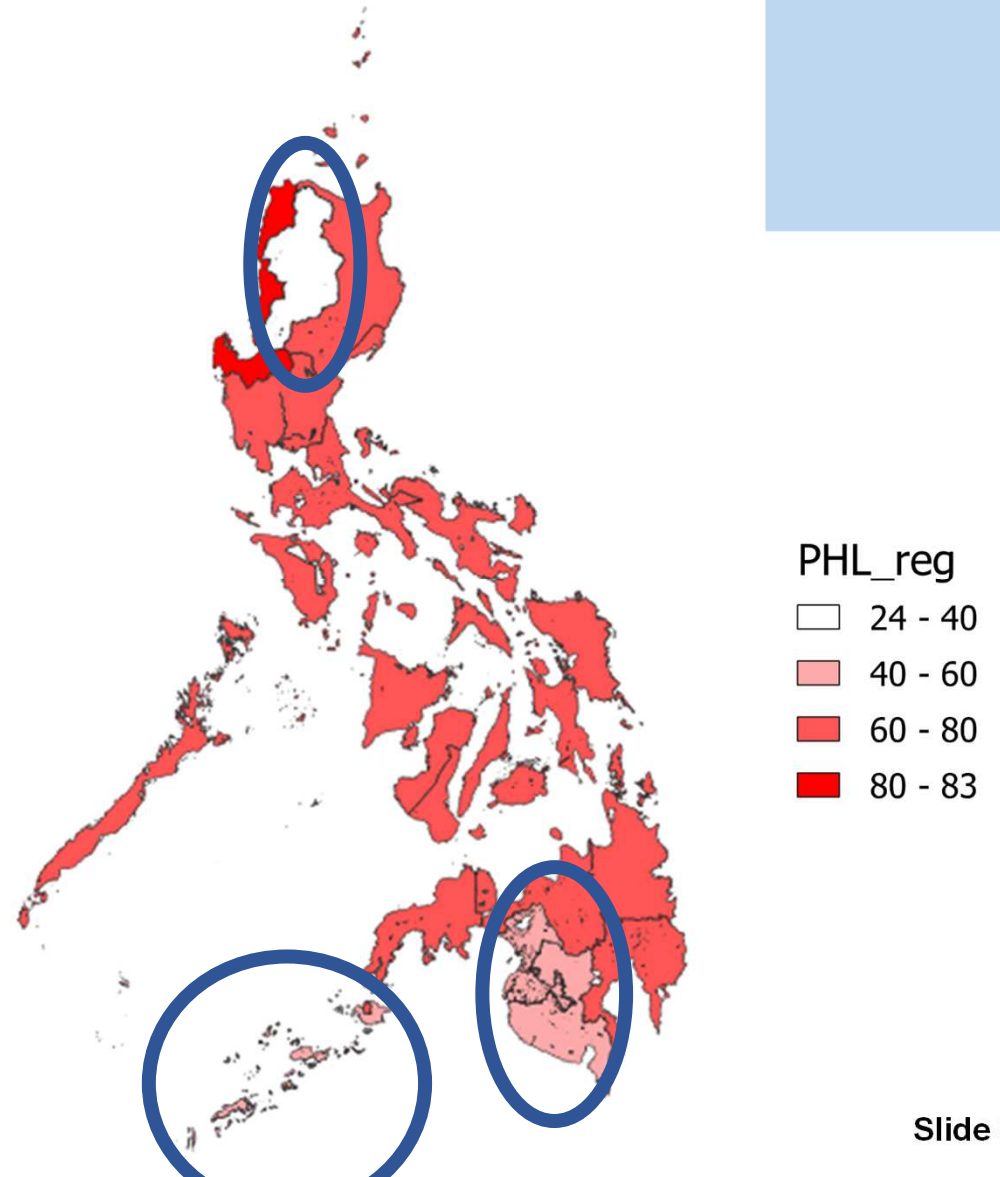
3. Results and Discussion

- **Region I (83.159%)** has the highest RAI followed by **Region III (78.114%)**.


PHL_reg

- 24 - 40
- 40 - 60
- 60 - 80
- 80 - 83
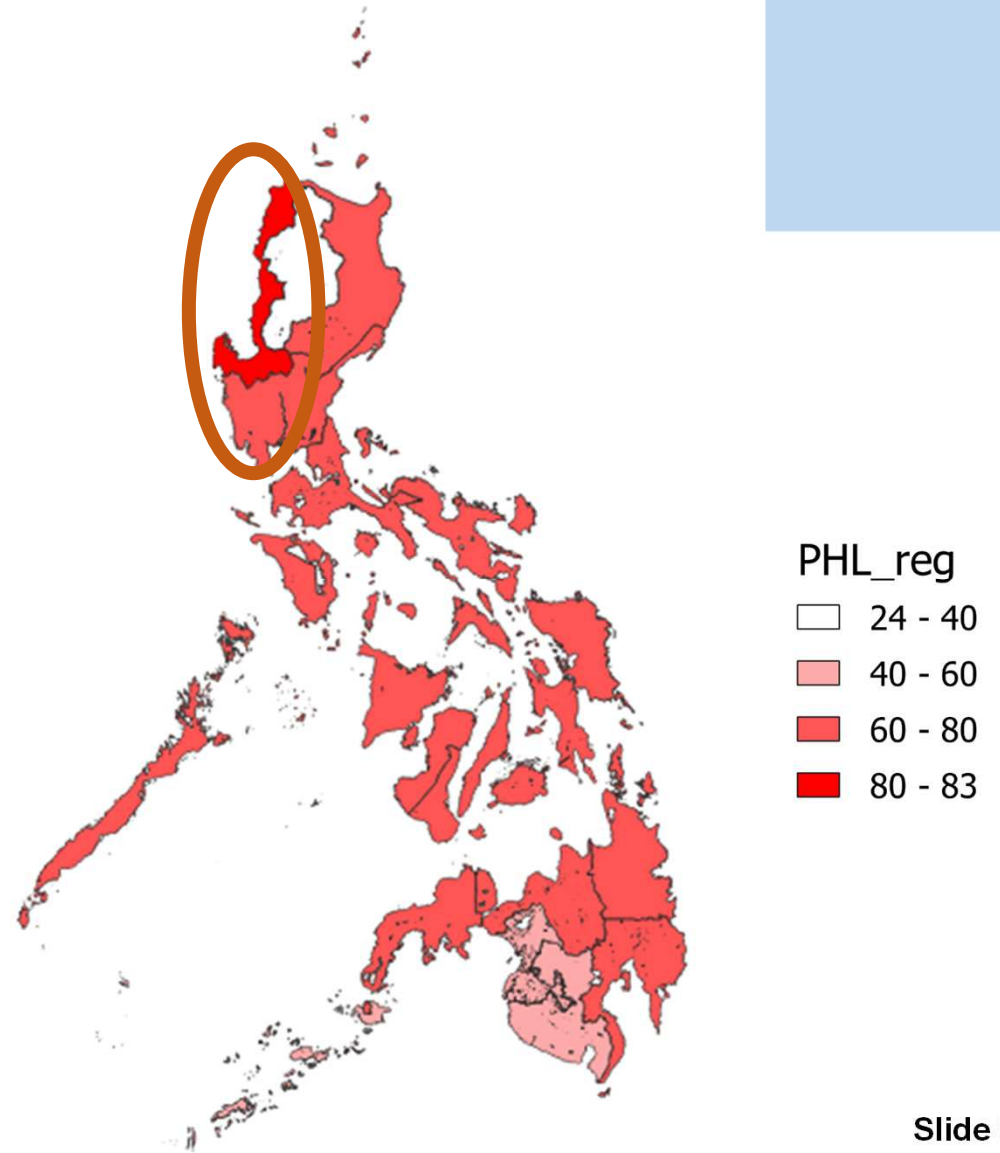
3. Results and Discussion (cont.)

- On the other hand, **Cordillera Administrative Region (23.797%)** has the lowest RAI followed by the **Autonomous Region in Muslim Mindanao (49.396%).**


PHL_reg
- 24 - 40
- 40 - 60
- 60 - 80
- 80 - 83

3. Results and Discussion (cont

- **The five provinces with the highest RAI are the following:**
  - Batanes (96.191%)
  - Marinduque (95.150%)
  - Ilocos Norte (92.480%)
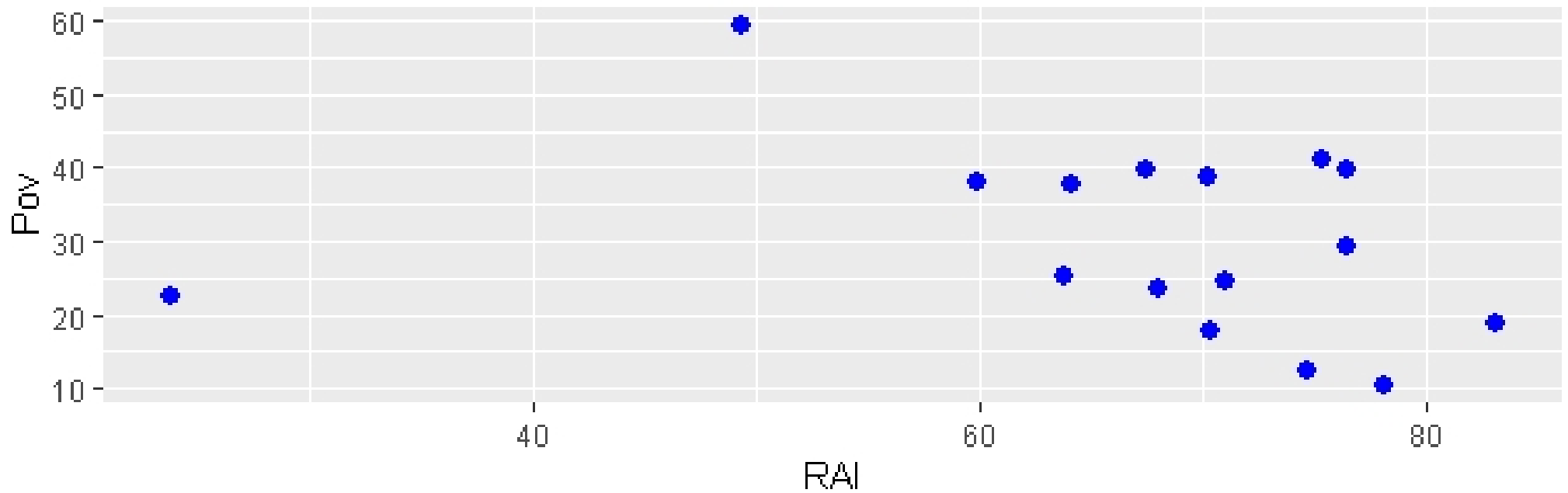 - Cavite (92.259%)
  - Southern Leyte (91.733%)

PHL_prov

- 0 - 20
- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100
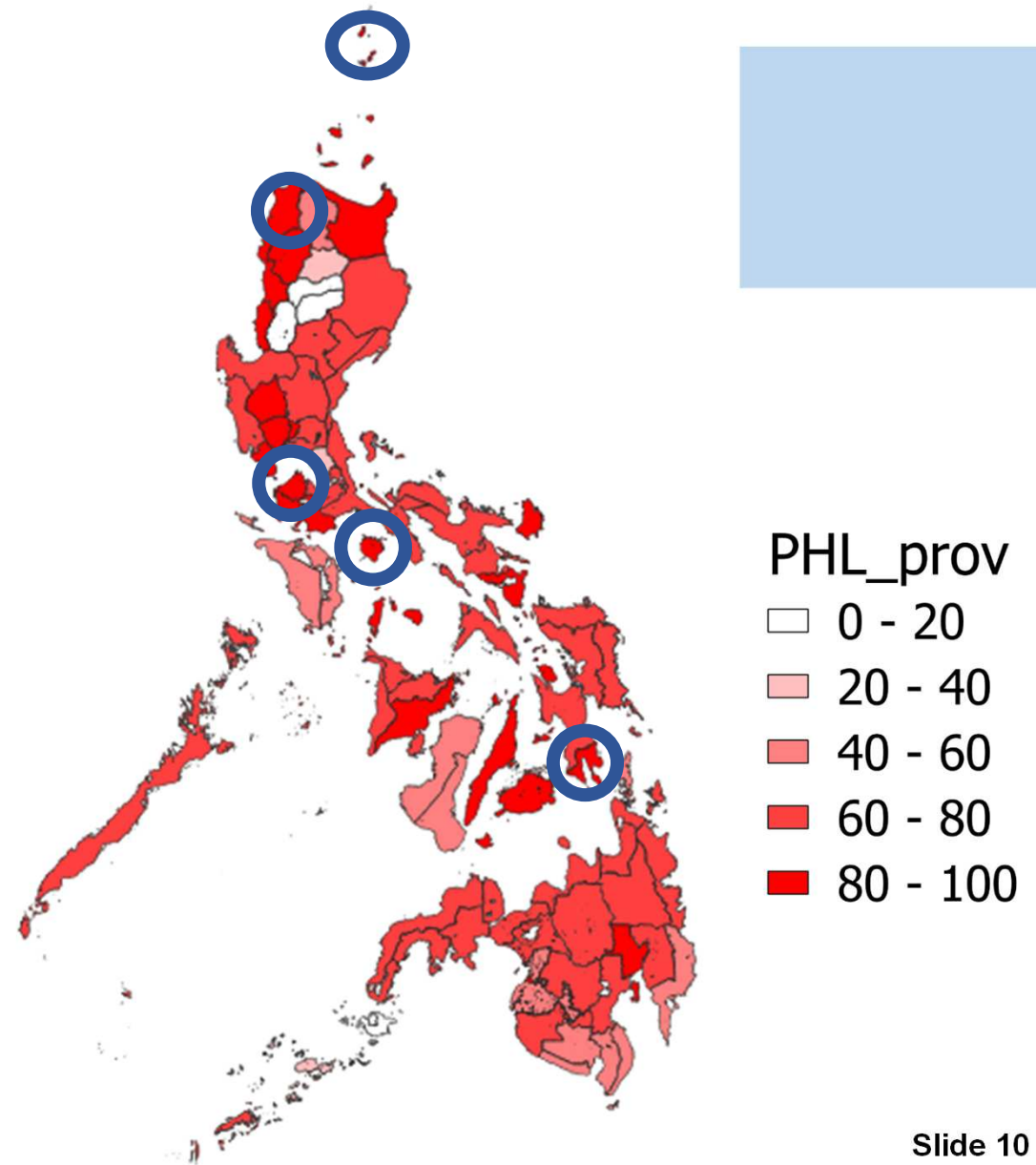
3. Results and Discussion (cont

- **The five provinces with the lowest RAI are the following:**
  - Basilan (0.000%)
  - City of Isabela* (0.000%)
  - Mountain Province (0.602%)
  - Benguet (1.735%)
  - Ifugao (6.546%)

PHL_prov
- 0 - 20
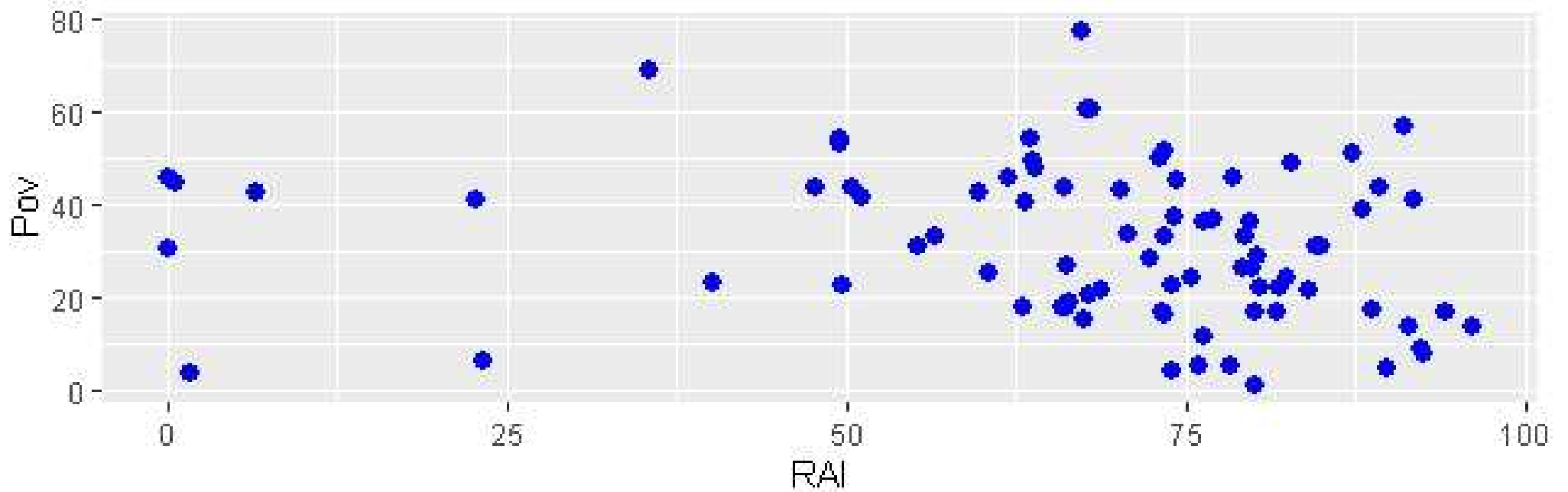- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100
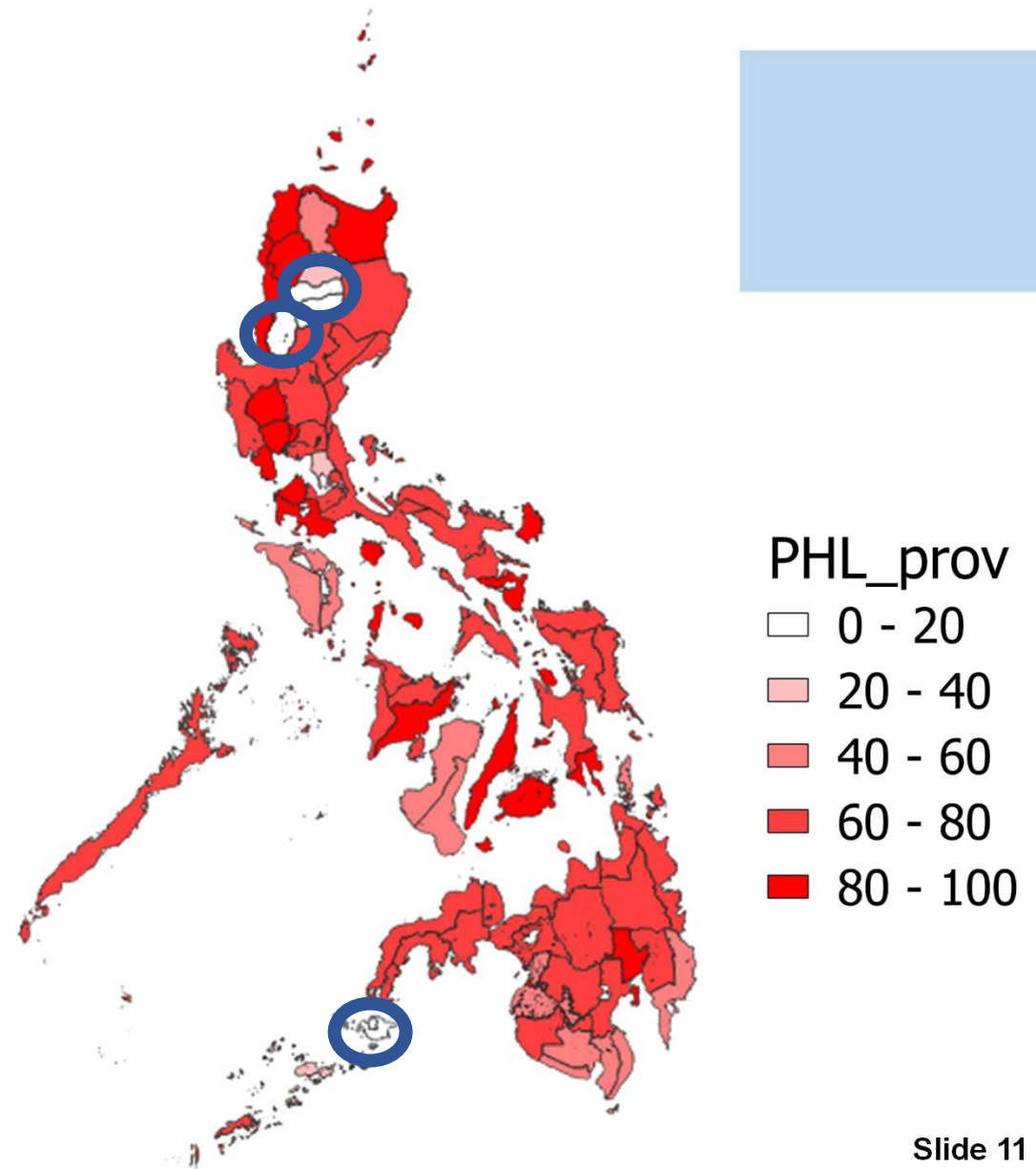
3. Results and Discussion (cont.)

Correlation between regional RAI and regional poverty estimates (2015) = -0.2403008

3. Results and Discussion (cont.)

Correlation between provincial RAI and provincial poverty estimates (2015) = -0.1927116

4. Ways Forward

- The methodology used still needs to be refined. Other factors such as elevation and presence of bodies of water needs to be factored in.

Photo from Dreamstime

- The methodology used still needs to be refined. Other factors such as elevation and presence of bodies of water needs to be factored in.

Photo from Getty Images

- Developed own model-based gridded population map and urban-rural distribution maps

Photo from Google Developers

4. Ways Forward (cont.)

- Policymakers should not fully rely on developing road networks for rural areas to alleviate poverty. Other aspects of the people's lives should be looked into (e.g. employment, education, health, etc.)
  - Do we need to develop more roads to reach rural areas? OR Can we move residents residing in far-flung areas nearer to all-season roads? [Which is more cost-efficient?] - for areas with low RAI
  - For areas with high RAI and high poverty incidence, have we already stopped after building roads?

Thank you!

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