Country Led Innovations to Address Low Data Challenges- Ghana's Experience

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Ghana Statistical Service
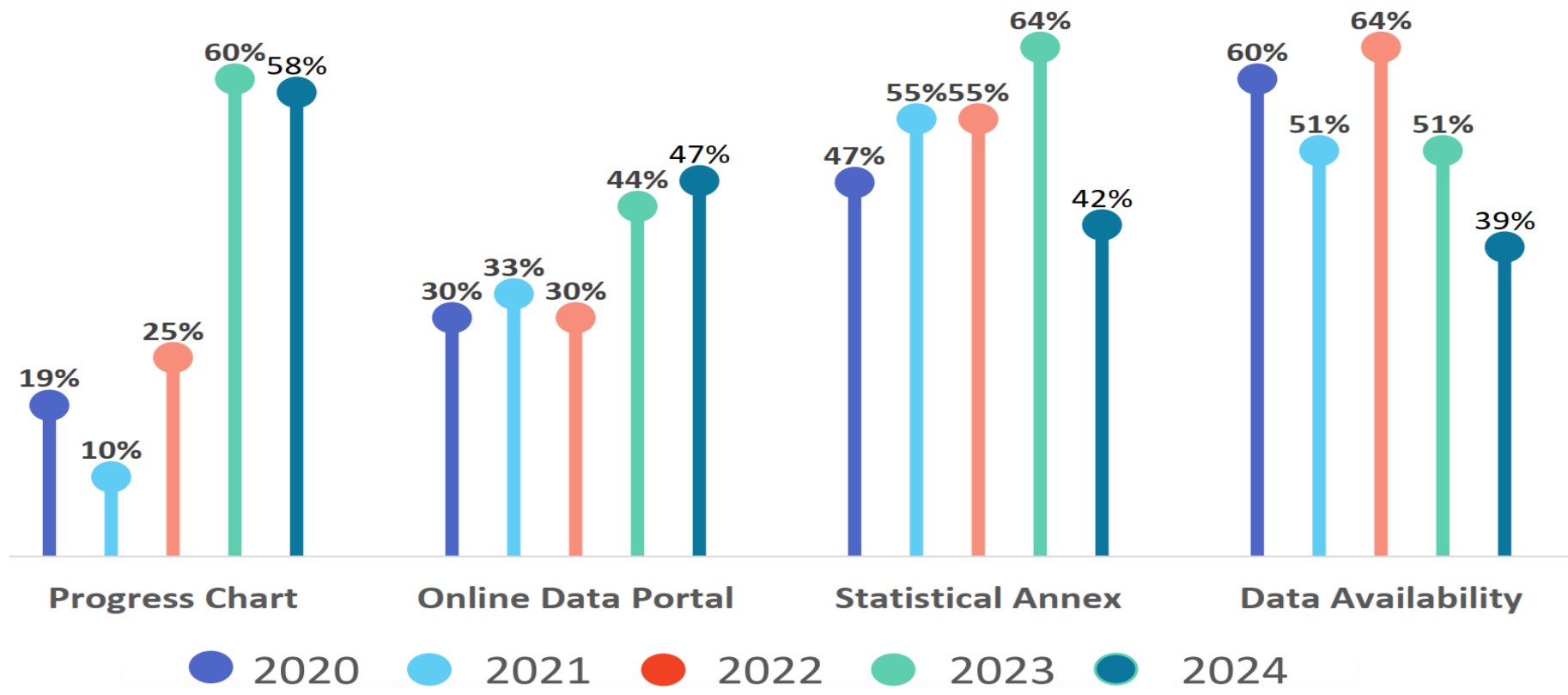
19th February 2025
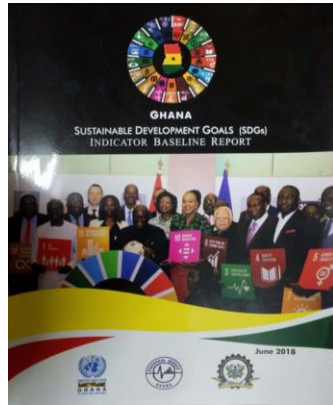
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OUTLINE

1. Progress in SDGs monitoring

2. Using data science tools for local level SDG monitoring for **SDG 1**

3. Machine learning for scraping 20 years of pdf data for **SDG 4**

4. Citizen data for **SDG 5, 11, 16**

5. Mobile Phone data and disasters **SDG 11**

6. Leveraging CSOs data to monitor **SDG 14**

7. Earth observation data for monitoring **SDG 15**

8. Going beyond reporting

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The Global Performance

Proportion of Countries Incorporating Data Elements in VNRs (2020-2024)

	Progress Chart	Online Data Portal	Statistical Annex	Data Availability
2020	19%	30%	47%	60%
2021	10%	33%	55%	51%
2022	25%	30%	55%	64%
2023	60%	44%	64%	51%
2024	58%	47%	42%	39%

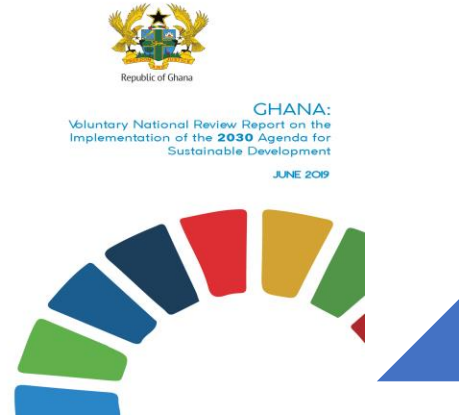● 2020   ● 2021   ● 2022   ● 2023   ● 2024

Progress in SDGs Monitoring in Ghana

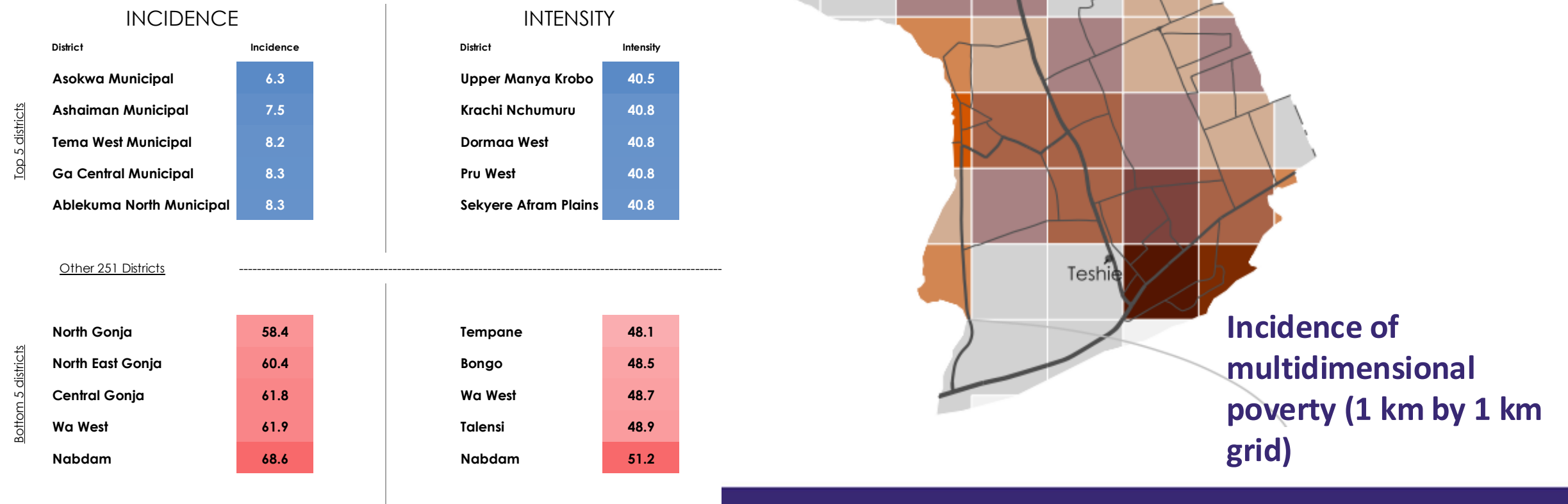
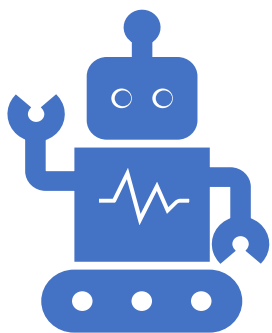**2018**

Baseline indicators = 70

2019 VNR indicators = 73

2022 VNR indicators = 102

2025 VNR indicators = 140

Leveraging Data Science Tools for Local-Level SDGs Monitoring (SDG 1.2.2)

INCIDENCE

District	Incidence
Asokwa Municipal	6.3
Ashaiman Municipal	7.5
Tema West Municipal	8.2
Ga Central Municipal	8.3
Ablekuma North Municipal	8.3

Top 5 districts

Other 251 Districts

District	Incidence
North Gonja	58.4
North East Gonja	60.4
Central Gonja	61.8
Wa West	61.9
Nabdam	68.6

Bottom 5 districts

INTENSITY

District	Intensity
Upper Manya Krobo	40.5
Krachi Nchumuru	40.8
Dormaa West	40.8
Pru West	40.8
Sekyere Afram Plains	40.8

District	Intensity
Tempane	48.1
Bongo	48.5
Wa West	48.7
Talensi	48.9
Nabdam	51.2

Incidence of multidimensional poverty (1 km by 1 km grid)
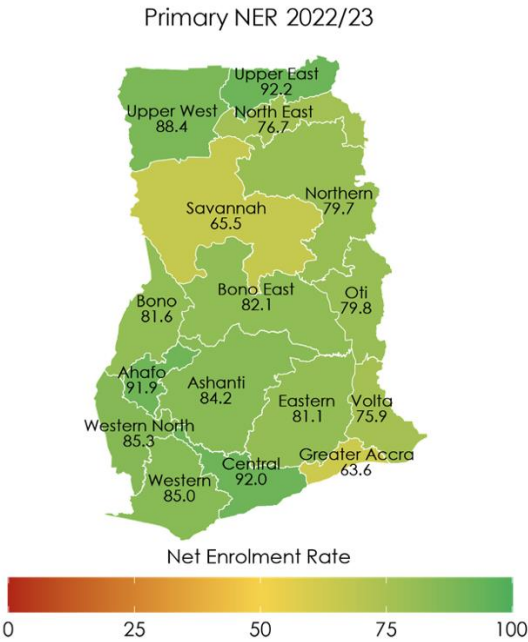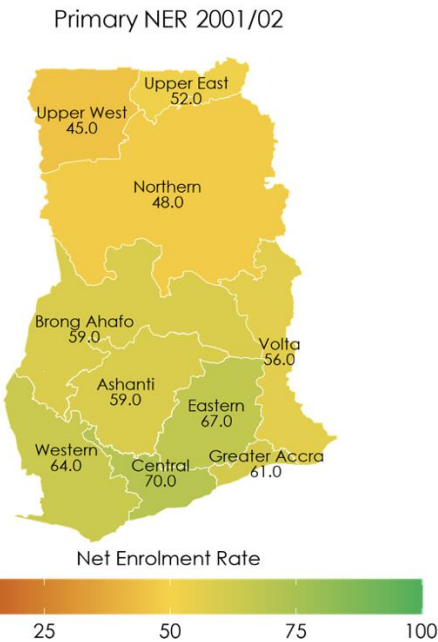
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Access to and Quality of Education using Administrative Data (SDG 4)

Using data science toolbox for automated scraping, verification, and quality check

Source data in PDF reports for each year from 2001 to 2021

Primary NER 2001/02

Upper East 52.0
Upper West 45.0
Northern 48.0
Brong Ahafo 59.0
Volta 56.0
Ashanti 59.0
Eastern 67.0
Western 64.0
Central 70.0
Greater Accra 61.0

Net Enrolment Rate
0 — 25 — 50 — 75 — 100

Primary NER 2022/23

Upper East 92.2
Upper West 88.4
North East 76.7
Savannah 65.5
Northern 79.7
Bono 81.6
Bono East 82.1
Oti 79.8
Ahafo 91.9
Ashanti 84.2
Eastern 81.1
Volta 75.9
Western North 85.3
Central 92.0
Greater Accra 63.6
Western 85.0

Net Enrolment Rate
0 — 25 — 50 — 75 — 100

User-centric citizens' data Apps for local-level data
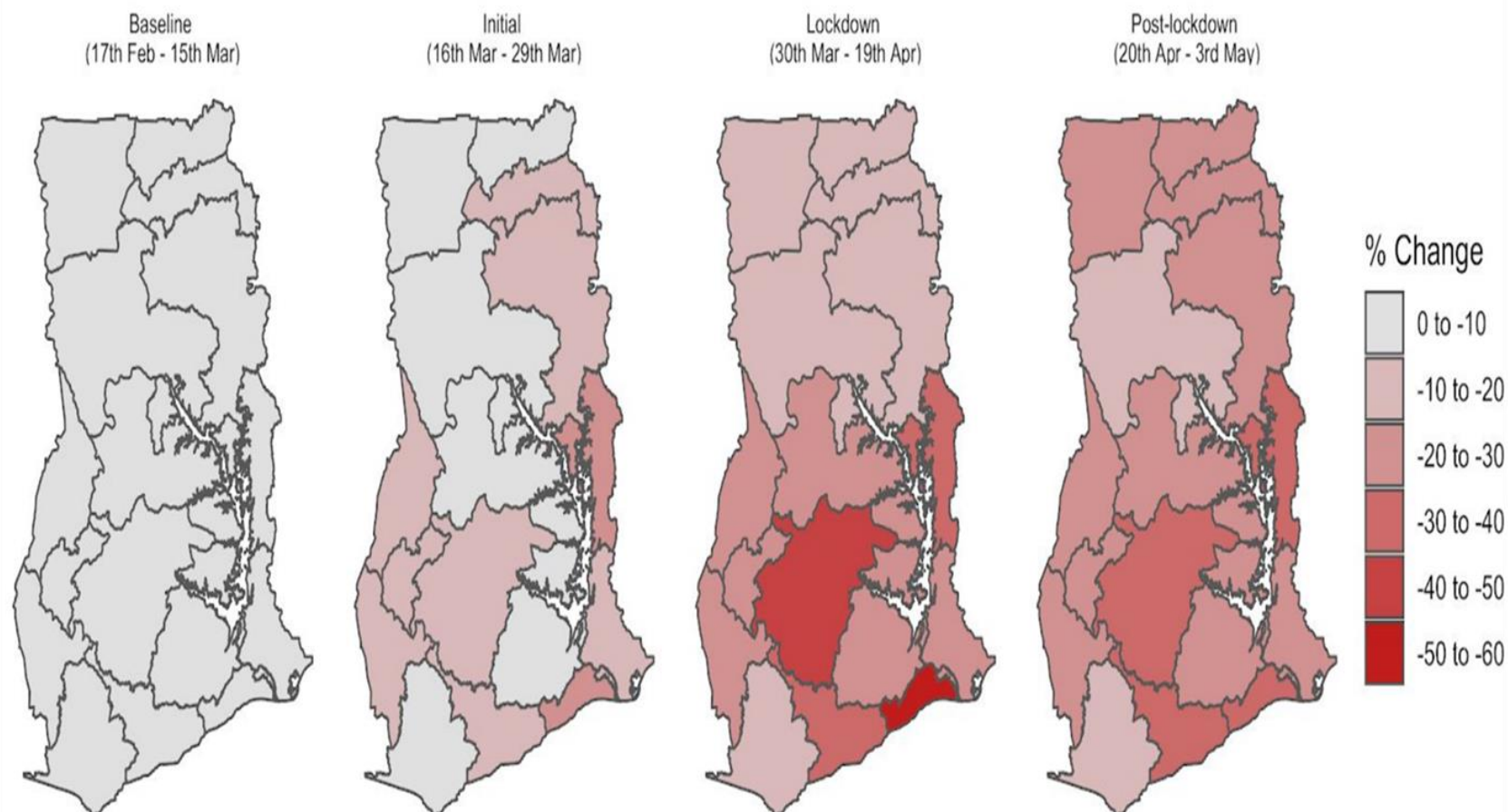
Indicators
- 5.2.1
- 5.2.2
- 11.7.2
- 16.1.3
- 16.6.2

MOBILE PHONE DATA CAN PROVIDE VALUABLE INSIGHTS INTO POPULATION DYNAMICS, WHICH IS CRITICAL FOR POLICY FORMULATION AND PLANNING
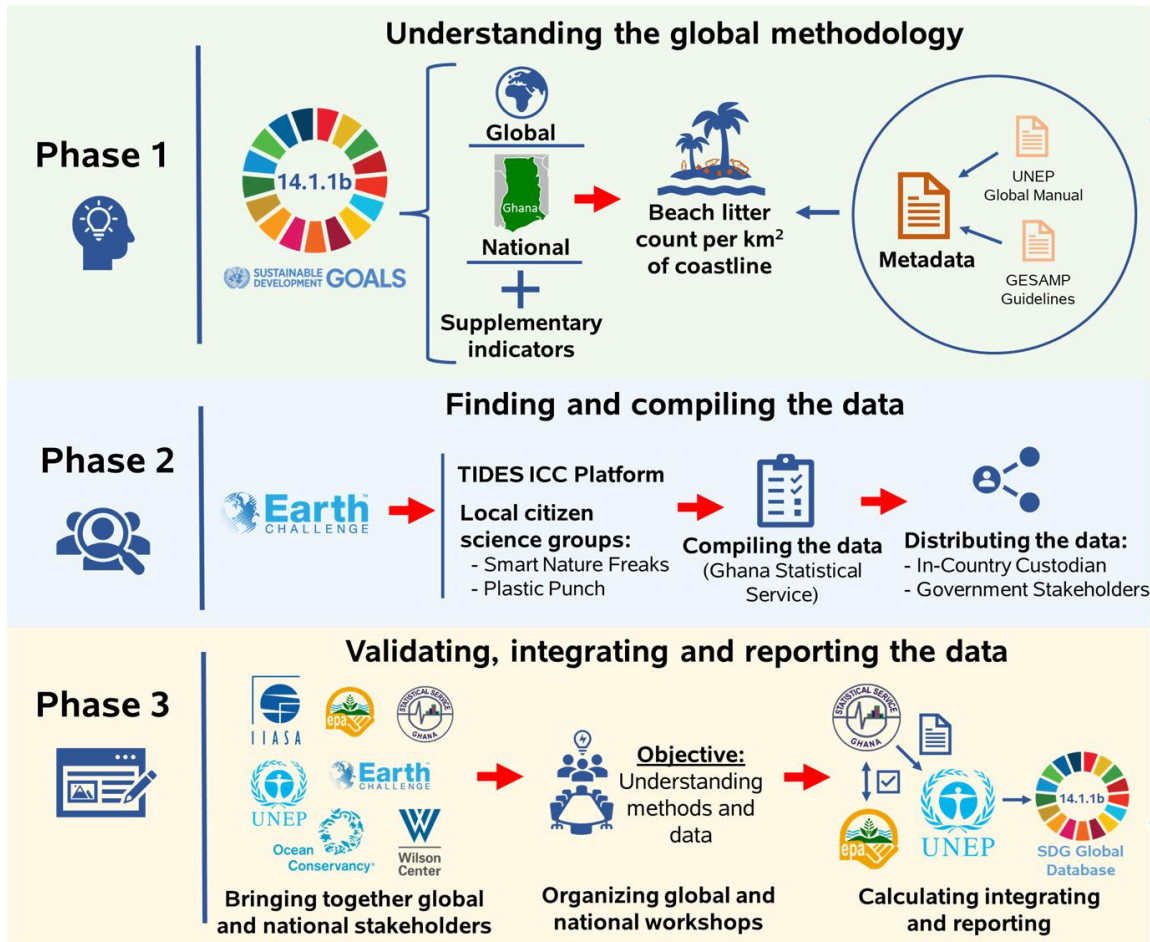
REQUISITE DATA TO SUPPORT THE FOLLOWING INTERVENTIONS IS LACKING

Change in the number of trips between any two districts in each region

Baseline (17th Feb - 15th Mar)

Initial (16th Mar - 29th Mar)

Lockdown (30th Mar - 19th Apr)

Post-lockdown (20th Apr - 3rd May)

% Change
- 0 to -10
- -10 to -20
- -20 to -30
- -30 to -40
- -40 to -50
- -50 to -60

- ✓ Disease Surveillance
- ✓ Disaster Response Resourcing
- ✓ Vaccination Campaign Planning
- ✓ Annual Poverty Mapping to give local and annual estimations
- ✓ Energy Grid Regulation
- ✓ Sanitation Planning
- ✓ Health prevalence indicators (with dynamic denominators)
- ✓ Real-time internal migration models
- ✓ Day/night -time population for health service
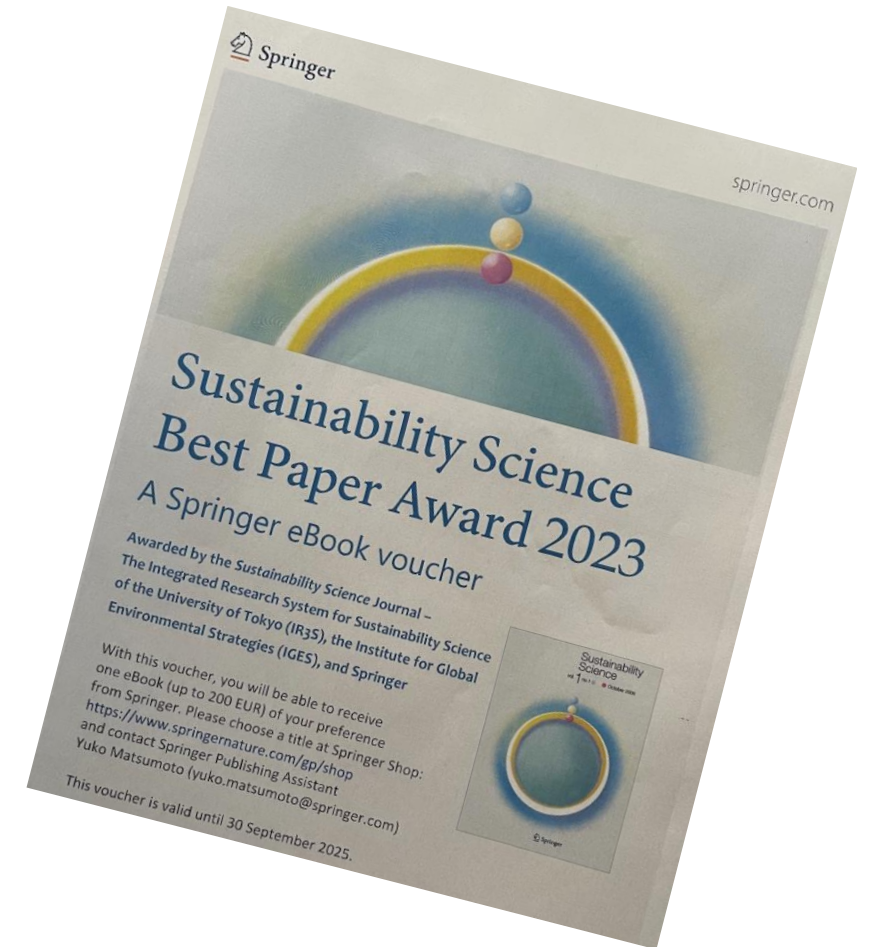- ✓ Urban planning / vehicular traffic

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Monitoring Marine Litter in Ghana (SDG 14.1.1b)

Using Earth Observation for SDG 15 Monitoring (SDGs 15.1.1; 15.1.2; 15.4.1)

LC_Class
- Water
- Mangrove
- Wetlands
- Mining
- Artificial Surfaces
- Closed Forest
- Open Forest
- Woody Crops
- Agriculture
- Grassland
- Mixed Vegetation
- Bare

☑ ProtectedKBAs_Ghana
☑ KBA_Ghana
☑ WDPA_GHA_poly
☑ Ghana_Classification_V1_2020.tif

Legend
- Ghana_Regions
- Key Biodivesity Area
- World Database on Protected Area
- Close Forest
- Open Forest
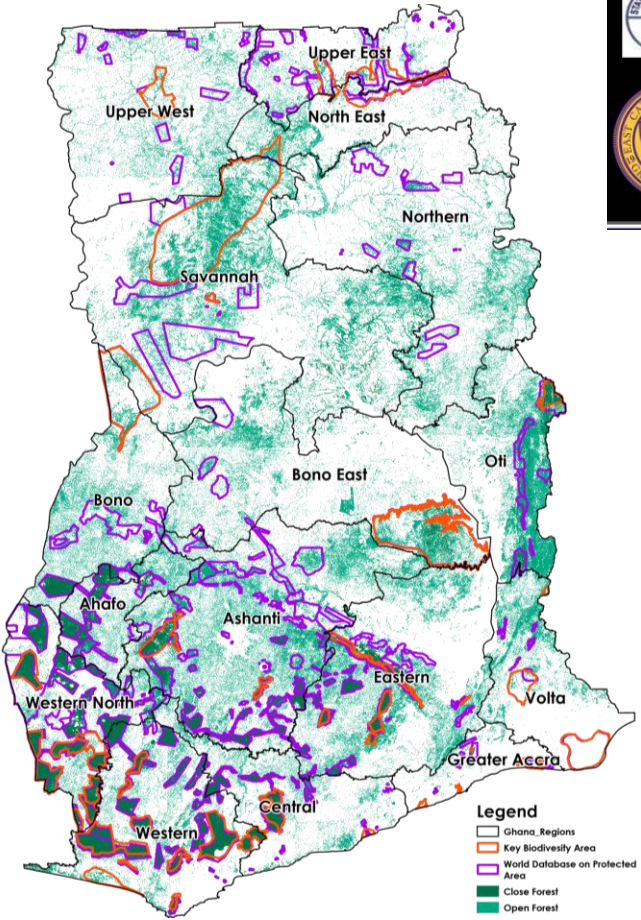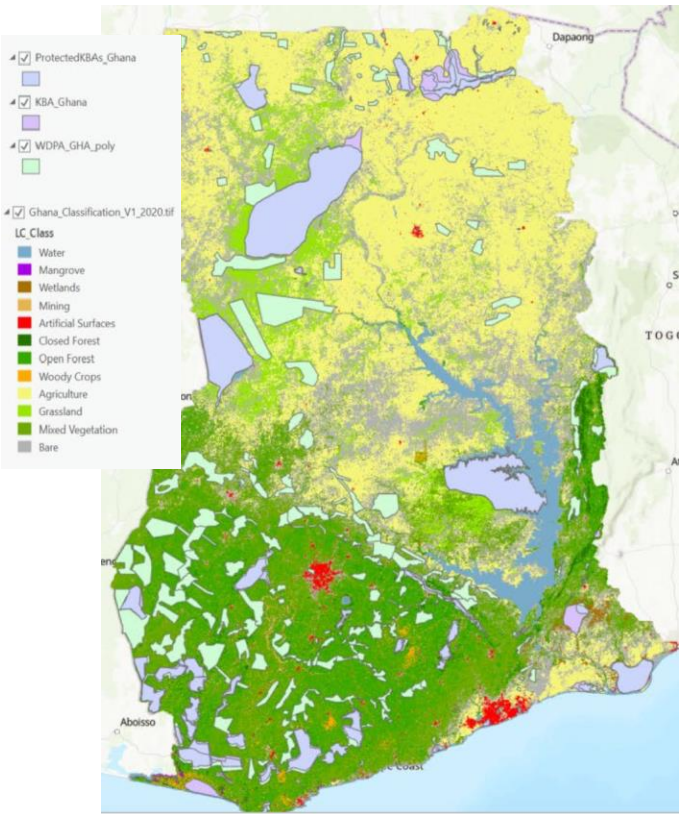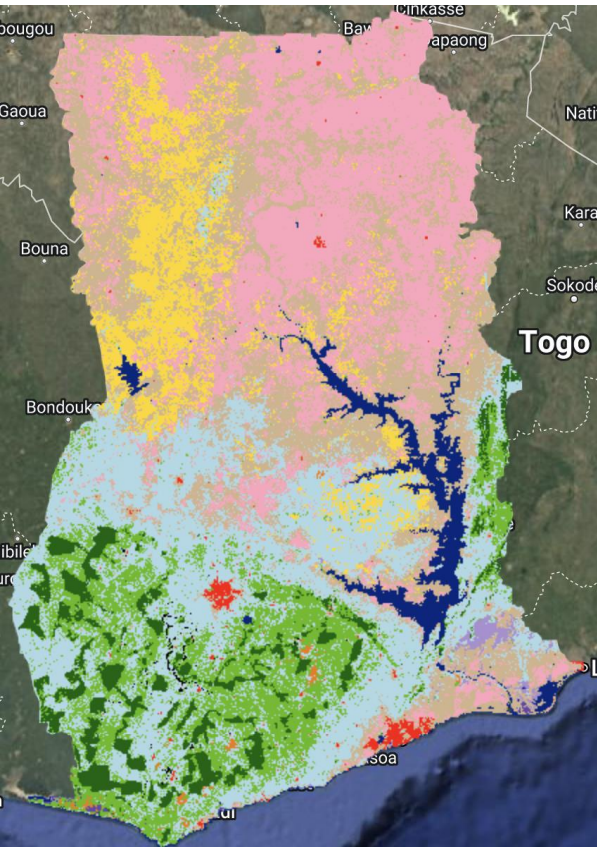
Interactive results are here:
https://amandajpayton.users.eart
hengine.app/view/agu-results

Going beyond reporting

- Baselines

- Periodicity

- Methodological alignment

- Alignment with changing national and sectoral policy documents

Thank you for your attention

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