THE SAPRIN
CONNECTION

Baseline Mapping of Community and Households in the Bafokeng Health and Demographic (BAMMISHO) Node

December 2025

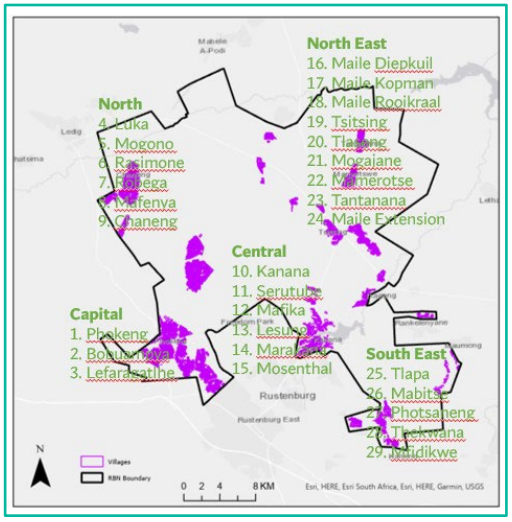

Image: HDSS Setting (Source: BAMMISHO)

BAMMISHO – the Bafokeng Health and Demographic Surveillance Node commenced with the collection of baseline surveillance data on 02 October 2025. BAMMISHO is the South African Population Research Infrastructure Network's (SAPRIN) seventh and newest Health and Demographic Surveillance System (HDSS). Launched on 27 November 2024, BAMMISHO is located in the Royal Bafokeng Nation (RBN) near Rustenburg, North West Province and hosted by the Aurum Institute.

BAMMISHO was the focus of the SAPRIN Population Science webinar on 26 November 2025. During the introduction to the webinar, BAMMISHO's Nodal Director, Professor Geoffrey Setswe said that BAMMISHO was established to understand the impact of mining and migration on the health and wellbeing of people in the local communities.

Dr Lucy Chimoyi, a Scientist from the Aurum Institute presented on, "Baseline Mapping of Community and Households in the Bafokeng Health and Demographic (BAMMISHO) Node," at the SAPRIN Population Science Webinar.

Dr Chimoyi explained that the purpose of the baseline mapping was to: identify, register and geo-code all households and community structures; establish demographic and household profiles of residents; map health and social and economic infrastructure as well as create a database for ongoing surveillance.

Baseline mapping is crucial as it establishes the foundation for population registration and surveillance. Dr Chimoyi emphasised that enumeration enables accurate denominators for key health indicators and facilitates data integration. Follow-up surveillance facilitates integration of community, environmental, and facility-level data for research and planning.

The BAMMISHO HDSS setting consists of 29 villages in 5 administrative regions, with the capital being Phokeng. The area is 1200km^2 with a population of 150 000. The aim is to develop a population cohort of 100 000 people living in the Bafokeng community.

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Dr Chimoyi outlined the rigorous baseline mapping methodology which entailed identifying sources, obtaining shape files, developing a database and mapping. This resulted in the mapping of the entire RBN site and boundaries of every stand/household. The graphic below outlines the Baseline Mapping Methodology. Three Functional Community Areas, consisting of 4 to 9 villages were created and this was to assist the field teams plan their activities. Three Supervisor Areas were created per village, with six Data Collectors Areas.

Professor Setswe said that there are 22 data collectors, all recruited from the Royal Bafokeng community. They were ideal candidates as they understood the language, the culture and the values of the community. They were thoroughly trained and were involved not only in data collection, but also community engagement.

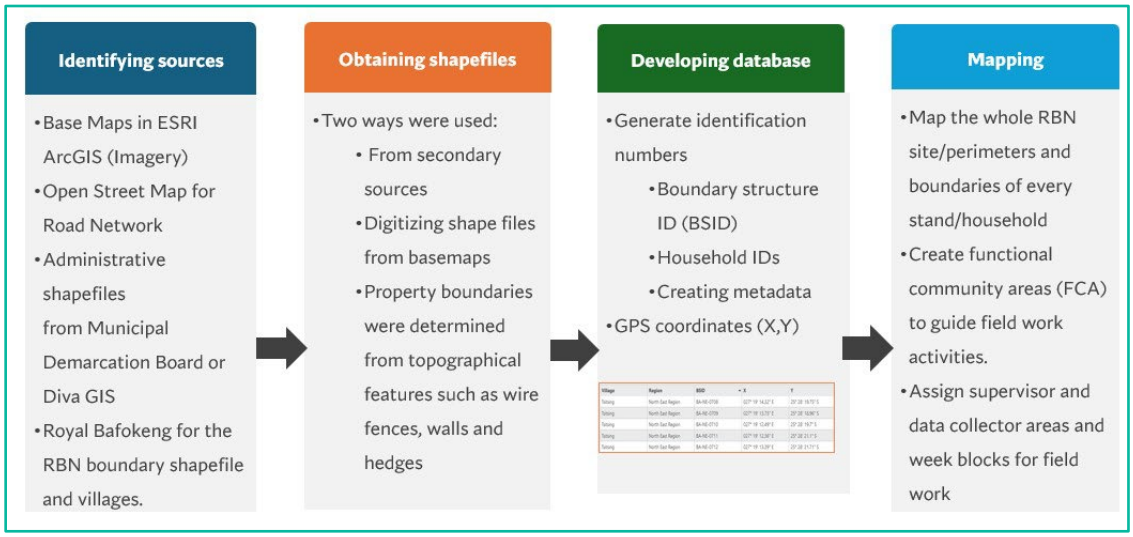

Image: Baseline Mapping Methodology (Source: BAMMISHO)

Information was digitised prior to going out to the field and it needed to be verified to ensure the initial baseline mapping corresponded with what was found on the ground. Fieldworkers would conduct door to door household listings based on GPS geocodes uploaded onto the digital tablets.

The baseline information is collected daily and synced together. The fieldworkers, GIS officer, data managers and supervisors are all involved in the data entry and data verification. The verification process includes daily data audits and GPS verifications, for quality control aimed at leaving little room for error and ensuring the tight timelines are met.

Dr Chimoyi described a bounded structure / homestead as any location where there's a boundary or a fence around it. She explained that sometimes you can find one or multiple households that live/s within that bounded structure. She said that during the initial desktop baseline mapping exercise, prior to going into the field, 26,520 homesteads were identified. By 24 November the identified bounded structures had increased by 7.

Some findings from the field as at 24 November 2025 are that the total number of locations or structures that have been registered by the field workers in the North East region is 1612. Out of the 1612 locations, 1244 households have been registered with the number of household members registered out of this 1244, standing at 4698. It currently shows that the number of women registered is slightly higher than men.

Dr Chimoyi cites incomplete local listings, GPS signal issues and household mobility as some of the challenges encountered during the baseline mapping process. However, several lessons were learnt along the way such as printing of static maps to navigate areas where internet connectivity was problematic and robust community sensitization for improved participation.

Professor Setswe and Dr Chimoyi commended the Royal Bafokeng Nation for their support and being invested in BAMMISHO. Numerous role players that have played an important role in developing the HDSS to this point were acknowledged. Some of these included, the community, community leaders, community engagement and field data teams. SAPRIN and collaborators such as the University of Witwatersrand, Sefako Makgatho Health Sciences University and Johns Hopkins University had provided guidance to the research team.

Dr André Rose, Acting Director of SAPRIN said, “Baseline mapping at BAMMISHO lays the foundation for actionable health intelligence. This work ensures that SAPRIN can deliver accurate, timely data to guide policies that address real challenges faced by communities in South Africa.”

BAMMISHO envisages completing their baseline census in March 2026.

The SAPRIN Population Science webinar titled, “Baseline Mapping of Community and Households in the Bafokeng Health and Demographic (BAMMISHO) Node,” can be accessed here South African Population Research Infrastructure Network (SAPRIN)