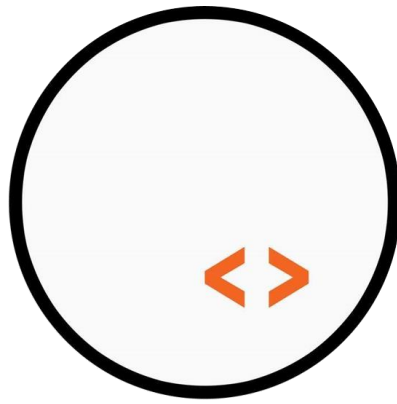


OPEN BANGSAMORO

Open Data for the Transition
from the ARMM to the BARMM



DATA ETHICS PH



Overcome Development Challenges through Visualization Dashboards

An Entry for Bangsamoro Data Challenge

by Amistad, Adam and dela Cruz, Karlo

Outline



- ▶ Introduction

- ▶ Motivation

- ▶ Dashboard



Introduction

Our Team

Our Team



Adam

Senior Data Analyst



Karlo

Data Scientist



Outline

- ▶ Introduction
- ▶ Motivation
- ▶ Dashboard

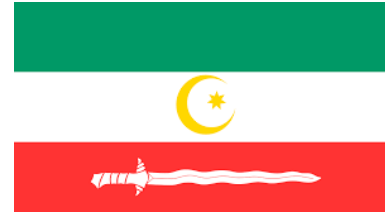


Motivation

Development Challenges

Solution

Bangsamoro



The Bangsamoro Organic Law or BOL (Republic Act No. 11054) provides for the creation of the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), and it covers the provinces of Basilan, Lanao del Sur, Maguindanao, Sulu, and Tawi-Tawi, the same provinces as ARMM.

Will the BOL usher the start of poverty reduction in the region?

Bangsamoro Challenges

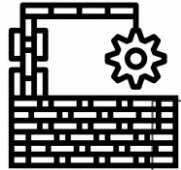
Some Development Challenges Identified:

1. Low economic base
2. Limited access to credit
3. Weak support to the Halal industry
4. Insufficient irrigation systems
5. Inadequate infrastructure support facilities (connective, water, electricity)
6. Weak revenue generation
7. Weak functionality of some LGUs
8. Insufficient delivery of services

Some **Persisting** Development Challenges Identified:

9. Low education outcomes
10. Public order, peace, and security challenges
11. Vulnerabilities due to disasters (man-made and natural, climate change)
12. Low infrastructure density
13. Encroachment into forested and protected areas due to unmanaged population growth and unregulated urbanization
14. Uneven local governance performance and service delivery

Bangsamoro Challenges



Group 1: Infrastructure

- 1 – Low economic base
- 4 – Insufficient irrigation systems
- 5 – Inadequate infrastructure support facilities (connective, electricity, water)
- 12 – Low infrastructure density
- 13 - Encroachment into forested areas due to unmanaged population and unregulated urbanization trends



Group 2: Economic

- 1 – Low economic base
- 2 – Limited access to credit
- 3 – Weak support to the Halal industry
- 4 – Insufficient irrigation systems
- 6 – Weak revenue generation capacity
- 13 - Encroachment into forested areas due to unmanaged population and unregulated urbanization trends



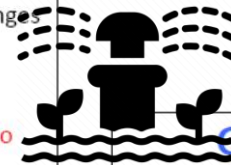
Group 5: Governance, Peace & Order

- 6 – Weak revenue generation capacity
- 7 – Weak functionality of some LGUs
- 8 – Insufficient delivery of services
- 10 – Public order, peace, and security challenges
- 11 – Vulnerabilities to disaster (man-made, natural, climate change)
- 13 - Encroachment into forested areas due to unmanaged population and unregulated urbanization trends
- 14 - Uneven local governance performance and service delivery



Group 3: Social

- 8 – Insufficient delivery of services
- 9 – Low education outcomes
- 13 - Encroachment into forested areas due to unmanaged population and unregulated urbanization trends
- 14 - Uneven local governance performance and service delivery



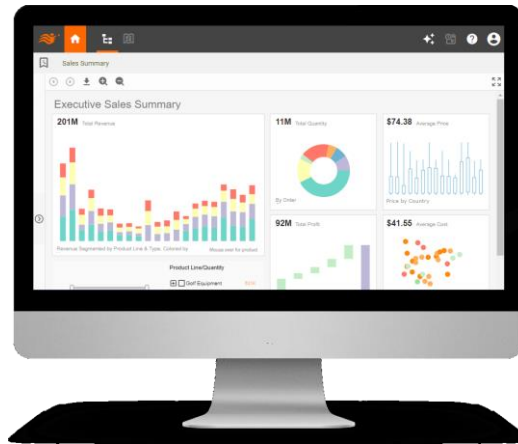
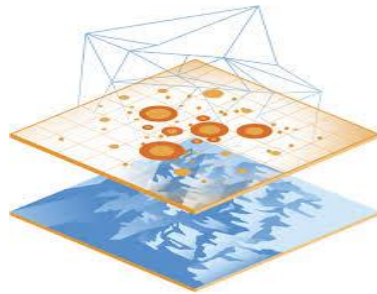
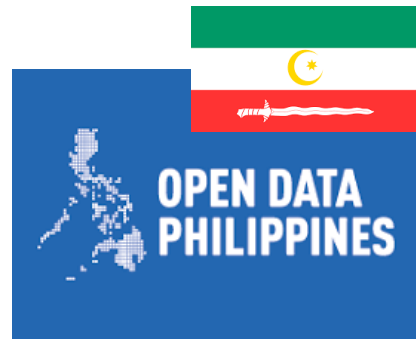
Group 4: Physical/Environmental

- 11 – Vulnerabilities to disaster (man-made, natural, climate change)
- 13 - Encroachment into forested areas due to unmanaged population and unregulated urbanization trends

Current Development Challenges are Grouped into these Categories

Solution

- Develop Generation Visualization Dashboard that address current development challenges for Bangsamoro Region.



“Proper Governance Guided by Data”

Outline



- ▶ Introduction

- ▶ Motivation

- ▶ Dashboard



Dashboard

Visualization Dashboard - Education

Sources

Note

Visualization Dashboard

Education



This Dashboard address social concerns on low education outcomes in Bangsamoro region. Using the spatial and school data, the dashboard presents the current progress of education in the region.

This Dashboard guides LGUs on how to mitigate problem in Public Education, such as building schools at the right location, hire right number of teachers, etc.



School Type

- ☐ Private
- ☐ Public
- ☐ SUC

School Category

- ☐ Elementary
- ☐ High School
- ☐ MD
- ☐ SUC

2,643

Number of Schools

1,570

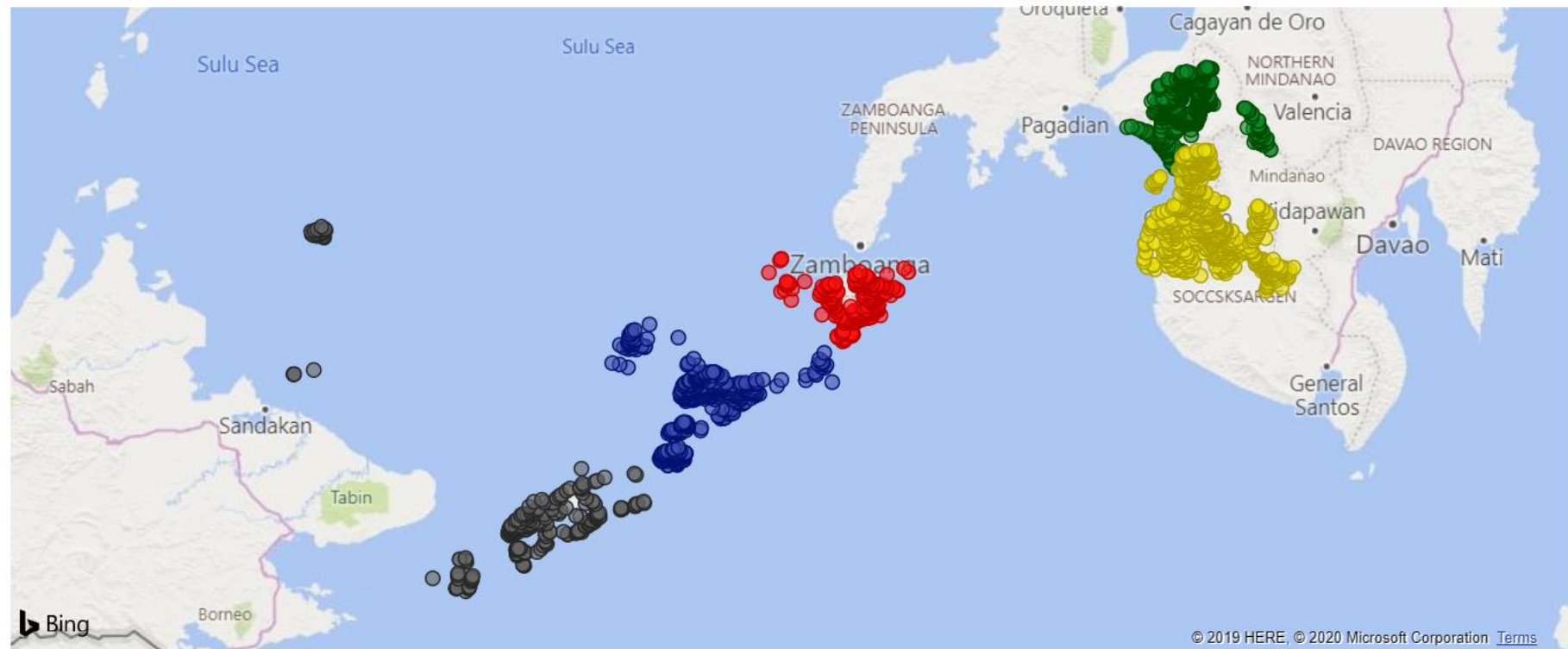
Number of Barangays

2,505

No. of Mapped Schools

118

No. of Municipalities



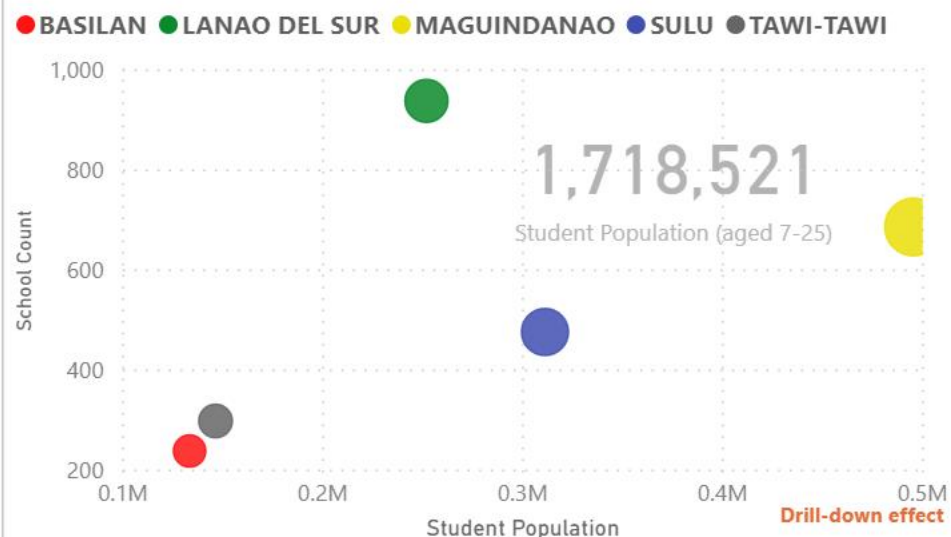
© 2019 HERE, © 2020 Microsoft Corporation [Terms](#)

Location

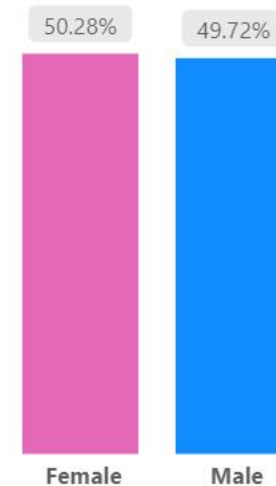
Hierarchy Filter: All

- ☒ BASILAN
 - ☒ Akbar
 - ☐ Caddayan
 - ☐ Linongan
 - ☐ Lower Bato-bato
 - ☐ Mangalut
 - ☐ Semut
 - ☐ Upper Bato-Bato
 - ☒ Al-Barka
 - ☒ CITY OF LAMITAN
 - ☒ Hadji Mohammad
 - ☒ Hadji Muhtamad
 - ☒ Lamitan City

School Count and Student Population Correlation



Student Population by Gender



Elementary Teachers Population (aged 15 and above)

117,763

Teachers Per Brgy

75

Teachers Per School

54

Students Per Teacher

● BARMM Avg ● National Avg

15

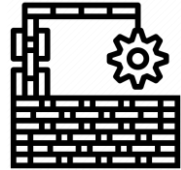
30

Sources

<https://app.powerbi.com/view?r=eyJrljoiNzRkZTA2ZmQtMWQ4NS00YmE5LTllZGUtZGI1MzU0Mzc1YTk2liwidCI6ImE2NTFIM2M3LTU1M2ItNGNmNy05Y2I3LTFIMDZjYjQ0MWIwYSIsImMiOiJlEwfQ%3D%3D>

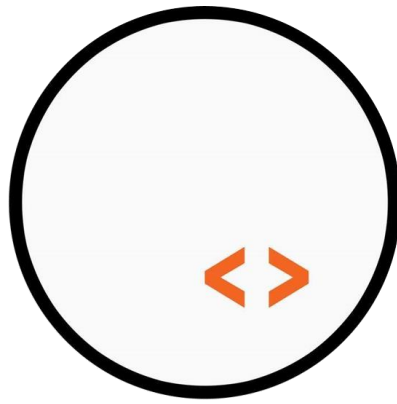
Note

Given a Chance to be Selected, we can expand our topic on other development challenges, such as Infrastructure, Peace & Order, Economic and Environmental.



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END