



GHANA 2021 POPULATION AND HOUSING CENSUS

Data Quality Assurance Fact Sheet



The 2021 Population and Housing Census (PHC) is Ghana's first fully digital census making it possible to harness technology for real-time data quality monitoring to achieve complete coverage and accurate data. In addition, the 2021 PHC implemented a hierarchical operational structure to enhance data quality monitoring during field work. This fact sheet highlights the innovative measures the Ghana Statistical Service (GSS) implemented to generate accurate, relevant, and timely Census data for decision-making.

Constitution of District Data Quality Management Teams

For the first time, District Data Quality Management Teams (DDQMT) were constituted in each of the 272 statistical districts to ensure complete and accurate coverage within the district. The team comprised the District Census Officer (DCO), District Field Supervisor (DFS), District Data Quality Monitor (DDQM), and District IT Officer (DIT) who were supervised by the Regional Data Quality Management Team (RDQMT) – their counterparts at the regional level.

The responsibilities of the DDQMT were critical to the real-time data quality monitoring and included: (i) identifying all data collection errors after each day's work; (ii) ensuring that all data collection errors were corrected while Enumerators were still in the field; (iii) undertaking spot checks and validation exercises to quality assure the work being done by Field Officers; (iv) promptly resolving technical issues and challenges to ensure a smooth and timely data collection exercise; (v) clearing the Field Officers (enumerators and supervisors) after verifying the completeness and accuracy of their respective data collected; and (vi) leading community engagement, and publicity, education, and advocacy activities in the district throughout the period.

Re-Interviews by Supervisors



To validate individual Enumerator's work, Supervisors were required to conduct re-interviews. The Computer Assisted Personal Interviewing (CAPI) application used for the data collection made it possible for Supervisors to re-visit structures and households that were randomly selected and administer an abbreviated version of the respective questionnaires. The application subsequently generated a report comparing the responses recorded by the Enumerator to that of the Supervisor in order to identify and correct any inconsistencies. In cases where the inconsistencies exceeded 30% of the responses, the DFS would step in to facilitate the resolution. Supervisors were required to do a minimum of two re-interviews per Enumerator during both the Listing and Enumeration phases.

Census Enumeration Tracking Dashboard

The 2021 PHC utilised an enumeration tracking Dashboard to monitor and report on quality of data collected in near real-time. The Dashboard, which was updated at least twice a day, allowed Census Officials at Headquarters *Situation Room* and Regional Statisticians to view data that were being synchronised to the server in near real-time. The Dashboard provided data that could be disaggregated to the Enumeration Area (EA) level for timely identification and rectification of errors. It provided summary statistics on progress of listing and enumeration such as structures listed, persons enumerated, spatial coverage, and Enumerator performance indicators e.g. questionnaires completed per day and time spent per interview. The Dashboard also generated information on demographic characteristics such as household size, age, and sex structure. The dashboard also served as an 'early warning system' by comparing key listing and enumeration indicators to expected or baseline values and promptly instituting the right action(s) where threats were detected.

Daily Data Quality Monitors Reports



After each day's work, Data Quality Monitors (DQM) at the national, regional and district levels downloaded data synchronised to server and run consistency checks to identify gaps, duplicates, and inconsistencies. The findings from the daily DQM reports (error reports) were shared with other DDQMT members and the relevant Field Officers for correction under the supervision of the DFS. At the national and regional levels, census management utilised the DQM reports in tandem with the enumeration tracking dashboard to remotely monitor the completeness and accuracy of the data collected.

Benchmarking

To assess coverage and quality, data collected was compared with benchmark indicators. Benchmark indicators for the Listing phase included building footprints generated from satellite imagery which allowed for both numerical and spatial analysis of coverage relative to the benchmark. For the enumeration phase, benchmark indicators included, mid-year population projections from the Ghana Statistical Service and the United Nations.

Virtual Briefing Meetings



Regularly scheduled virtual meetings between Census Officials at GSS HQ and those in the regions and districts made it possible for daily review of work in progress and discussion of matters arising and strategies to resolve challenges. These meetings included daily early briefings between the Government Statistician and Regional Statisticians; routine briefing meetings with National Monitors in the districts; and between Regional Statisticians and their District Data Quality Management Teams. These meetings were complemented with the use of WhatsApp groups for rapid communication of information.

Incident Response Tracker



During data collection, an incident response tracker was created (using Google Forms) for National Monitors deployed nationwide to immediately report any issues that came to their attention and needed to be resolved immediately. The tracker required the Monitor to provide information on the district, enumeration area number where the issue was observed and select one of the pre-populated responses (e.g. violation of enumeration procedures, refusal to participate, Enumerator not at post, tablet malfunction etc.). Monitoring and Evaluation team members were assigned to review and follow up on the incidents reported and provide feedback on the status of resolution.

Census Call Centre

A Census Call Centre was set up to receive inbound calls from persons whose structures may not have been listed, whose households may not have been enumerated or who had concerns/complaints about Enumerators or the process. This setup, following a publicity campaign to raise awareness on what to expect during the data collection period, made it possible for members of the public to report any issues that could affect coverage and data quality. The Call Centre agents communicated the content of calls to the relevant district teams for follow up and recorded the call logs in an online dashboard to provide real-time information to Census Management for monitoring.

Post Enumeration Spot Checks

To ensure complete coverage, GSS enforced post-enumeration spot checks in an entire enumeration area whenever a call was received from individuals claiming to not having been enumerated. In the process of spot-checking, verification and validation were done to ensure: (i) all structures were listed; (ii) all households in structures were covered; and, (iii) all households members were enumerated.

To further quality assure work done by Field Officers, higher level Census Officials made physical visits to selected households for purposes of verifying information collected by the Field Officers. Outbound calls to selected members of the public were used for the same purpose of verifying information collected by the Field Officers.

Post Enumeration Survey

In accordance with United Nations Principles and Recommendations for successful census taking a Post Enumeration Survey (PES) is being carried out to independently evaluate the completeness and accuracy of the data collected in the 2021 PHC.

Contact Information



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