



HANDBOOK FOR DEVELOPING A SUBNATIONAL RESILIENCE INDEX IN GHANA

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INTRODUCTION

This handbook is designed primarily as a practical manual for adapting The Fund for Peace’s State Resilience Index (SRI) to the Ghanaian subnational context. Its purpose is to guide users through the principal steps involved in translating the SRI’s conceptual architecture designed for the national level, into an operational methodology that can be applied at the subnational level, including at the regional, district, town, or community level. In particular, it explains how relevant datasets may be identified and assessed, how indicators may be mapped to the appropriate SRI pillars, how data limitations may be addressed, and how supplementary tools such as surveys may be developed where existing information is insufficient. The examples, source references, and methodological illustrations presented throughout the handbook are therefore grounded primarily in the Ghana case and are intended to support the development of a subnational resilience index that is responsive to Ghana’s data landscape and institutional context. While the guidance is tailored to Ghana and the examples are drawn principally from Ghanaian datasets and applications, the underlying process may be adapted for use in other country contexts where practitioners wish to apply the SRI framework at the subnational level. In this sense, the handbook should be understood first and foremost as a Ghana-focused manual, but one that may also provide a transferable methodological reference for similar subnational resilience assessments elsewhere.

Resilience is an increasingly important analytical concept because crises are not exceptional events, but recurring features of social, political, economic, and environmental life. Whether shocks arise from conflict, climate stress, economic volatility, public health emergencies, or governance failures, the central question is not only where vulnerability exists, but also which capacities enable institutions and communities to absorb pressure, adapt, and recover over time. A resilience lens therefore complements fragility and risk analysis by helping practitioners understand why some places are better able than others to withstand and respond to shocks, and by identifying the systems, relationships, and resources that reduce crisis sensitivity and support longer-term stability.

This perspective is particularly important at the subnational level, where national-level analysis may obscure substantial variation in institutional performance, economic opportunity, social cohesion, environmental conditions, and civic space. A subnational resilience index can help make such variation more visible by identifying both localized vulnerabilities and localized strengths. Rather than focusing solely on deficits, it can also help reveal areas of relative strength that may serve as practical entry points for action, discussion, or further investigation.

Against this backdrop, this handbook is intended primarily to explain the technical and methodological steps involved in adapting the SRI to subnational contexts. Its aim is to provide a structured and accessible process for developing subnational resilience indexes that are methodologically sound, operationally useful, and responsive to the realities of the context in which they are applied. In the Ghana case, this means offering a practical guide to developing a Ghana-focused subnational resilience index, while also setting out an approach that may be adapted by users working in other national contexts. The resulting index may also provide a useful evidence base to inform programme design, prioritization, investment planning, and longer-term resilience-building efforts, where relevant.

WHAT IS THE SRI?

The State Resilience Index (SRI) is a global analytical tool designed to measure the capacities and capabilities of states to prepare for, manage, and recover from crises relative to the severity of the pressures they face. Covering 154 countries, the SRI complements fragility-focused assessments by shifting attention from vulnerability alone to the systems, institutions, and social dynamics that enable societies to absorb shocks and recover sustainably.

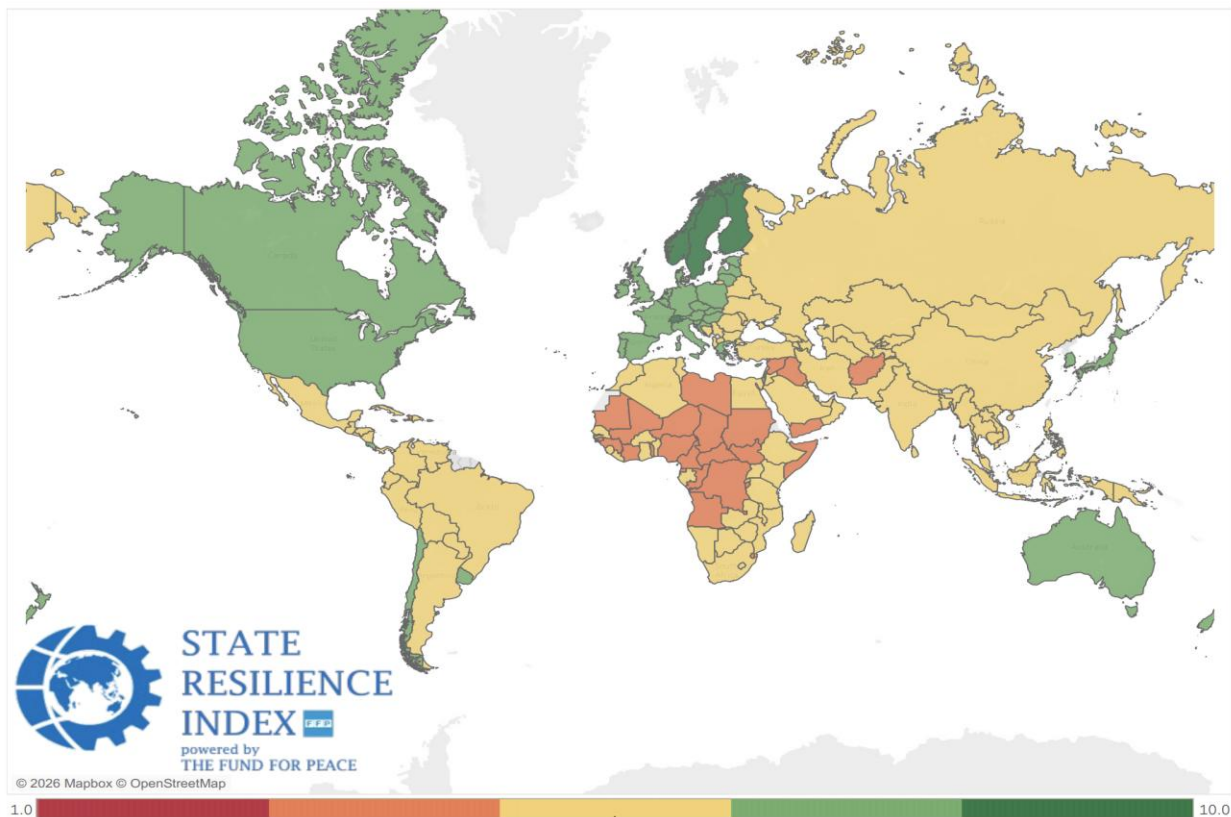


Figure A. Global map of countries included in the State Resilience Index (SRI), illustrating the index's coverage across 154 countries. The SRI can be accessed at: <https://fundforpeace.org/SRI/about.html>

At its core, the SRI recognizes that crises, whether economic, environmental, political, or public health-related, are inevitable. What differentiates states is not whether they face shocks, but how effectively they mitigate impacts, contain disruption, and rebuild afterwards. Resilience therefore reflects structural diversity, institutional strength, social trust, and ecological sustainability.

While the SRI provides a meta-level understanding of resilience across countries, resilience dynamics often vary significantly within a country. National averages may mask important regional disparities in infrastructure, institutional capacity, environmental exposure, economic opportunity, or social cohesion. For this reason, the SRI framework and methodology can also be applied at the subnational level, enabling practitioners to measure and better understand resilience across regions, provinces, districts, towns, or communities. Adapting the SRI to a subnational context can help identify localized strengths and vulnerabilities and provide a more granular analytical picture of resilience within a country.

The SRI is organized around seven pillars of resilience. Each pillar is further broken down into sub-pillars, which represent the most granular level at which the public version of the index can be disaggregated. There are 40 sub-pillars, and together with the seven pillars, they provide a multidimensional framework for understanding resilience across political, social, economic, institutional, and environmental systems.

Figure B. The seven pillars of SRI, which together provide a multidimensional framework for assessing resilience.



THE SEVEN PILLARS

PILLAR	DESCRIPTION	SUB-PILLARS
Inclusion	When people are socially, economically, or politically included, they have less exposure to risk and vulnerability, are represented in decision making, and have access to public resources to mitigate and respond to crisis and disasters.	Inclusion of Youth; Political Inclusion; Access to Finance; Group-based Inclusion; Access to Economic Resources; Access to Employment; Protection Against Precarity
Social Cohesion	In addition to inclusion, a sense of solidarity is key to a resilient society. Kinship ties, sociocentrism, and social and political capital can create opportunities for generosity and collaboration that are necessary to overcome major crises.	Social Capital; Social Relations; Confidence in National Institutions

State Capacity	When government has effective systems, and the trust and confidence of the population to act in the interest of the public good, it has greater flexibility to persuade and mobilize collective action when faced with crisis.	Finances; Government Effectiveness; Disaster Risk Reduction; Public Health; Education Outcomes; Rule of Law; Freedom from Corruption
Individual Capabilities	When the average person has a stock of education, health, income, and food security, a crisis is less likely to render them immediately destitute and reliant on social protection services or external intervention to survive.	Food/Nutrition; Education System; Health; Wealth
Environment and Ecology	Stable, regenerative ecosystems, water access, and clean energy are vital to health and livelihoods, as the world faces increasingly frequent and intense threats from climate change and extreme weather events.	Pollution; Ocean and Fisheries Health; Agricultural Productivity; Ecosystem Health; Biodiversity; Long-term Climate Stability; Clean Energy; Water Availability
Economy	Diverse and innovative economies with access to capital are less vulnerable to price shocks and supply-chain disruptions, and they recover more quickly after a disaster. Over the longer term, infrastructure and high-quality economic management are necessary to compete in a changing global economy.	Diversification; Business Environment; Dynamism/Innovation; Physical Infrastructure; Capital Flows; Economic Management
Civic Space	A healthy public square enables consultation, debate, dialogue, and consensus-building so that the needs and grievances of individuals and communities can be addressed constructively. In times of crisis, a stable social contract can generate accountability for leaders and public buy-in for collective action.	Engagement; Accountability; Democratic Structures; Human Rights and Civil Liberties; Information Access

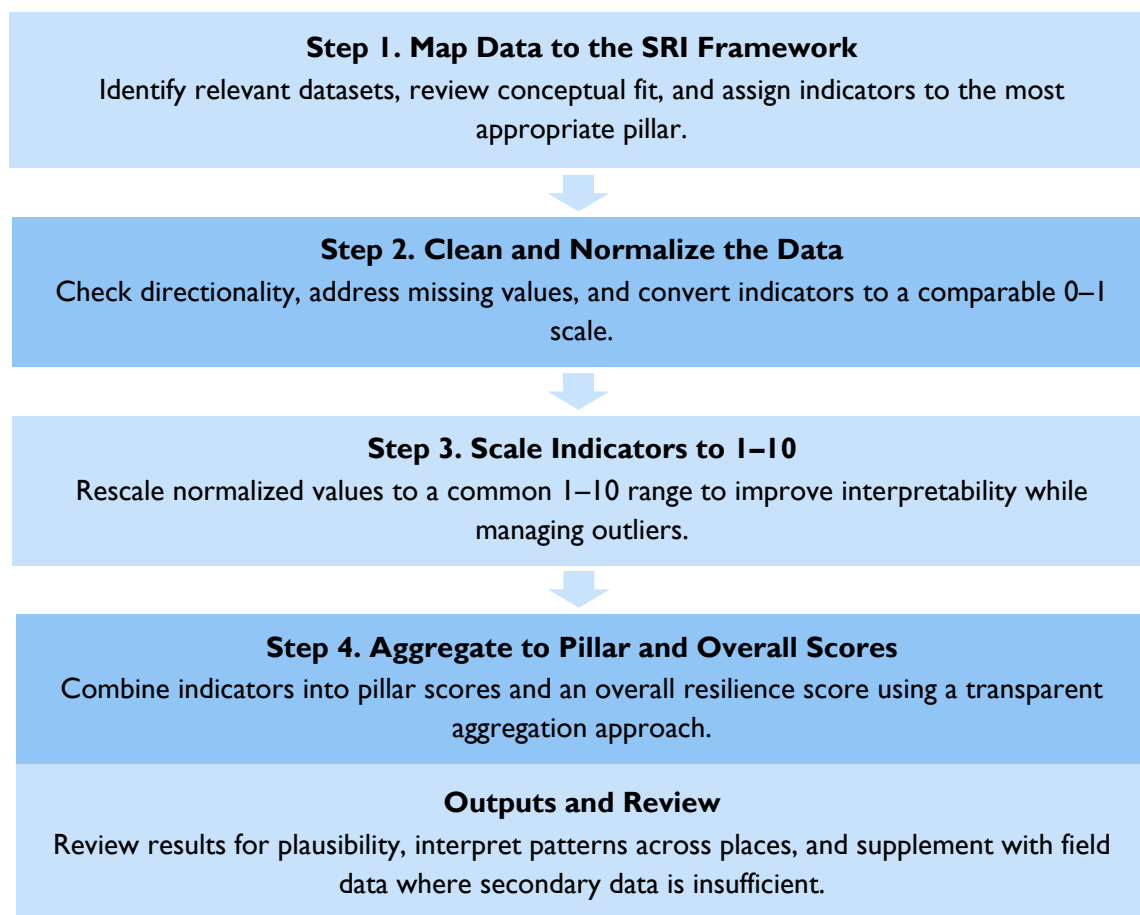
METHODOLOGICAL STEPS FOR DEVELOPING A SUBNATIONAL RESILIENCE INDEX

The sections below set out the core construction process for a subnational resilience index and illustrate how that process is applied in the Ghana case. The Subnational/Regional Resilience Index for Ghana is designed to provide a comparable picture of resilience across regions by organizing available data into the seven resilience pillars of the SRI framework. The purpose is to translate diverse datasets into a single, interpretable index that highlights relative strengths and vulnerabilities across geographic areas. This process is organized around four core stages:

- Mapping available data to the most relevant indicator and pillar based on conceptual fit and data availability;
- Normalizing each metric so that values can be compared consistently across different units of measurement;
- Scaling indicators onto a common 1–10 score to improve interpretability while managing outliers; and
- Aggregating results through weighted averages and composite indices to produce pillar scores and an overall resilience score for each geographic unit.

METHODOLOGY FLOWCHART

Overview of the methodology used to construct a subnational resilience index



I. MAP AVAILABLE DATA TO THE SEVEN RESILIENCE PILLARS

The data mapping phase establishes the foundation of the index by determining which available sources and metrics in Ghana best capture each dimension of resilience. Because resilience is multidimensional, no single dataset is sufficient on its own; instead, variables from multiple sources are reviewed, organized into a common analytical framework, and assigned first to the most relevant indicator and then to the broader pillar where they most directly reflect underlying conditions affecting resilience. Indicator selection should be guided by two core considerations: the availability of reliable subnational data with sufficient geographic coverage and recent observations, and the conceptual relevance of each metric to the resilience dimension being measured.

When adapting the SRI framework to a subnational or regional context, dataset selection is a critical design decision. Each metric should be assigned according to what it most directly measures—for example, livelihood and employment indicators under Economy, service delivery measures under State Capacity, levels of trust and civic participation under Social Cohesion, or natural resource management and environmental stewardship indicators under Environment and Ecology. Because no single source captures all seven pillars equally, multiple datasets will often need to be combined to ensure balanced coverage and to reduce overreliance on any one source.

Potential data sources for developing a subnational resilience index using the SRI methodology can be drawn from a range of institutions. For example, administrative and sector-specific datasets can be obtained from relevant government ministries and public agencies. Additional sources may include multinational organizations such as UN agencies, academic or research institutions, independent/third-party data sources, or civil society organizations.

The table below describes the data sources that were used in developing the subnational resilience index for Ghana.

Potential data sources include:

DATA SOURCE	DESCRIPTION	FREQUENCY OF UPDATES
Ghana Statistical Service (GSS)	Ghana's national statistical agency, providing a wide range of official demographic, economic, social, and governance-related datasets relevant to subnational analysis.	Varies by dataset/publication.
UNICEF Multiple Indicator Cluster Surveys (MICS)	A household survey programme developed by UNICEF that collects internationally comparable data on health, education, child protection, water and sanitation, and household characteristics.	Periodic survey-based updates; not continuous.

United Nations High Commissioner for Refugees (UNHCR)	Datasets relating to refugees, internally displaced persons, and broader displacement trends, which may be useful for understanding population movement and vulnerability.	Varies by dataset and reporting cycle.
Administrative and sectoral datasets from relevant ministries and public agencies	Administrative records and sector-specific datasets produced by government ministries and public agencies, where available, which may provide useful subnational data on service delivery, infrastructure, livelihoods, or other resilience-related issues.	Varies depending on the ministry, agency, and dataset.
Armed Conflict Location & Event Data (ACLED)	ACLED is an independent, impartial global monitor that collects, analyses, and maps data on conflict and protest. ACLED provides detailed information to help identify, understand, and track patterns and trends in conflict and crisis situations around the world.	Updated regularly on an ongoing basis.
Emergency Events Database (EM-DAT)	A global disaster database maintained by the Centre for Research on the Epidemiology of Disasters (CRED). It records natural and technological disasters worldwide.	Updated regularly.
Global Data Lab (GDL)	Hosted by Radboud University in the Netherlands, GDL provides subnational, harmonized development data across low-, middle-, and high-income countries. It is particularly useful for translating global development indicators into regionally disaggregated datasets.	Varies by indicator and dataset release.
Ghana Statistical Service: The Governance Series	A survey series designed to measure people's interaction with public services and institutions, the fairness of administrative processes, and the degree to which people feel heard.	Periodic survey-based updates by wave.
Ghana Demographic and Health Survey (GDHS)	A population-based survey implemented by the Ghana Statistical Service to monitor progress on health service utilization and management, supported by the Government of Ghana, USAID, and other partners.	Periodic survey-based updates; not continuous.



In cases where a direct indicator is not available, proxy indicators that capture a closely related concept may be used, provided the rationale is documented clearly. For example, corruption- or bribery-related measures may serve as proxies for confidence in national institutions where direct perception data is limited. All identified indicators and their corresponding SRI pillars and sub-pillars should be documented in a mapping sheet to ensure transparency and to allow future review and refinement of indicator selection.



At the subnational level, data handling choices should also account for differences in geographic boundaries, data years, and coverage across sources. Practitioners may need to harmonize datasets to a common geographic unit, select the closest comparable year where identical reference periods are unavailable, and exclude indicators that cannot be aligned in a sufficiently consistent way. These decisions should be documented transparently so that the structure of the index remains clear and replicable.

2. CLEAN AND NORMALIZE THE DATA

Once indicators have been selected and assigned to the resilience framework, the next step is to clean the data and convert all values to a common scale so that they can be compared across regions. This is necessary because subnational indicators are often drawn from different sources and reported in different units—such as percentages, counts, rates, or absolute values—which cannot be combined directly in their original form. The normalization step standardizes each indicator onto a shared range between 0 and 1, creating a consistent basis for comparison before later scaling and aggregation.

In many cases, normalization involves applying a Gaussian transformation, which adjusts the data so that values follow a standard bell-curve distribution. This approach is particularly useful when indicators have uneven distributions because it reduces the influence of extreme values and creates a smoother spread of scores across locations. In Excel, this can be implemented using the cumulative normal distribution function: `=NORM.DIST(x, mean, standarddev, TRUE)`.

Where indicators are negatively associated with resilience—such as poverty rates, mortality, or other deficit measures—the resulting values should be inverted so that all indicators move in the same direction and higher scores consistently reflect stronger resilience. Indicators that already represent positive capacity—such as school completion, service access, or employment—may remain unchanged.

Practitioners should also decide in advance how missing values will be handled. Where missingness is extensive, the indicator may need to be excluded. Where gaps are limited, conservative imputation or partial exclusion may be appropriate, provided that the approach is applied consistently and documented clearly. This stage is also the appropriate point to verify that indicator directionality, coding, and units have all been checked before further transformation.

This means:

- 0 = lowest observed resilience
- 1 = highest observed resilience

3. SCALE INDICATORS TO A COMMON 1–10 SCORE

Once indicators have been normalized to a common 0–1 range, they may be rescaled to a 1–10 scoring system to make the results easier to interpret and communicate. While normalized values are statistically useful, they are often less intuitive for non-technical audiences; converting them to a 1–10 scale allows differences across districts or regions to be understood more readily, with 1 representing relatively weak performance and 10 representing relatively strong performance within the observed distribution. This scaling stage preserves the relative position of each geographic unit while presenting results in a format that is more accessible for policymakers, stakeholders, and decision-makers.

In most cases, normalized values can be scaled using the full observed distribution, with the minimum and maximum values serving as the lower and upper bounds of the scoring range. Where outliers are sufficiently extreme to distort the distribution, percentile thresholds may be introduced to moderate their influence—for example by using adjusted lower and upper bounds such as the 5th and 95th percentiles rather than the absolute minimum and maximum. The adjusted values are then transformed linearly onto a common 1–10 scale, preserving meaningful variation across most locations while limiting undue compression caused by exceptional observations.

Thresholds should therefore be applied flexibly rather than uniformly, depending on the shape of each indicator’s distribution. This allows the scaling process to remain sensitive to genuine variation while avoiding situations in which one or two extreme values dominate interpretation of the full dataset.

This means:

- 1 = weakest relative performance
- 10 = strongest relative performance

4. AGGREGATE SCORES INTO COMPOSITE PILLARS AND OVERALL RESILIENCE

Once all indicators have been scaled to a common range, they can be combined through a staged aggregation process that builds progressively from individual measures to the overall resilience score. This step helps ensure that related variables contribute first to a shared analytical category before being incorporated into broader dimensions of resilience, thereby preserving conceptual coherence at each level of the index. Aggregation may proceed hierarchically: related metrics are first combined into indicators, indicators are then grouped into each of the seven resilience pillars, and pillar scores are finally combined into a single composite score for each geographic unit.

As a general rule, equal weighting may be applied within each level of aggregation so that indicators contribute proportionately unless there is a clear conceptual or empirical reason to do otherwise. In cases where certain variables are judged to be more representative, more reliable, or more complete than others, modest weighting adjustments may be introduced, but these should be applied selectively and transparently. This staged structure strengthens interpretability by allowing users to examine both the final resilience score and the underlying components that explain differences across locations.

As a basic quality-assurance step, practitioners should review whether the results align plausibly with contextual knowledge, inspect whether any one indicator is disproportionately driving a pillar score, and, where feasible, test whether modest changes in weighting materially affect the overall pattern of results. Such validation will not eliminate uncertainty, but it can improve confidence that the index is behaving in a conceptually coherent way.

VALIDATION AND REVIEW CHECKLIST

Before finalizing the index, practitioners may use the following checklist to review the consistency and plausibility of the results:

- ☒ Confirm that indicator-to-pillar assignments are conceptually justified and documented.
- ☒ Check that geographic units and reference years have been harmonized as consistently as possible across datasets.
- ☒ Verify that indicator directionality has been reviewed so that higher scores consistently reflect stronger resilience.
- ☒ Document how missing values, exclusions, and proxy indicators have been handled.
- ☒ Review outliers and any percentile thresholds used during scaling to ensure they do not distort interpretation.
- ☒ Check whether any single indicator is disproportionately driving a pillar score.
- ☒ Where feasible, test whether modest changes in weighting materially alter the overall pattern of results.
- ☒ Compare final scores against contextual knowledge and qualitative findings to assess whether the outputs are plausible.

ADDITIONAL CONSIDERATIONS

INTERPRETING THE RESULTS

The final index is intended to identify relative patterns of resilience across geographic areas, enabling users to compare regions, districts, towns, or communities and to identify areas of relative strength and weakness. Because resilience is multidimensional, the composite score should not be interpreted in isolation; rather, it should be read alongside pillar-level results in order to understand which dimensions are contributing to stronger or weaker performance in a given location.

Scores should therefore be interpreted as relative rather than absolute. The index is most useful when read alongside contextual knowledge, qualitative findings, and stakeholder consultation, particularly where local realities may not be fully captured by available quantitative data.

ILLUSTRATIVE VISUALIZATION: RELATIVE ECONOMIC RESILIENCE IN GHANA

Maps and charts can help present subnational resilience results in a format that is easier to interpret and communicate. For example, a district- or regional-level map of economic resilience may be used to show the relative distribution of scores across Ghana, while a corresponding chart may help compare the same scores more precisely across geographic units.

Any such visual should make clear that the underlying scores are relative, not absolute, and should be read alongside the underlying pillar and indicator data. High scores indicate relatively stronger performance within the observed distribution, while lower scores indicate comparatively weaker performance within that same framework.

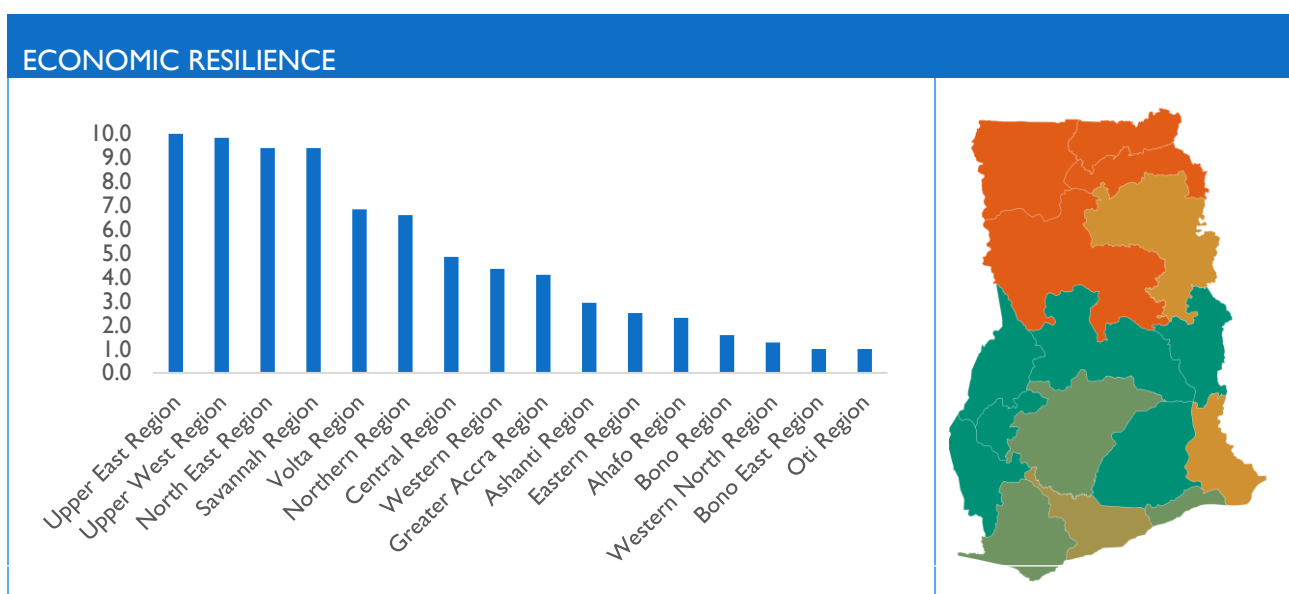


Figure C. Illustrative example only; scores are relative within the observed Ghana dataset.

SUPPLEMENTARY FIELD DATA COLLECTION: USING SURVEYS, KIIS, AND FGDS

In some subnational applications of the State Resilience Index (SRI), secondary data may not be sufficient to generate a meaningful or appropriately disaggregated picture of resilience. This is likely to be especially true where the assessment is conducted below the regional level, including at the district, town, city, or community level. While a range of national and regional datasets is available in Ghana, these sources may not always provide the level of geographic detail needed to assess resilience in specific localities, and they may not adequately capture perception-based dimensions such as trust, inclusion, grievance, or confidence in institutions. In such cases, practitioners may supplement available secondary data with primary data collection.

This may include perception surveys, key informant interviews (KIIs), and focus group discussions (FGDs). Together, these methods can help fill data gaps while also deepening the analysis by capturing lived experiences, local perceptions, and context-specific dynamics that are not easily reflected in administrative or secondary datasets. In the Ghanaian context, these methods may be particularly valuable where the assessment seeks to understand issues such as social cohesion, civic participation, perceptions of fairness, informal governance, or relationships between local stakeholders across different regions and communities.

A perception survey may be especially appropriate where reliable data is not available at the geographic level required for the index, or where the assessment needs to capture attitudes and experiences that cannot be measured through existing datasets alone. In the Ghana case, a perception survey would be developed because sufficient town- and city-level data is not available for Obuasi and Ahafo South. In similar contexts, practitioners may choose to develop a comparable instrument to support the construction of a town-level resilience index. The survey tool is therefore annexed to this handbook as a sample resource that NGOs, companies, or other users may adapt for their own purposes.

Primary data collection may also be useful where practitioners wish to establish a baseline before future programming or intervention. In mining-affected contexts, for example, surveys, KIIs, and FGDs can help generate a clearer understanding of local perceptions around inclusion, livelihood opportunities, environmental pressures, institutional trust, and relations between mining companies and host communities. This can support conflict-prevention efforts and provide a reference point against which changes may later be assessed.

Field-based methods can strengthen application of the broader SRI framework at the local level by making the analysis more context-sensitive and by generating evidence that would otherwise be unavailable. Where used carefully, they can help ensure that a subnational resilience assessment is both analytically robust and grounded in local realities.

LIMITATIONS

As with any composite index, a subnational resilience index will be shaped by the quality, availability, and comparability of the underlying data. In many contexts, subnational datasets may be incomplete, unevenly disaggregated, or collected at different points in time, which can limit the consistency of measurement across geographic units. Some indicators may also rely on proxy variables where direct measures are unavailable, particularly for sub-pillars that are difficult to capture through existing administrative or survey data. The index should therefore be understood as an analytical tool that provides a structured approximation of resilience, rather than a definitive or exhaustive measure of all local conditions.

These constraints are especially important at the subnational level, where data availability often varies considerably across regions, districts, towns, or communities. Because the index is comparative in nature, its scores should be interpreted as relative rather than absolute. Findings are most useful when read alongside contextual knowledge, qualitative insights, and stakeholder consultation wherever possible.

CONCLUSION

This handbook has set out a practical process for adapting the State Resilience Index (SRI) to the Ghanaian subnational context, with examples and methodological guidance tailored to Ghana's data landscape and institutional realities. By outlining the steps involved in indicator selection, data mapping, normalization, scaling, aggregation, and, where necessary, supplementary field data collection, it is intended to support the development of subnational resilience indexes that are methodologically sound, transparent, and contextually grounded.

Used carefully and interpreted alongside contextual knowledge, qualitative insights, and stakeholder engagement, a subnational resilience index can help make localized patterns of strength and vulnerability more visible across Ghana's regions, districts, towns, and communities. In this sense, the handbook is intended not only as a technical guide for the Ghana case, but also as a practical reference that may inform similar efforts in other country contexts where adaptation of the SRI at the subnational level is desired.

GLOSSARY

The following terms are used throughout this handbook:

TERM	DEFINITION
Administrative data	Data generated through the routine operations of governments, public agencies, or other institutions, such as records on service delivery, education, health, or employment.
Aggregation	The process of combining multiple indicators or scores into a higher-level score, such as a pillar score or an overall index score.
Baseline	An initial measurement used as a reference point against which future changes can be assessed.
Comparability	The extent to which data, indicators, or scores can be meaningfully compared across geographic units, time periods, or datasets.
Composite index	A single score produced by combining multiple indicators in order to represent a broader concept, such as resilience.
Contextualisation	The process of adapting a framework or methodology to reflect the specific social, political, economic, environmental, or institutional realities of a given context.
Data gap	An area in which relevant data is missing, incomplete, unavailable, or insufficient for analysis.
Data harmonisation	The process of making data from different sources more consistent and comparable so that they can be used together in a single analytical framework.
Decision-support tool	A tool designed to help users organize and interpret evidence in order to inform analysis, discussion, or decision-making.
Disaggregation	The process of breaking data down into smaller geographic, demographic, or thematic units, such as regions, districts, gender groups, or age groups.
Distribution	The way values are spread across a dataset, including the range, concentration, and variation of observations.
Enumerator	A person responsible for administering surveys or collecting field data directly from respondents.
Focus group discussion (FGD)	A guided group conversation used to gather shared perspectives and experiences.
Geographic coverage	The extent to which a dataset includes all relevant locations or geographic units within the area of study.
Geographic unit	The specific spatial level used for analysis, such as a region, province, district, town, city, or community.

Gaussian transformation	Gaussian transformation is a method used to convert data into a bell-shaped (normal) distribution for easier analysis.
Indicator	A measurable variable used to represent one specific aspect of a broader concept, such as resilience.
Key informant interview (KII)	A semi-structured interview conducted with an individual who has specialized knowledge of the local context, sector, or issue being studied.
Metric	A specific data point or measure used to quantify an indicator.
Normalisation	The process of transforming data to a common scale so that values measured in different units can be compared consistently.
Operationalisation	The process of translating a concept or analytical framework into measurable variables, indicators, and practical methodological steps.
Outlier	An unusually high or low value in a dataset that may distort the interpretation of results if not handled carefully.
Percentile	A statistical measure indicating the relative position of a value within a distribution.
Perception survey	A survey designed to capture people's views, attitudes, experiences, or perceptions regarding particular issues or conditions.
Pillar	One of the main dimensions of resilience within the SRI framework. The SRI is organized around seven pillars.
Primary data	Data collected directly for the specific purposes of a study or assessment, for example through surveys, interviews, or focus group discussions.
Proxy indicator	An indirect measure used in place of a preferred direct indicator when suitable direct data is unavailable.
Relative score	A score that reflects performance in comparison with other geographic units in the dataset, rather than against a fixed universal standard.
Resilience capacity	The ability of a system, institution, or community to absorb, adapt to, and recover from shocks or stresses.
Resilience profile	The pattern of strengths and weaknesses across different pillars or dimensions of resilience for a specific geographic unit.
Respondent	A person who provides answers to survey, interview, or other data collection questions.
Sampling	The process of selecting individuals, households, communities, or locations from which data will be collected.
Scaling	The process of converting normalized values into a more interpretable scoring range, such as from 1 to 10.

Secondary data	Data that has already been collected by governments, institutions, researchers, or other organizations and is reused for analysis.
Sensitivity test	A methodological check used to assess how much results change when key assumptions, thresholds, or weights are adjusted.
Shock	A sudden disruptive event, such as a conflict outbreak, natural disaster, economic crisis, or disease outbreak, that places stress on a system or population.
Stress	A longer-term or chronic pressure, such as inequality, weak governance, environmental degradation, or livelihood insecurity, which can undermine resilience over time.
Subnational resilience index	An adaptation of the State Resilience Index methodology for measuring resilience below the national level, such as across regions, provinces, districts, towns, or communities.
Sub-pillar	A more specific analytical component within each pillar of the SRI framework.
Triangulation	The use of multiple data sources, methods, or perspectives to strengthen the reliability and credibility of findings.
Validation	The process of reviewing and checking whether the methodology, indicators, and results are reasonable, credible, and consistent with contextual knowledge.
Vulnerability	The degree to which people, systems, or places are exposed and susceptible to harm from shocks or stresses.
Weighting	The assignment of relative importance to indicators, sub-pillars, or pillars when calculating composite scores.

ANNEXES

ANNEX A: SAMPLE PERCEPTION SURVEY

The following sample survey has been developed to collect primary data both to contextualize and help inform the adaptation of the SRI framework to a specific region or community. The questions are designed to capture perceptions of capacities, access to services, and other key factors at the household and community levels across the seven resilience indicators of the SRI.

A.1 INCLUSION

- 1) To what extent do you feel that people like you have a voice in community decisions (e.g., local governance, development projects)?
 - ☐ A great deal
 - ☐ Somewhat
 - ☐ Very little
 - ☐ Not at all
- 2) In your community, how fairly are public services and resources (such as healthcare, education, or aid) distributed among different groups?
 - ☐ Very fairly
 - ☐ Somewhat fairly
 - ☐ Somewhat unfairly
 - ☐ Very unfairly
- 3) To what extent are all groups in your community (regardless of gender, ethnicity, religion, or social status) able to participate in community activities and decisions?
 - ☐ Fully included
 - ☐ Mostly included
 - ☐ Partially included
 - ☐ Not included

A.2 SOCIAL COHESION

- 1) To what extent do you trust people in your community to support one another during difficult times?
 - ☐ A great deal
 - ☐ Somewhat
 - ☐ Very little
 - ☐ Not at all

- 2) If you face an emergency (e.g., illness, loss of job/income), how likely is it that you could rely on neighbors or community members for help?
- ☐ Very likely
 - ☐ Somewhat likely
 - ☐ Unlikely
 - ☐ Very unlikely
- 3) How often do people in your community come together to solve shared problems and issues (e.g., during crises or local challenges)?
- ☐ Often
 - ☐ Sometimes
 - ☐ Rarely
 - ☐ Never

A.3 STATE CAPACITY

- 1) How reliable and effective are public institutions (e.g., local government, public services) in providing essential services in your community?
- ☐ Very reliable/effective
 - ☐ Somewhat reliable/effective
 - ☐ Not very reliable/effective
 - ☐ Not at all reliable/effective
- 2) How much do you trust public authorities to respond effectively and in the public interest during a crisis?
- ☐ A great deal
 - ☐ Somewhat
 - ☐ Very little
 - ☐ Not at all
- 3) To what extent are laws and public services applied fairly to all groups in your community?
- ☐ Fully fairly
 - ☐ Mostly fairly
 - ☐ Somewhat unfairly
 - ☐ Very unfairly

A.4 INDIVIDUAL CAPABILITIES

- 1) If your household lost its main source of income tomorrow, how long could you meet your basic needs (food, healthcare, and essential expenses) without outside assistance?”
 - ☐ Less than 1 week
 - ☐ 1–4 weeks
 - ☐ 1–3 months
 - ☐ More than 3 months
- 2) In your view, does the local education system provide skills that are relevant to employment opportunities in your community or region?
 - ☐ Yes
 - ☐ No
 - ☐ Somewhat
- 3) Do you feel that your household has sufficient education, skills, and access to healthcare to cope with unexpected shocks (such as job loss, illness, or price increases)?
 - ☐ Yes, fully sufficient
 - ☐ Mostly sufficient
 - ☐ Partially sufficient
 - ☐ Not sufficient

A.5 ENVIRONMENT AND ECOLOGY

- 1) How reliable is your household’s access to clean water and energy during periods of environmental stress or shocks (e.g., droughts, floods, extreme weather)?
 - ☐ Very reliable
 - ☐ Somewhat reliable
 - ☐ Not very reliable
 - ☐ Not at all reliable
- 2) To what extent do local environmental conditions (e.g., land, water, ecosystems) remain stable or recover after climate-related shocks?
 - ☐ Fully recover and remain stable
 - ☐ Mostly recover
 - ☐ Partially recover
 - ☐ Do not recover

3) How much do changes in climate or extreme weather affect your household's health or ability to earn a living?

- ☐ Not at all
- ☐ Slightly
- ☐ Moderately
- ☐ Severely

4) How prepared do you think your community is to respond effectively to natural disasters (e.g., floods, droughts, or storms)?

- ☐ Well prepared
- ☐ Somewhat prepared
- ☐ Somewhat unprepared
- ☐ Totally unprepared

A.6 ECONOMY

1) If your household or business needed financial support (e.g., a loan, credit, or savings) to recover from a shock, how easy would it be to access it?

- ☐ Very easy
- ☐ Somewhat easy
- ☐ Difficult
- ☐ Very difficult

2) How strongly are your household's income or livelihood affected by changes such as price increases or supply disruptions?

- ☐ Not affected
- ☐ Slightly affected
- ☐ Moderately affected
- ☐ Severely affected

3) How diverse is the local economy in your area in terms of industries, sectors and economic activities?

- ☐ Very diverse (many different sectors)
- ☐ Somewhat diverse
- ☐ Limited diversity (few sectors dominate)
- ☐ Not diverse at all (dependent on one sector)

A.7 CIVIC SPACE

- 1) To what extent do people in your community feel free to express their views and participate in public discussions on important issues?
 - ☐ To a great extent
 - ☐ To some extent
 - ☐ To a limited extent
 - ☐ Not at all
- 2) How responsive are local leaders and authorities to the concerns/needs and grievances of people in your community?
 - ☐ Very responsive
 - ☐ Somewhat responsive
 - ☐ Not very responsive
 - ☐ Not at all responsive
- 3) In times of crisis, how likely are people in your community to support and follow guidance from public authorities?
 - ☐ Very likely
 - ☐ Somewhat likely
 - ☐ Unlikely
 - ☐ Very unlikely
- 4) How often do different groups in your community come together to discuss and resolve shared challenges and issues?
 - ☐ Often
 - ☐ Sometimes
 - ☐ Rarely
 - ☐ Never

ANNEX B: GHANA SRI INDICATOR MAPPING TABLES

This annex presents a set of illustrative indicator mapping tables developed for the Ghana subnational resilience index, together with selected examples of data collection. The tables demonstrate how identified indicators may be mapped across the seven SRI pillars, together with the relevant data sources and reference metrics used. They are intended to enhance transparency in indicator selection, provide a clear record of the methodological process, and serve as a practical reference for practitioners adapting the SRI framework to other subnational contexts.

Note: The tables below are intended as a practical reference and may be adapted, expanded, or refined depending on the context, subnational level, and data availability for a given subnational resilience assessment.

B.1 INCLUSION

Metric	Women in Paid Employment (%)	Human Development Index	Access to Finance (%)	Group Based Inclusion - lack of influence in governance (%)
Source	Global Data Lab	Global Data Lab	Global Data Lab-Mean International Wealth Index	Ghana Governance Series - Wave 2 Page 3 Percentage of population that said they have no influence in government
Link	Percentage of Women in Paid Employment	Subnational HDI	Mean International Wealth Index Per Region	
Year	2022	2022	2022	2025
Region				
Ahafo	70	0.591	48.9	48.1
Ashanti	79.8	0.618	55.5	41.8
Bono	70	0.591	48.9	43
Bono East	70	0.591	48.9	22.5
Central	76.1	0.612	51.4	21.8
Eastern	73.5	0.622	51.6	38
Greater Accra	69.7	0.67	62	27.1
Northern	70.2	0.496	45.4	38.6
North East	70.2	0.496	45.4	44.8
Savannah	70.2	0.496	45.4	30.3
Oti	77.3	0.603	48.2	23.9
Upper East	73.5	0.565	46.3	42.1
Upper West	70.2	0.536	42.8	19.1
Volta	77.3	0.603	48.2	23.6
Western	77.8	0.611	52.7	26.9
Western North	77.8	0.611	52.7	40.2

B.2 SOCIAL COHESION

Metric	Sum of Fatalities	Items given in addition to a local fee by region (MONEY) Wave 2 (Bribery) (%)	Responsiveness of government in decision making by region: A Lot (WAVE 2) (%)	Frequency of contact with a public official by region: More than 5 times (WAVE 2) (%)
Source	ACLED	Ghana Governance Series Page 46	Ghana Governance Series Page 85	Governance Series Page 24
Link	ACLED Sum of fatalities	The Governance Series Wave 2	The Governance Series Wave 2	The Governance Series Wave 2
Year	2025	2025	2025	2025
Region				
Ahafo	1	87.8	8.1	11.2
Ashanti	46	79	6.4	14.1
Bono	5	69.7	9.5	15.1
Bono East	1	70.2	16.8	12.2
Central	11	78.2	16.1	10.9
Eastern	14	59.1	14.7	8.6
Greater Accra	8	73	12.5	10.7
Northern	11	73.9	14	10
North East	24	81.8	18.7	6.3
Savannah	46	84.8	17.3	5.9
Oti	2	71.3	23.7	14.7
Upper East	73	67.3	18.5	11
Upper West	6	76.6	23	10.1
Volta	1	79.1	7.7	16.9
Western	5	69.6	15.5	9.3
Western North	9	62.5	7.1	14.8

B.3 STATE CAPACITY

Metric	Perceived Public Sector Corruption (%)	Educational attendance children aged 6-8 (%)	Vaccinations of children aged 1: Public Health (%)	Access to and utilization of Health Services: Men (%)
Source	Global Data Lab	Global Data Lab	Global Data Lab	Ghana Demographic and Health Survey
Link	Comprehensive Subnational Corruption Index (SCI)	Educational attendance children aged 6-8	% of children age 1 with BCG Vaccine	% of men who visited a health provider or facility

Year Region	2022	2022	2022	2022
Ahafo	51	86.8	96.3	20.2
Ashanti	50.5	97.7	97.2	20.9
Bono	51	86.8	96.3	19.2
Bono East	51	86.8	96.3	19.6
Central	51.5	93.6	99.1	20.9
Eastern	55.1	96.2	90.5	29.2
Greater Accra	49.1	97	98.8	19.2
Northern	50.5	74.1	89.4	19.1
North East	50.5	74.1	89.4	12.3
Savannah	50.5	74.1	89.4	13.2
Oti	45.3	90.7	97.3	17.6
Upper East	52.9	94.9	94.4	14
Upper West	46.5	91.1	95.7	23.8
Volta	45.3	90.7	97.3	22.4
Western	53.7	92.9	94.6	15.5
Western North	53.7	92.9	94.6	16.4

B.4 INDIVIDUAL CAPABILITIES

Metric	Children who in the last year could not attend class due to absence of teacher or school closure (%)	Mean International Wealth Index (IWI) score of region (%)	Underweight children (%)	Severely Wasted Children (%)
Source	MICS	Global Data Lab	Global Data Lab	Global Data Lab
Link	MICS School-related reasons for inability to attend class	Global Data Lab Mean International Wealth	Global Data Lab underweight children percentage	Severely Wasted Children
Year Region	2023	2023	2023	2023
Ahafo	17.2	48.8	10.6	16
Ashanti	20	55.9	9.73	16.7
Bono	17.2	48.8	10.6	16
Bono East	17.2	48.8	10.6	16
Central	17.7	52	11.2	15
Eastern	16.2	51.8	10.9	10.7
Greater Accra	10	62.1	8.6	10.9

Northern	24.5	45.7	17.4	26.6
North East	24.5	45.7	17.4	26.6
Savannah	24.5	45.7	14.6	26.6
Oti	13.9	49.1	17.4	16.7
Upper East	22.3	47.9	11.6	22.5
Upper West	19.4	43.4	11.1	17.1
Volta	13.9	49.1	14.6	16.7
Western	14.6	53.3	7.53	11
Western North	14.6	53.3	7.53	11

B.5 ENVIRONMENT AND ECOLOGY

Metric	Disaster Mortality (No. of deaths due to natural disaster in last 5 years)	Infant mortality rate (%)	Availability of sufficient drinking water when needed (%)	Yearly Average Surface Temperature (°C)
Source	EM-DAT	Global Data Lab	MICS	Global Data Lab
Link	EMDAT Disaster Mortality	Global Data Lab infant mortality rate	MICS Drinking Water	Yearly Average Water Surface Temps Global Data Lab
Year Region	2021-2026	2023	2017/18	2022
Ahafo	0	27.6	89.8	27.57
Ashanti	12	31	88.5	26.92
Bono	0	27.6	89.8	27.57
Bono East	0	27.6	89.8	27.57
Central	0	32.3	82.6	26.47
Eastern	0	22.8	94.8	26.89
Greater Accra	12	13.3	85.7	26.97
Northern	0	21.1	88.3	28.16
North East	5	21.1	88.3	28.16
Savannah	0	21.1	88.3	28.16
Oti	0	42.3	81.8	27.30
Upper East	0	35.4	95	28.55
Upper West	0	18.5	85.5	28.05
Volta	0	42.3	81.8	27.30
Western	8	31.1	91	26.31
Western North	0	31.1	91	26.31

B.6 ECONOMY

Metric	Access to internet in the household (%)	Access to electricity in the household (%)	Youth population (15-35 Years) not in education, employment, or training (NEET) by region (%)	Intensity of poverty (%)	Unemployment rate (%)
Source	Global Data Lab	MICS	Ghana Statistical Service	Statsbank Ghana	Statsbank Ghana
Link	Global Data Lab Internet Access	MICS Electricity	StatsGhana NEETs Page 20	Intensity of Poverty StatsGhana	Unemployment StatsGhana
Year	2021	2017/18	2022	2021	2021
Region					
Ahafo	25.6	75.1	21.1	42.5	11.9
Ashanti	36	79.3	25.1	42.8	13.1
Bono	25.6	75.1	20.9	42.1	13.8
Bono East	25.6	75.1	15.9	41.7	11.2
Central	31.1	87.3	21.9	43.6	13.3
Eastern	22.8	81	22.6	42.6	11.8
Greater Accra	48.7	94.2	29.1	43.3	12.9
Northern	9.03	73	22.8	44.3	20.7
North East	9.03	73	22.4	45.8	14.3
Savannah	18.5	73	27	45.8	6.7
Oti	9.03	83.4	16.2	41.7	22.4
Upper East	19.7	46.1	23.4	47.5	21.1
Upper West	12.3	63.4	20	46.2	14.4
Volta	18.5	83.4	20.2	44.4	13.8
Western	32.7	-	23.5	43.4	14.6
Western North	32.7	-	20.7	41.9	13.1

B.7 CIVIC SPACE

Metric	Number of Political Violence and Civic Unrest Events	Households with a cell phone (%)	Population age 15-49 years who are exposed to specific mass media on a weekly basis (%)	Voter turnout (%)
Source	ACLED	Global Data Lab	MICS	Peace FM News
Link	ACLED Political Violence Civil Unrest	Global Data Lab Cell Phone Data	MICS Mass Media	Voter Turnout Peace FM News
Year	2025	2022	2017/18	2024
Region				
Ahafo	5	94.5	77.31	70
Ashanti	93	94.7	83.31	65
Bono	7	94.5	77.31	62
Bono East	7	94.5	77.31	53
Central	25	93.4	83.62	62
Eastern	34	92.8	83.17	53
Greater Accra	108	96.9	90.51	57
Northern	28	92.6	55.93	76
North East	21	92.6	55.93	78
Savannah	8	92.6	75.63	69
Oti	19	92.6	55.93	68
Upper East	73	93.8	65.01	67
Upper West	6	85.6	51.49	67
Volta	13	92.6	75.63	64
Western	20	93.6	80.56	57
Western North	9	93.6	80.56	65



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