

## **Assessing the impact of malaria and malaria control interventions on the welfare of the population on Bioko Island, Equatorial Guinea.**

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The Bioko Island Malaria Control Project (BIMCP) has conducted intensive malaria control interventions on Bioko Island, Equatorial Guinea since 2005. The BIMCP has had significant success in reducing *P. Falciparum* parasite prevalence in 2-14 year olds from 45% (95% CI 40%-50%) in 2004 (baseline) to 12.1% (95% CI: 11.2%-13.3%) in 2016 based on annual Malaria Indicator Survey (MIS) data. During MIS surveys, the BIMCP assessed, every 5 years, the impact of malaria and malaria control interventions on the welfare of the island's population and its effect on the poor, as measured by socio-economic status (SES) indicators. Most often, SES is calculated as a proxy using principal components assessment (PCA) which enables ranking of surveyed households. However, using PCA to measure SES provides several limitations such as: the inability to measure the absolute level of poverty in a community or changes in poverty level over time (20% of houses always remain the poorest without any knowledge of how vulnerable they are). Inter-country and inter-temporal analysis is only possible if SES indices are derived from the same asset combination (which may depend on context). Data on expenditure and savings questions on a subset of households from 2004, 2009, and 2013 MIS are used to estimate income as a measure of household welfare, and used to rank the households into deciles. This study will examine self-reported incidence of malaria and prevalence of infection across welfare groups, and establish whether the malaria control interventions have an effect on health improvement, as well as welfare-enhancing (pro-poor), on the population of Bioko Island in Equatorial Guinea.