# GIS Applications for Social and Behavior Change Communication in Liberia's Ebola Response

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Introduction: Geographic Information Systems (GIS) has enormous potential to impact the field of public health; however, it remains underutilized, especially within the context of global health and infectious diseases [1, 2]. Social and behavior change communication (SBCC) strategies are poised to be central to curbing the current Ebola crisis in West Africa [4]. GIS has the potential to greatly inform SBCC activities in order to maximize their effectiveness.

Methods: Data from the multiple, disparate sources were interwoven to produce an integrated geospatial dataset for ESRI's ArcGIS 10.2 [5]. WHO Ebola data and DHS household data were integrated with other data, such as administrative divisions, population densities, road networks, and mobile coverage maps [5-7].
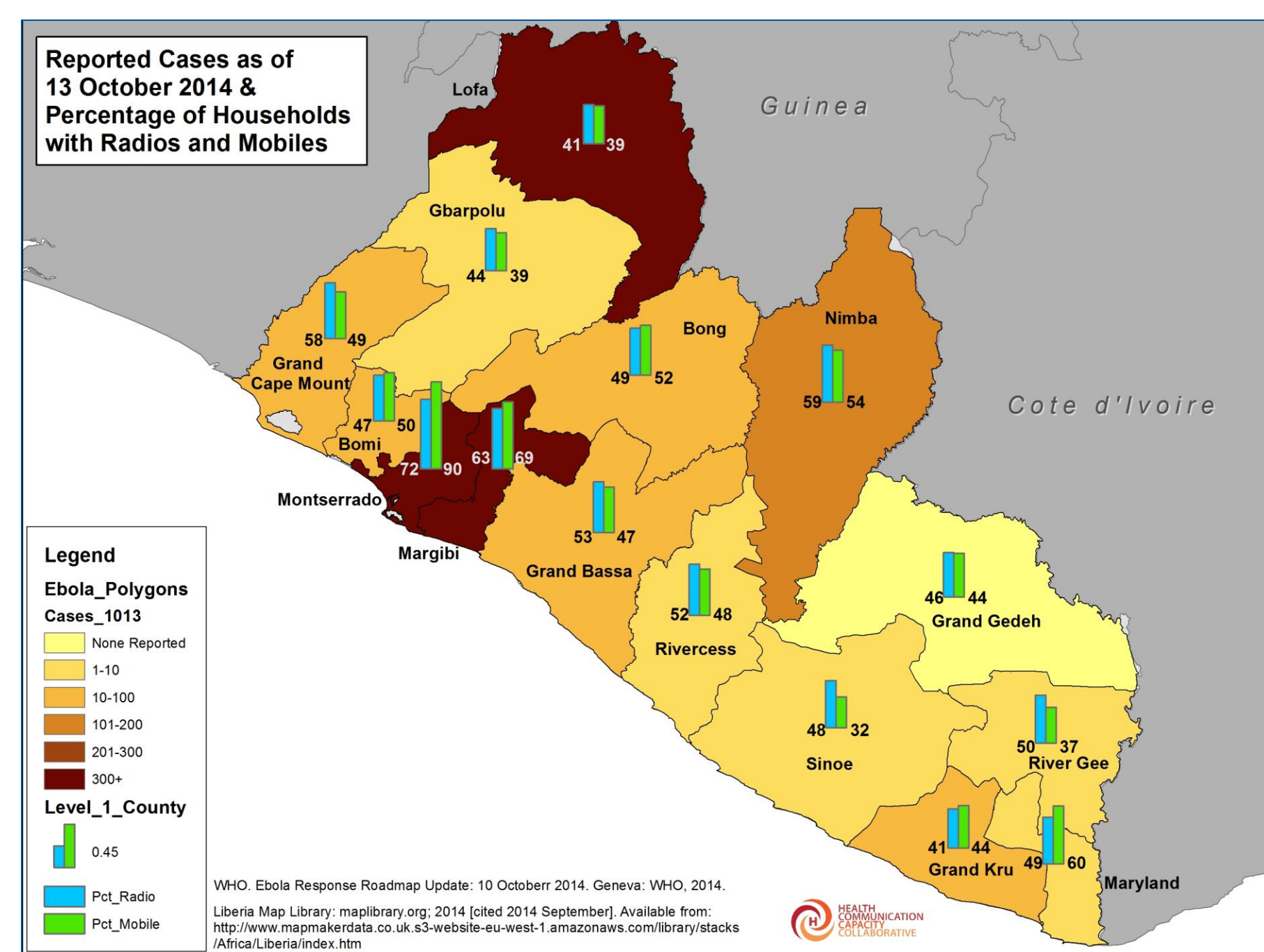
Results: The geodatabase offers map displays, including an interactive map on the Ebola Communication Network (ebolacommunicationnetwork.org), that overlay seemingly disparate sets of data into a useful and informative perspective that can help explain where and why current behaviors exist and where and how to target SBCC interventions. Results may help contribute to the appropriate design implementation and focus of SBCC activities.

Conclusions: GIS has great potential to integrate data from a variety of sources into a meaningful way for applications in controlling the Ebola outbreak. SBCC interventions can be informed by continuing to map and monitor activities on the ground, which may prove especially important due to the critical nature of communication in this context.
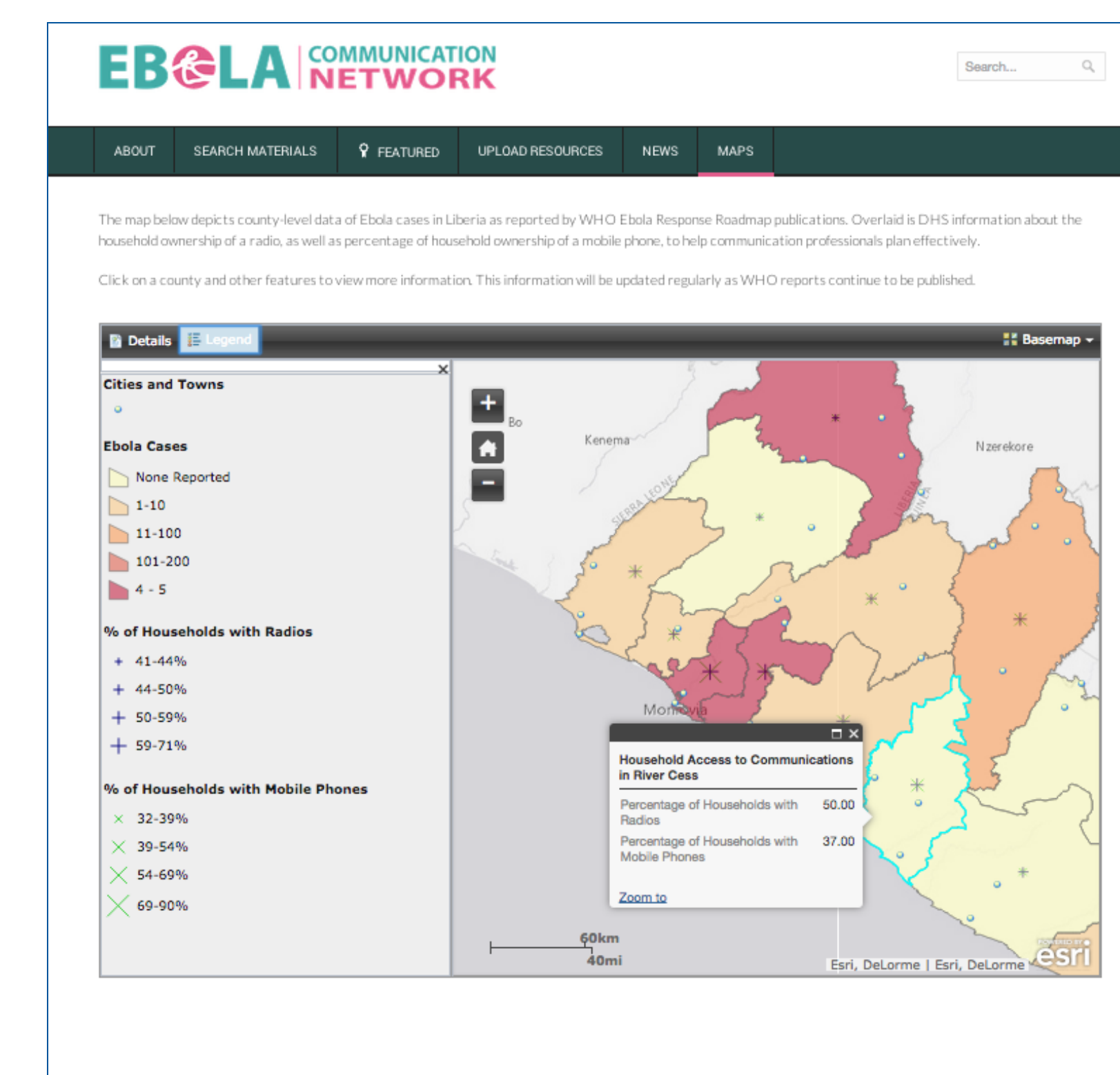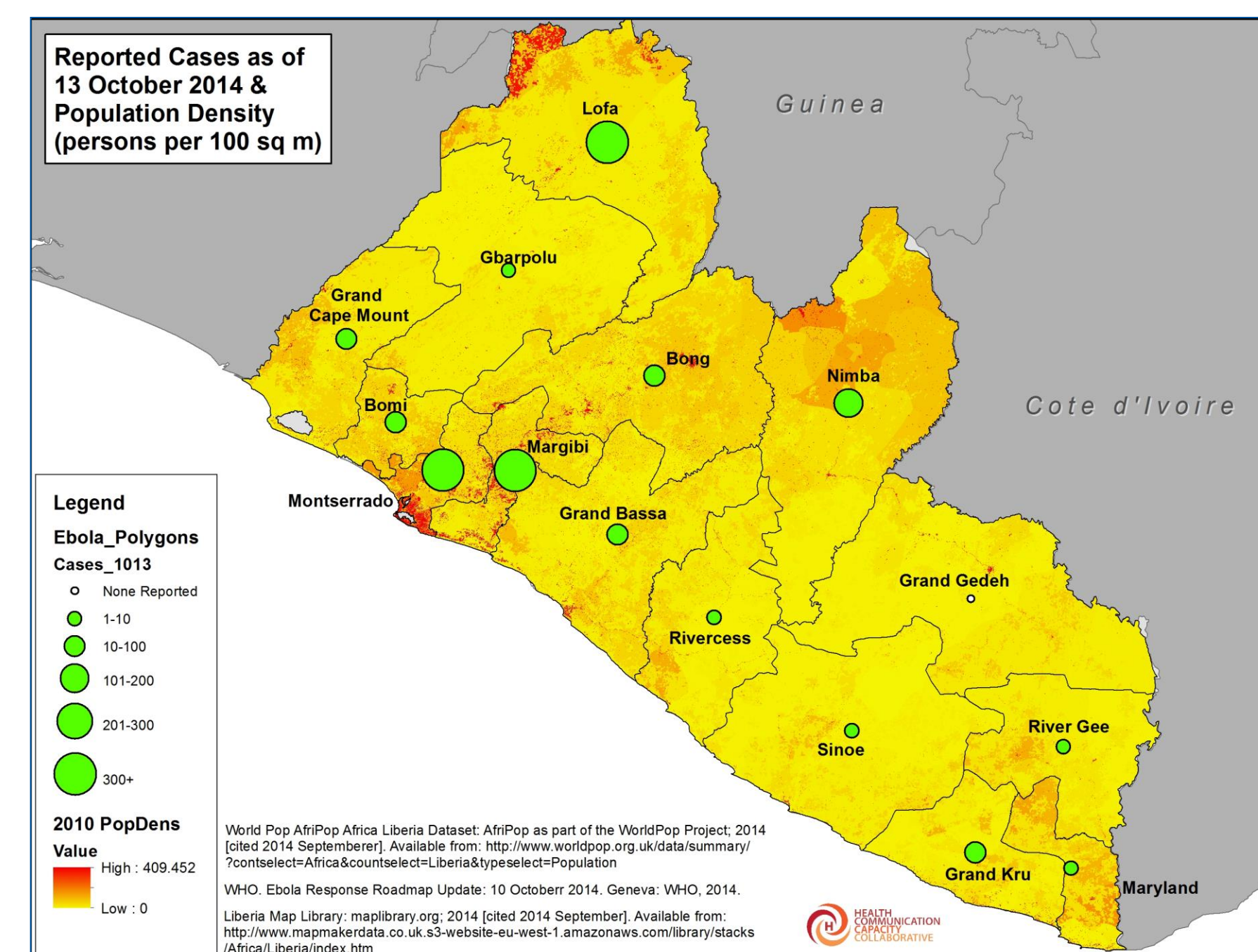
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