

# Quality assurance in the Portuguese Census 2011: The Alert Indicators System

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The Population and Housing Census in Portugal is carried out every ten years by Statistics Portugal. This operation is a multi-stage process with multiple sources of error that could directly affect the quality of the final output. The fieldwork process is the central and decisive part of the census operation, therefore, fieldwork supervision is crucial to minimise the risks of faulty enumeration. In order to guarantee high standards of quality of the census output, Statistics Portugal has implemented a quality assurance (QA) system to ensure that the enumeration work would follow the established procedures. This QA system includes a newly developed feature for controlling and minimising the coverage errors during the census operation and it is named as Alert Indicators System (AIS). This is a statistical-based tool that permitted the monitoring of counts of individuals and dwellings at the parish level. The AIS is comprised of a set of estimated intervals for individuals and dwellings counts in each of the 4260 parishes on the reference day of the census. AIS implementation was supported by the Fieldwork Organization and Control System, an information system specifically designed to assist the organization and monitoring of the entire workflow of the fieldwork operation. In this paper we describe how the AIS was built and discuss how it allowed the risk of coverage error to be minimised and the overall objectives set for the fieldwork stage were to be met.

Key words: fieldwork operation, coverage error, quality assurance, regression analysis