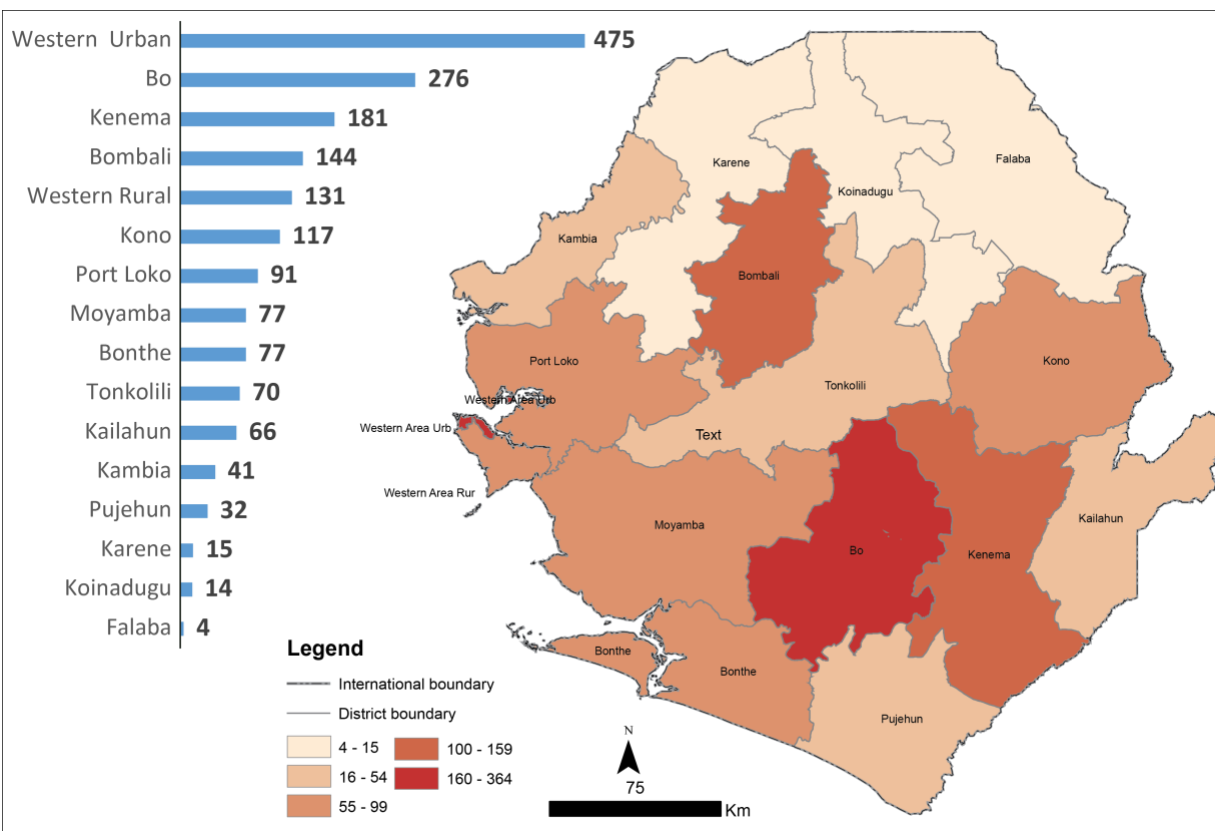




Geospatial Data Analysis and Mapping for Financial Inclusion Report

FINANCIAL SECTOR DEVELOPMENT PLAN SUPPORT PROJECT (Grant No. 662)



Joseph Kandeh, Ph.D.

Consultant, Geospatial Technical Analyst

joe.kandeh@jenmaa.com

30th November 2017

Project Location	Sierra Leone
Contract Number:	BSL/FSDPSP/2016/0016
Project start date:	12 September 2017
Project end date:	30 November 2017
Consultant:	Joseph Kandeh, Ph.D.
Postal address:	12 Sam Sumana Drive, IMATT, Freetown
Telephone	+232 79 627 956 / +232 30 748 040
Email:	joe.kandeh@jenmaa.com

Table of Contents

FIGURES	VI
TABLES	VIII
ACRONYMS	1
EXECUTIVE SUMMARY	2
1. BACKGROUND	4
1.1 SCOPE OF WORK	5
2. METHODOLOGY	6
2.1 TRAINING.	6
2.2 FIELD SURVEY.	6
2.3 DATABASE DEVELOPMENT	9
2.4 ANALYSIS AND ANALYTICS	10
2.4.1 DATA PROCESSING	10
2.4.3.3 DISSEMINATION	12
2.5 ACCESS POINTS (AP) MAPPING SYSTEM DEVELOPMENT	13
3 RESULTS	14
3.1 KEY FINDINGS	14
3.2 NATIONAL OVERVIEW OF FINANCIAL SERVICES	16
3.3 ANALYSIS OF ACCESS POINTS BY TYPE	19
3.4 MAPPING ACCESS POINTS WITH KEY SECONDARY DATA	21
3.4.1 ACCESS POINTS AND POPULATION DENSITY	21
3.4.2 ACCESS POINTS AND EMPLOYED POPULATION	23
3.4.3 ACCESS POINTS AND LITERATE POPULATION	24

3.4.5	ACCESS POINTS AND TELEPHONE COVERAGE	25
3.4.6	ACCESS POINTS AND ROAD NETWORK	27
3.5	UNDERSERVED AREAS	28
3.6	ANALYSIS OF FINANCIAL INCLUSION INDICATORS	29
3.6.1	ACCESS DIMENSION	29
3.5.2	USAGE DIMENSION	30
3.7	CHIEFDOM ANALYSIS OF ACCESS POINTS	31
3.6	INTERACTIVE WEB MAP	31
4	<u>CHALLENGES AND LESSONS LEARNED</u>	33
4.1	KEY CHALLENGES	33
4.1.1	CHALLENGES BEFORE THE SURVEY	33
4.1.2	CHALLENGES DURING THE SURVEY	33
4.2	OVERALL CHALLENGES	34
4.2.1	ACCESS TO SUPPLY-SIDE DATA, TIMELINESS AND OVERALL DATA CHARACTERISTICS	34
4.2.2	OVERLAPS AND GAPS IN ADMINISTRATIVE BOUNDARIES	34
4.2.3	MISMATCH BETWEEN DATASETS (ATTRIBUTE AND SPATIAL DATASETS)	35
4.3	LESSONS LEARNED	35
5	<u>CONCLUSIONS AND RECOMMENDATIONS</u>	36
5.1	CONCLUSIONS	36
	<u>ANNEXES</u>	39
ANNEX 1:	TERMS OF REFERENCE	39
ANNEX 2:	FINANCIAL INCLUSION INDICATOR CALCULATION	42
ANNEX 3:	NATIONAL OVERVIEW	43
ANNEX 4	DATA COLLECTION TOOL	46

ANNEX 5: AREA THAT NEED EXPANSION	50
ANNEX 6 SCREEN SHOOT OF THE WEB MAP	51

Figures

Figure 1: Geospatial data analysis and mapping methodology	6
Figure 2: Distribution of Enumerators and Supervisors, and an Enumerator using the data collection tool.....	9
Figure 3: Access Points to economically active population	15
Figure 4: Access Points to economically active population	15
Figure 5: Distribution of Access Points per district	16
Figure 6: Spatial distribution of Access Points at district level.....	17
Figure 7: Percent contribution of Access Points per district.....	17
Figure 8: Points: Chiefdom with and without Access	18
Figure 9: Chiefdom without access points	19
Figure 10: Breakdown by access points	19
Figure 11: Distribution of Access Points by type and district	20
Figure 12: Per capital information for Commercial Banks.....	21
Figure 13: Access Points and population density.....	22
Figure 14: Access Points and Adult Population	23
Figure 15: Access Points and Adult population employed	24
Figure 16: Access Points and literate population	24
Figure 17: Access Points and Mobile Phone subscription	25
Figure 18: Access Points and Mobile Phone subscription	26
Figure 19: Access Points and Mobile Phone coverage.....	26
Figure 20: Access Points and Road Network	27
Figure 21: Areas for possible future expansion	28
Figure 22: Supply-Demand Ratio Map	29

Figure 23: Supply-Demand chart.....	30
Figure 24: Chiefdom assessment of access to financial services	31

Tables

Table 1: Commercial Banks Worksheet	10
Table 2: Breakdown of Access Points	14

ACRONYMS

AP	Access Point
FAP	Financial Access Point
AFI	Alliance for Financial Inclusion
ATM	Automatic Teller Machine
BSL	Bank of Sierra Leone
FSA	Financial Services Association
GIS	Geographic Information System
SSL	Statistics Sierra Leone
WB	World Bank

EXECUTIVE SUMMARY

Geospatial mapping of financial access point is critical but important in the identification of areas that are under and over served. It is considered important because it provide the bases for financial expansion. The Geospatial Data Analysis and Mapping for Financial Inclusion Project (BSL/FSDPSP/2016/0016) aimed at mapping existing financial access points and identifying areas that are underserved. Forty data collectors were deployed across the sixteen political districts to collect geographic coordinates and attribute data from each identified financial access points including Banks, Automatic Teller Machine, Financial Services Association, Community Banks, Microfinance Institutions, Foreign Exchange Bureaus, Point of Sales, and Mobile Money Agents.

One thousand eight hundred and eleven (1,811) access points were mapped during the five weeks field work. Seventy-five (75%) are Mobile Money Agents (Orange Money making up 74% of the total) followed by Microfinance Institutions (7%), Commercial Banks (6%), and Foreign Exchange Bureaus (6%). Financial Services Association, ATMs, and Community Banks account for the remaining 6%. Aggregate figures show that Western Urban has the highest number of FAP (475, 26%), followed by Bo District (276, 15%). Sixty-seven (67%) percent of financial access points are concentrated in Western Urban, Bo, Kenema, and Bombali districts, making these the main hub for financial services in Sierra Leone. Falaba, Karene, Koinadugu, Pujehun, and Kambia make up the bottom five of the financial services accounting for about 6 percent.

More than half of the chiefdoms in Tonkolili, Falaba, Karene, Kambia, and Port Loko districts (combined) do not have APs. Out of 207 chiefdoms, 86 (42%) are without APs. The 86 chiefdoms without are found in all the districts except Western Urban and Western Rural. Tonkolili district has the highest number chiefdoms without an access point. Of the 82 chiefdoms, 62 percent of them are in Tonkolili, Falaba, Karene, Bo, Port Loko, and Pujehun. The chiefdoms without access points reveal an interesting pattern; they tend to be clustered together. In Falaba, Karene, and Kambia, they are more at the border between Sierra Leone and Guinea suggesting that the population in those location access financial access points or travel to the nearest chiefdom with the required access

point. The analysis revealed that in Bo, Pujehun, and Port Loko, chiefdoms without access points are small in area size.

In addition, an interactive map has been developed that displays a comprehensive visual representation of the landscape of financial access points in Sierra Leone.

1. BACKGROUND

Existing research recognises that approximately 4 billion people living in developing countries and emerging economies do not have access to financial services including savings, insurance and credits.¹ In Sierra Leone, less than 15 percent of Sierra Leoneans have an account at a financial institution (See TOR in Annex 2). The low financial access could in part be explained by the refusal of formal financial intermediaries including commercial banks to serve poor households and micro-enterprises. The refusal of financial institutions to serve certain areas suggest that they are ignoring the enormous potential of entrepreneurs of that stratum of society. Evidence suggest that access to financial services will stimulates self-development through entrepreneurship and independence of households.² Moreover, access to financial services is a critical and important step in connecting the rural poor to economic life. Access to financial services help build the confidence of the poor to play a role in the national economy.

Given that access to financial services particularly for the rural poor could play an important role in alleviating poverty, the identification of underserved areas is critical for financial inclusion. Identification of underserved areas for the most part is informed by geospatial mapping of financial services. Unlike Sierra Leone, geospatial mapping of financial access points (AP) for financial inclusion landscape has been carried out in several countries in Asia, Americas and Africa including Nigeria, Ghana, Senegal, Ivory Coast, and Benin. In mapping financial access points for financial inclusion, data from the supply and demand side are important. Whilst these two data streams are for the most part available in other developing countries, the situation is quite different in Sierra Leone. Given the growing demand for financial expansion in Sierra Leone, with support from the World Bank, the Geospatial Data Analysis and Mapping for Financial Inclusion Project (BSL/FSDPSP/2016/0016) was design to address the gap.

¹ Sjauw-Koen-Fa, A., & Vereijken, I. (2005). Access to financial services in developing countries. *Rabobank Nederland*, September, 1-32.

² Karmakar, K., Banerjee, G., & Mohapatra, N. (2011). *Towards financial inclusion in India*: SAGE Publications India.

1.1 Scope of Work

1. To map out current and potential access points
2. To overlay Access Points with population, economic activity, financial behaviors, telephone networks, postal offices, and other parameters.
3. To identify underserved areas and areas ready for financial service expansion and optimum/maximized opportunities.
4. Provide information that will help assess the strategic placement of current and potential financial products and access channels and, potentially build a business case for reforms and the expansion of products and services in new areas.

2. METHODOLOGY

For the purposes of nation-wide geospatial mapping of financial services, Figure 1 shows a schematic illustration of operationalised activities.



Figure 1: Geospatial data analysis and mapping methodology

2.1 Training.

A two-day hands-on training (27th and 28th September 2017), was carried out for 40 enumerators and four supervisors. The enumerators were trained on how to identify an AP, how to collect the relevant attribute data, and how to collect portrait and geolocation of the facility. During the training, the mobile data collection tool was installed on Android phones for all the enumerators and supervisors. Being a hands-on training, six hours was spent in piloting the tool with the enumerators within Brookfield's and Congo Cross sections of Freetown. The quality of the evaluated piloted data suggests that the enumerators understood the training and could undertake the exercise with little supervisions.

2.2 Field Survey.

The Alliance for Financial Inclusion (AFI) defines an AP as any physical entity where an individual can perform cash-in and cash-out transactions with a regulated financial institution.

For the purpose of the exercise, information on the following access points were collected:

- I. Banks – (Central, Commercial, and Community),
- II. Financial Service Associations (FSAs),
- III. Automatic Teller Machines (ATMs)
- IV. Microfinance Institutions,
- V. Post Offices,
- VI. Foreign Exchange Bureaus (FEBs),

- VII. Discount & Home Mortgage Houses,
- VIII. Capital Markets,
- IX. Point of Sales,
- X. Leasing Companies, and
- XI. Mobile Money Agents.

For each of the access points, the following attribute information were collected:

- I. Location, this include the region, district and town/village
- II. Category of AP (whether a bank, foreign exchange bureau money agent, etc.)
- III. AP type; e.g. Head Office or Branch,
- IV. If Commercial Bank, the name of the commercial bank. e.g. Sierra Leone Commercial Bank, Rokel Commercial Bank, etc.,
- V. For ATMs, whether off-site or attached to either head office or branch office
- VI. Date & time of data collection,
- VII. Picture of the AP,
- VIII. GPS Coordinate of the AP

The Field Survey commenced on October 2nd, 2017 and lasted for five weeks. The enumerators and supervisors were deployed as shown in Figure 2. Within each region, each enumerator was assigned to a district. However, in the case of urban areas like Freetown, Bo, Kenema, and Makeni, a number of enumerators were assigned. Within each urban setting, enumerators were assigned to specific areas bounded by principal streets that could be easily identified.

Each access point was assigned a unique ID. Given that KoboCollect provides an opportunity to collect data offline, data collected on each AP were saved and later sent to the KoboCollect server. On a daily basis, data on the server were checked by the database administrator for consistency, omission and missing data. For accuracy purposes, GPS readings above 10 meters threshold were rejected. In such situation, the enumerator was asked to redo the AP in question.

In addition to the primary data, the following secondary data were acquired;

- a) Statistics Sierra Leone (SSL):
 - 2015 population at district and chiefdom level,

- Registered businesses at chiefdom level,
 - 2015 Socio-economic data; Literacy, Employment rate, rural population, and poverty data at chiefdom level,
 - GIS Map layers;
 - Administrative boundaries; Admin 1, 2, 3, 4, and 5
 - Settlements, and
 - Roads
- b) Humanitarian Data Exchange - a number of other datasets on Sierra Leone such as telephone coverage were sourced.
- c) Bank of Sierra Leone - the following supply-side data was requested from Banking Supervision:
- Number of bank accounts by bank by district
 - Number of loans by bank by district
 - Number of SMEs accounts by district
 - Number of loans by SMEs by district

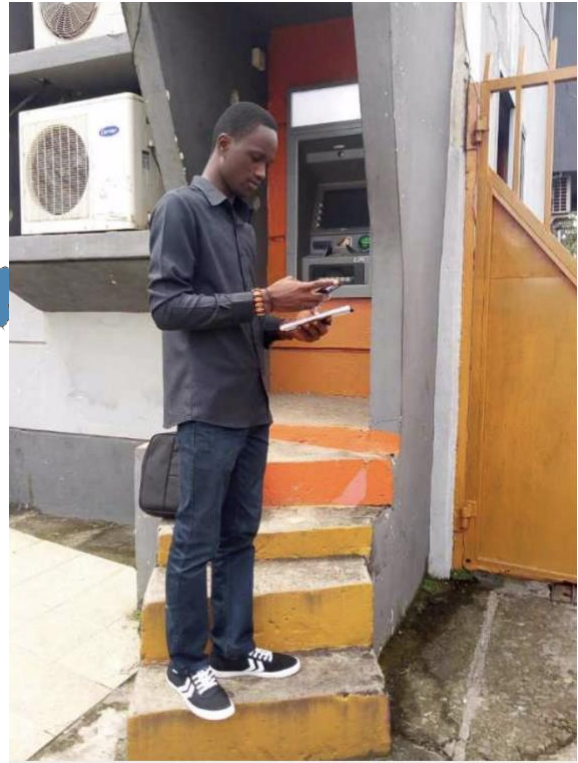
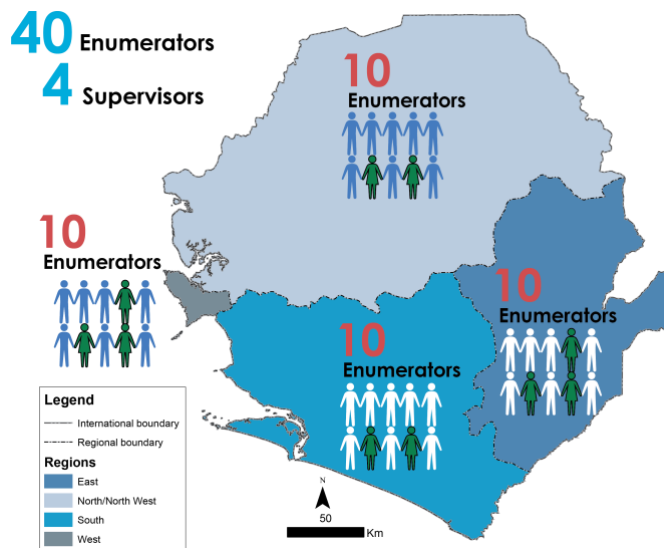


Figure 2: Distribution of Enumerators and Supervisors, and an Enumerator using the data collection tool

2.3 Database development

With the approval of the Data Administrator, data was downloaded from the KoboCollect server into Microsoft Excel and Comma-separated values (CSV) file format and further cleaned. The GPS coordinates of the Access Points allow it to be aggregated at both district and at chiefdom levels representing the two units of analysis of the study.

A database of the Access Points was developed in Microsoft Excel. The Excel is composed of several worksheets with each category of Access Point placed in separate worksheet as shown below. The “Introductory” worksheet provides the Metadata.

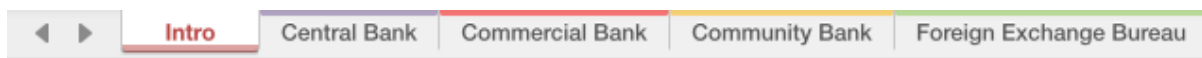


Table 1 is a screenshot of the “Commercial Banks” worksheet. As new commercial banks or other APs are established, the details will be added to the Excel database in addition to updating the interactive map.

Table 1: Commercial Banks Worksheet

	A	B	C	D	E	F	G	H	I	J
1	ID	Region	District	Chiefdom	Name	Category	Address	Town	X_Cord	Y_Cord
2	76	East	Kenema	Kenema City	Ecobank (SL) Ltd.	Branch Office	54 Hanga Ro	Kenema City	-11.188461	7.88601872
3	58	East	Kenema	Kenema City	First International Bank (SL) Ltd.	Branch Office	10 Dama Ro	Kenema City	-11.191533	7.87266852
4	44	East	Kenema	Kenema City	Guaranty Trust Bank (SL) Ltd.	Branch Office	71 Hanga Ro	Kenema City	-11.188965	7.88545167
5	14	East	Kenema	Kenema City	Rokel Commercial Bank (SL) Ltd.	Branch Office	12 Dama Ro	Kenema City	-11.191456	7.87243805
6	1	East	Kenema	Kenema City	Sierra Leone Commercial Bank	Branch Office	2 Hanga Ro	Kenema	-11.192075	7.8743633
7	31	East	Kenema	Kenema City	Union Trust Bank (SL) Ltd.	Branch Office	19 Hanga Ro	Kenema City	-11.190752	7.87732333
8	32	East	Kenema	Kenema City	Union Trust Bank (SL) Ltd.	Branch Office	5 Old Yenger	Kenema City	-11.190752	7.87732333
9	101	East	Kenema	Kenema City	Zenith Bank (SL) Ltd.	Branch Office	Kenema	Kenema City	-11.190878	7.87814167
10	77	East	Kono	Koidu City	Ecobank (SL) Ltd.	Branch Office	Kono	Koidu City	-10.975873	8.64304667
11	59	East	Kono	Koidu City	First International Bank (SL) Ltd.	Branch Office	6 Suku-Tamb	Koidu City	-10.972309	8.64138665
12	45	East	Kono	Koidu City	Guaranty Trust Bank (SL) Ltd.	Branch Office	46 Kaikordu	Koidu City	-10.970605	8.64487809
13	15	East	Kono	Koidu City	Rokel Commercial Bank (SL) Ltd.	Branch Office	2 New Semb	Koidu City	-10.97711	8.64147898
14	2	East	Kono	Koidu City	Sierra Leone Commercial Bank	Branch Office	13 Post Offic	Koidu City	-10.972309	8.64138665

2.4 Analysis and Analytics

Bearing in mind the limited period of the study and data paucity particularly with regards to supply-side data, the analytical framework focused on four components;

- Data Processing,
- Desktop Mapping,
- Financial Inclusion Indicator Analysis, and
- Interactive Web Mapping

2.4.1 Data Processing

Within this phase, data on the key secondary data, and supply-side data at district and chiefdom level are processed to ensure that there is a value for each district and chiefdom. In addition, the following socio-economic indicators were selected from the 2015 Sierra Leone Integrated Household Survey Census data: educational attainment, rural population, and poverty. The purpose of the socio-economic analysis was to find out if there is a relationship between socio-economic characteristics of a population and locality with or without an AP. The attributes of the Access Points are then combined with those of the secondary (including socio-economic data) and supply-side data through the use of either the district code or the chiefdom code. With this approach, each record in the Excel file had data on the attribute information of each Access Points combined with the following secondary data; 2015 total population, adult population, number of businesses registered, literate population, mobile subscribers, population employed, and

poverty. Using the total number Access Points and adult population for each administrative unit, indicators of Financial Inclusion were generated.

2.4.2 Desktop Mapping and analysis

The processed Access Point data combined with secondary data and the generated indicators at district and chiefdom level were taken into ArcGIS 10.4 for Desktop and converted into Shapefile, the data format for mapping. District and a chiefdom Shapefiles were created. The two units of analysis are used here because some of the data are only represented at district and not at chiefdom level. In ArcGIS 10.4, the point data on AP are overlaid with the various secondary data and derived indicators to create several maps showing the distribution of Access Points at the two geographies (district and chiefdom).

The overarching goal was:

- I. To map current access points in Sierra Leone,
- II. Identify underserved areas, and areas for financial service expansion
- III. Provide several map overlays with key secondary data

The maps and analytics developed are shown in the result section of this report.

2.4.3 Financial Inclusion Indicator Analysis

The study also looked at two dimensions of financial inclusion: access and usage of financial services³. Equation used to calculate these indicators are shown in Annex 2

2.4.3.1 Access Dimension

The Alliance for Financial Inclusion refers to “access” as the ability to use the services and products offered by formal financial institutions. Under here, we identify and analyze potential barriers to opening, using and accessing a financial access point such as a bank account, such as cost or physical proximity of bank service points (branches, ATMs, etc.).

³ Measuring Financial Inclusion – Core Set of Financial Inclusion Indicators, Financial Inclusion Data Working Group (FIDWG), Guideline Note No.4, March 2013.

The following access indicators were used:

- Number of access points per 10,000 adults at a national level segmented by type and administrative unit
- Percentage of administrative units with at least one access point
- Percentage of total population living in administrative units with at least one access point

An adult here refers to anyone aged 15 years and above. Based on data availability, the administrative unit of analysis selected are district and chiefdom. Most of the data are at chiefdom level.

2.4.3.2 Usage dimension

The AFI refers to “usage” as the depth or extent of financial services and products use. Unlike Access dimension, usage indicators are derived from Supply-side data. However, data on the following indicators were not available to inform the analysis.

Indicator 2.1: Number of deposit accounts per 10,000 adults, and by administrative unit

Indicator 2.2: Number of loans per 10,000 adults, and by administrative unit

Indicator 2.3: Number of SME accounts per 10,000 adults, and by administrative unit

Indicator 2.3: Number of SME loans per 10,000 adults, and by administrative unit

Data on accounts and loans were either not disaggregated at district level or not comprehensive enough. Due to the data paucity, the number of registered businesses was used as a proxy indicator in assessing usage.

2.4.3.3 Dissemination

Using Tableau software^{10.4}, and Adobe Illustrator CS6, the results of the analysis and analytics are visualized. A number of interactive dashboards have been created in Tableau 10.4 and published in Tableau Public with the links to be embedded in the website of Bank of Sierra Leone. As the underlying data change, the published interactive dashboards will automatically change.

In addition to static maps produced using ArcGIS 10.4 Desktop, a number of static analytics describing the landscape of the financial access points have been produced

using Adobe Illustrator CS6. The analytics will also be published on the website of Bank of Sierra Leone. In this report, only static analytics and maps are embedded.

2.5 Access Points (AP) Mapping System development

Using ArcGIS online, an interactive Web Map has been developed. ArcGIS Online is a cloud base server that supports collaborative mapping. A cloud based server was chosen due to lack of the requisite infrastructure and technical capacity to host and maintain the system at BSL.

With the data on Access Points as Shapefiles within ArcGIS Desktop, these were exported in zipped format into the map viewer of ArcGIS Online and symbolized. The ArcGIS Online is an interactive map platform to visualize the geography of financial Access Points in Sierra Leone. Clicking on an Access Point in the platform, will pop-up a window on the screen revealing summary information on that Access Point in terms of where it is located; district, and chiefdom, and the services it renders.

3 RESULTS

3.1 Key Findings

A total of about 1,811 access points were mapped during the five weeks field work (Table 2). Of the 1,811, 75% are Mobile Money Agents (Orange Money making up 74% of the total) followed by Microfinance Institutions (7%), Commercial Banks (6%), and Foreign Exchange Bureaus (6%). Financial Services Association, ATMs, and Community Banks account for the remaining 6%.

Table 2: Breakdown of Access Points

Access Points	No.	Percent
Mobile Money Agents	1,356	75%
Microfinance Institutions (MFIs)	125	7%
Commercial Banks	110	6%
Foreign Exchange Bureaus (FEB)	103	6%
Financial Services Associations (FSA)	57	3%
ATMs	43	2%
Community Banks	17	1%
TOTAL	1,811	

Over half (59%) of the total FAP in Sierra Leone are in the Western Region with 33% (606) and Southern Region with 26% (462) (see Figure 3). Northern Region is the least served in terms of FAP, with a ratio of 1 Access Point to 4,443 economically active population. Figure 4 shows that the North, North-West, and Eastern regions are above the national average ratio of 1 Access Point to 2,309 economically active population. This means that there are more economically active population to 1 Access Point in those areas.

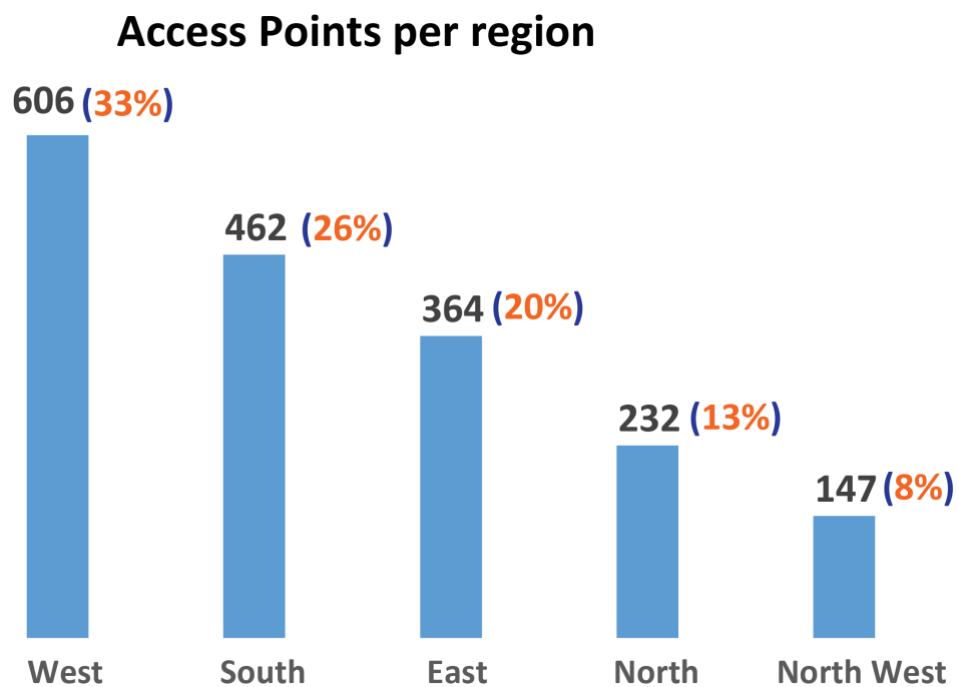


Figure 3: Access Points to economically active population

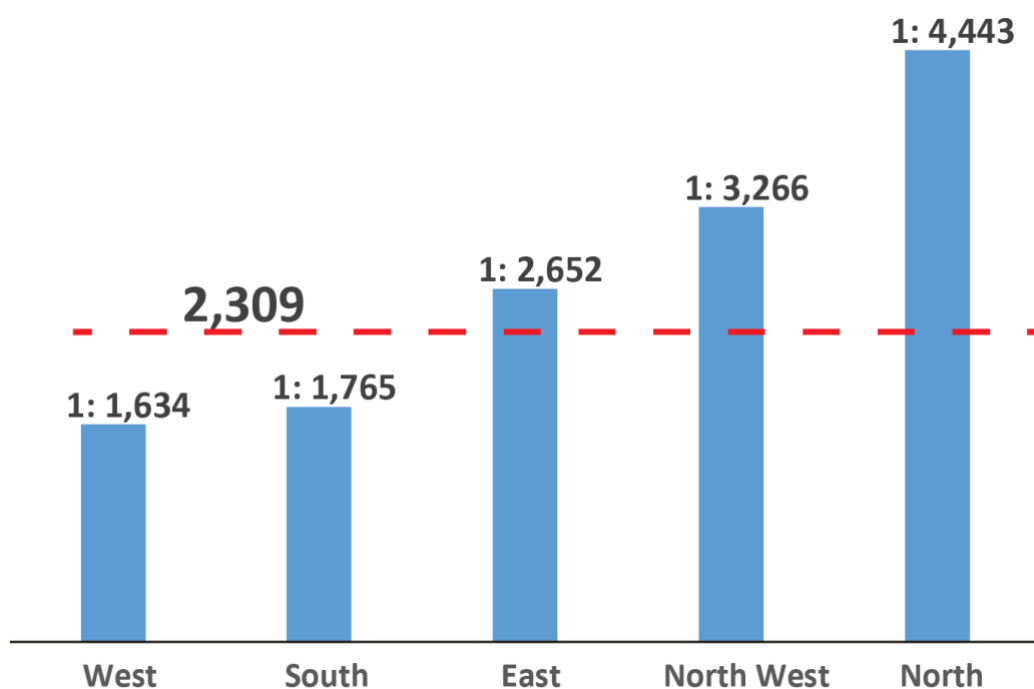


Figure 4: Access Points to economically active population

3.2 National Overview of Financial Services

Figures 5 and 6 shows the spatial distribution of Access Points at district levels. As shown in the figures, there are APs in all the 16 political districts. Aggregate figures show that Western Urban has the highest number of FAP (475, 26%), followed by Bo District (276, 15%). Sixty-seven (67%) percent of financial access points are concentrated in Western Urban, Bo, Kenema, and Bombali districts, making these the main hub for financial services in Sierra Leone (Figure 7). Falaba, Karene, Koinadugu, Pujehun, and Kambia make up the bottom five of the financial services accounting for about 6 percent. The distribution clearly shows an urban trend with more FAP in the bigger urban locations except for Kono District.

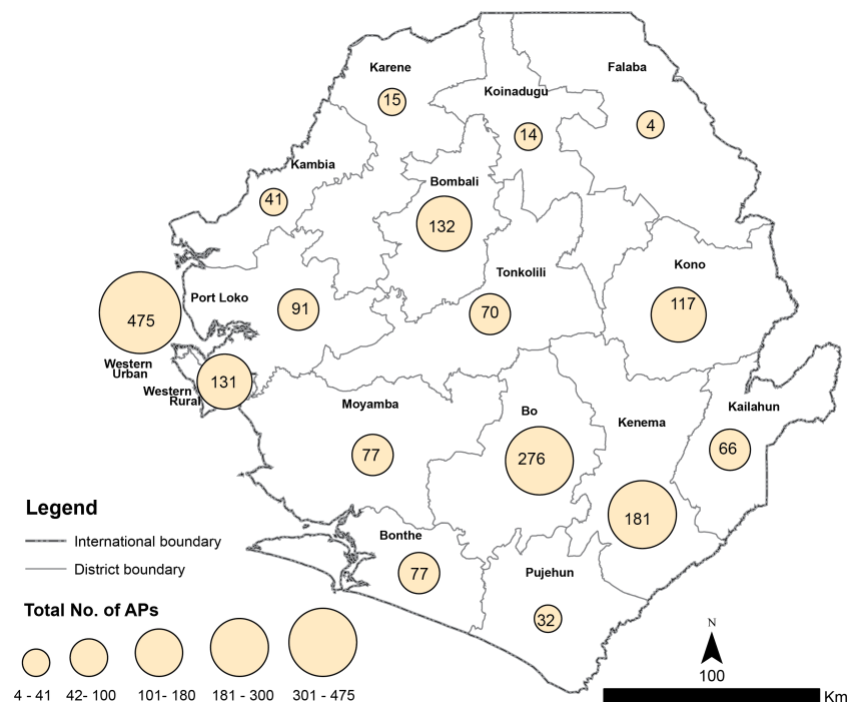


Figure 5: Distribution of Access Points per district

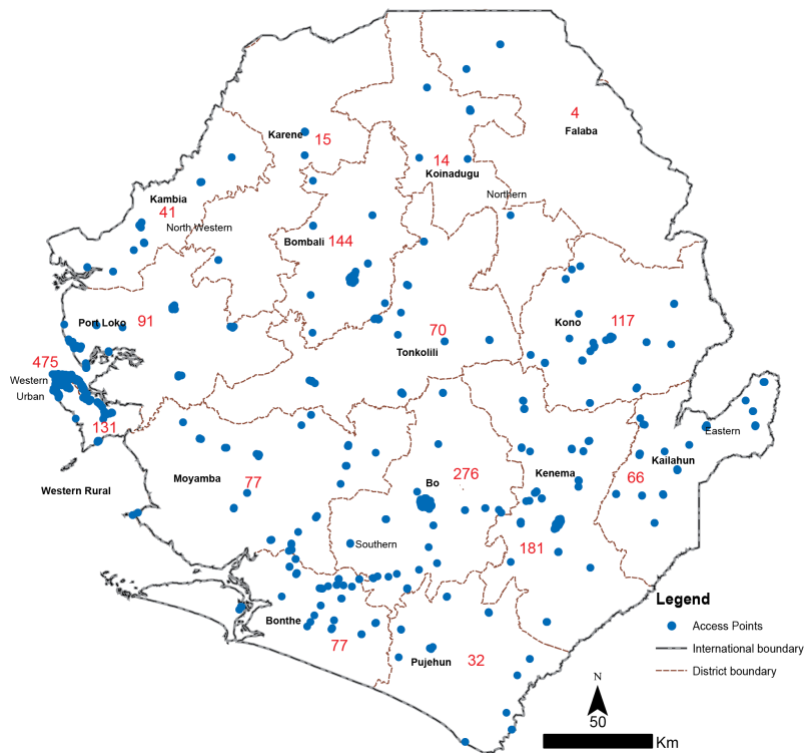


Figure 6: Spatial distribution of Access Points at district level

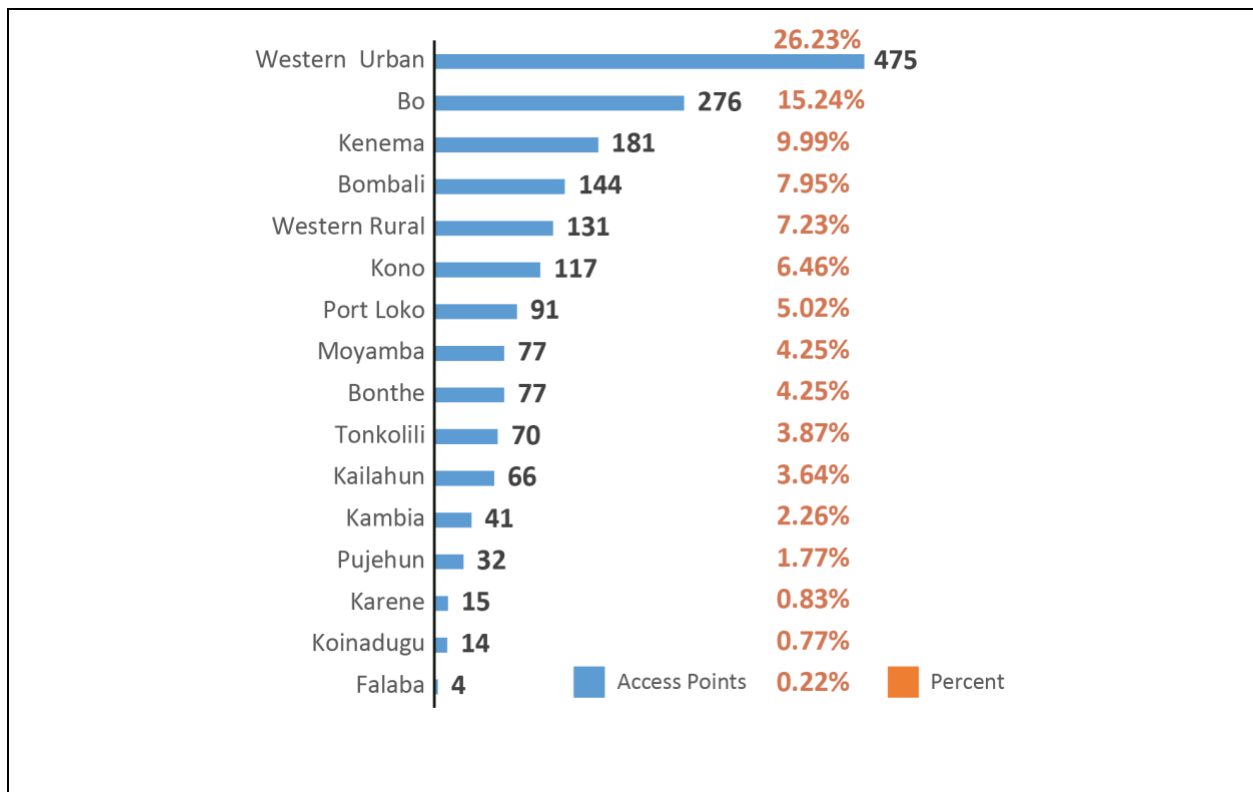


Figure 7: Percent contribution of Access Points per district

Unlike the District level FAP results, not all chiefdoms have Access Points (see Figure 8). More than half of the chiefdoms in Tonkolili, Falaba, Karene, Kambia, and Port Loko districts (combined) do not have APs. Out of 207 chiefdoms, 86 (42%) are without AP. The 86 chiefdoms without FAP are found in all the districts except Western Urban and Western Rural.

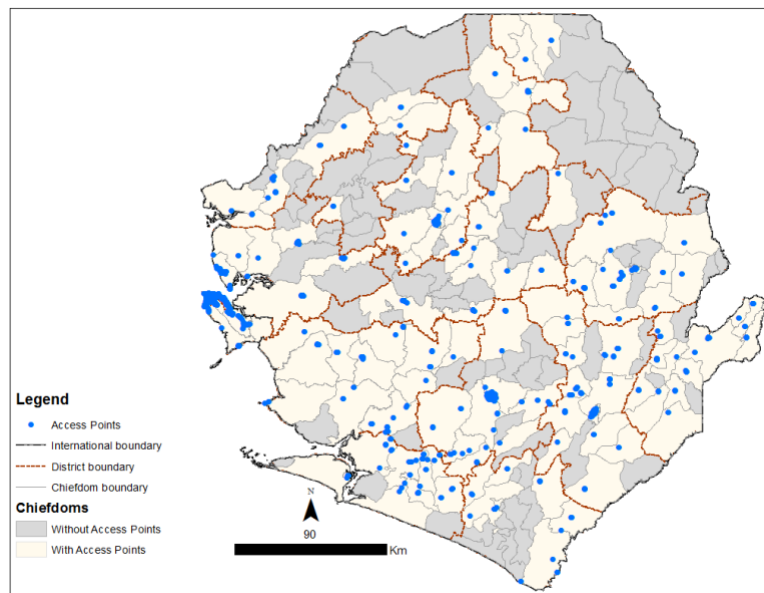


Figure 8: Points: Chiefdom with and without Access

Tonkolili district has the highest number of chiefdoms without an access point. Of the 82 chiefdoms, 62 percent are in Tonkolili, Falaba, Karene, Bo, Port Loko, and Pujehun Districts (Figure 9). The chiefdoms without access points reveal an interesting pattern; they tend to be clustered together. In Falaba, Karene, and Kambia, they are more at the border between Sierra Leone and Guinea suggesting that the population in those location access financial access points or travel to the nearest chiefdom with the required access point. The map (Figure 8) also reveals that in Bo, Pujehun, and Port Loko, most of the chiefdoms without access points are small in area size.

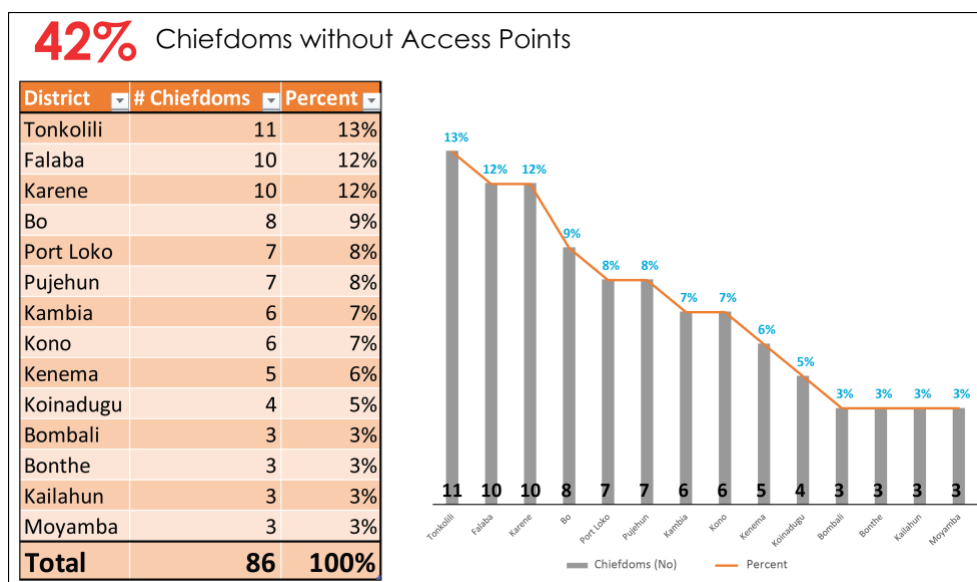


Figure 9: Chiefdom without access points

3.3 Analysis of Access Points by type

A breakdown of the total 1,811 access points mapped shows that Mobile money agents accounted for 1,356 (75 percent) of financial access points in the country, representing a ratio of 1 Money agent to 3,041 economically active population.

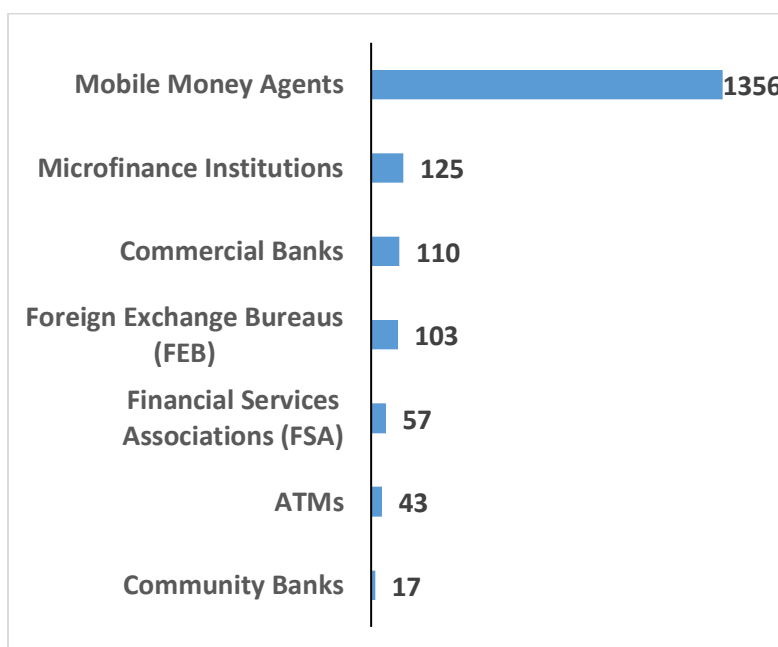


Figure 10: Breakdown by access points

Figure 11 shows the concentration of FAP by regions. The figures clearly show regions that need expansion with respect to a particular AP. Western Urban has the highest number of locations for all types of access points except for the mostly rural based FSAs and Community Banks.

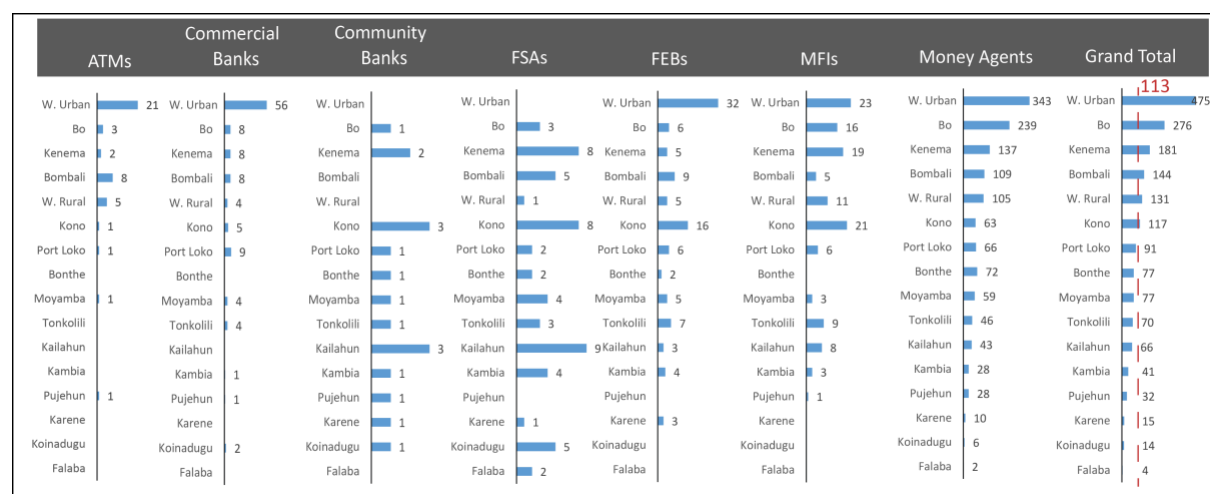


Figure 11: Distribution of Access Points by type and district

The high concentration of Community Banks and FSAs in the rural areas clearly shows their demand in those areas. Commercial banks are urban driven with high concentration in Western Urban, Port Loko, Bo, Kenema, Bombali, Kono, and Western Rural. There are no commercial banks in Karene and Falaba, the two new districts recently established. Money agents are predominantly concentrated in Western Urban, Bo, Kenema, Bombali, and Western Rural. Unlike other access points spread across the districts, ATMs are predominantly concentrated in urban areas of Western Urban, Bo, Kenema, Bombali, and Western Rural.

Per capital information (Figure 12) provides a realistic assessment of access dimension. We take a look at Commercial Banks in terms of their branches spread across the country and we compared it to the population it serves. Western Urban has a higher number of commercial banks but it also provides better access (0.79 per 10,000 people) than any other district. This shows that in terms of commercial banking, Western Urban is doing well.

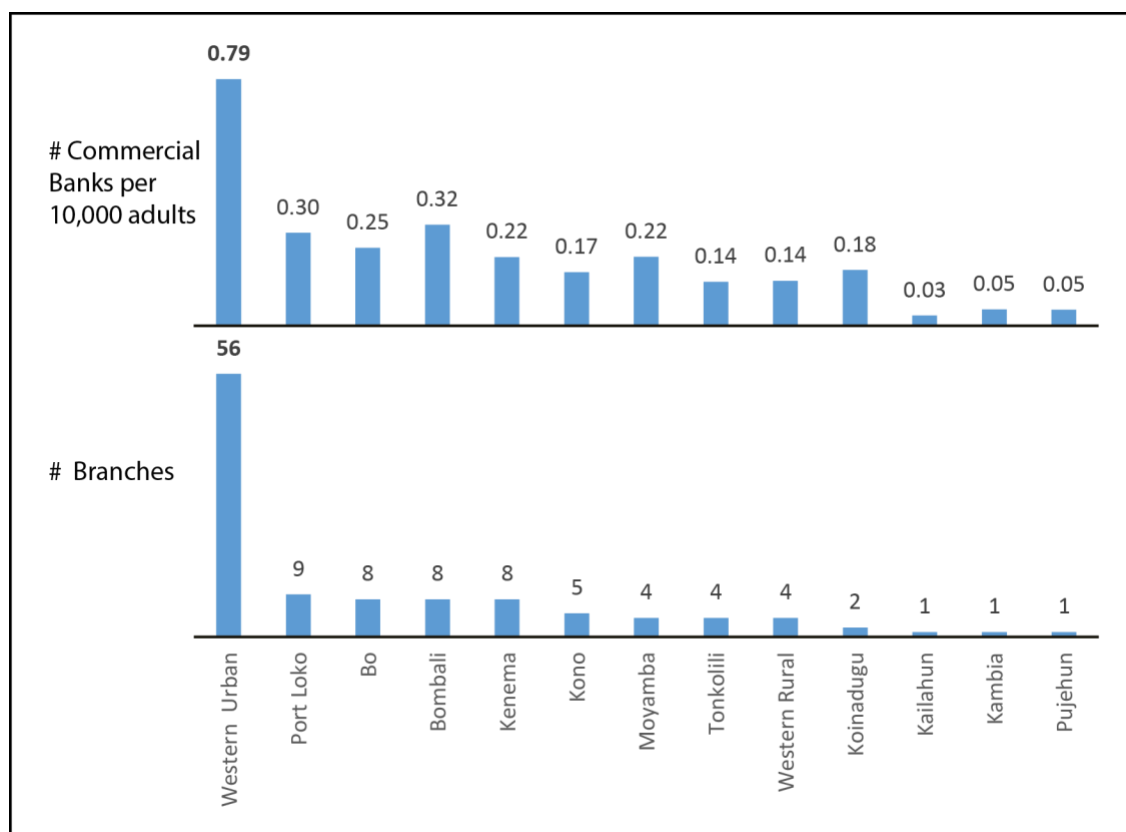


Figure 12: Per capital information for Commercial Banks

3.4 Mapping Access Points with key secondary data

Overlaying and analyzing access point within the context of demand-side data and socio-economic data makes provision for in-depth understanding of market characteristics that can inform more innovative product design or delivery channels. Overlaying Access Points with key secondary data; population density, telephone coverage and a number of socio-economic data revealed unique patterns

3.4.1 Access Points and Population density

There is a very strong correlation (0.9) between access points and economically active population at chiefdom level. This mean that there are greater number of access points in locations of high population density (Figure 13 and 14). The map also shows that there are quite a number of chiefdoms with large number of economically active population without access points. It is also interesting to note that in districts such as Falaba, despite the high number of chiefdoms without access points, the population in those chiefdoms

are actually low. There are more Money agents in districts with high population. This further supports that increase in financial access points should target populated areas.

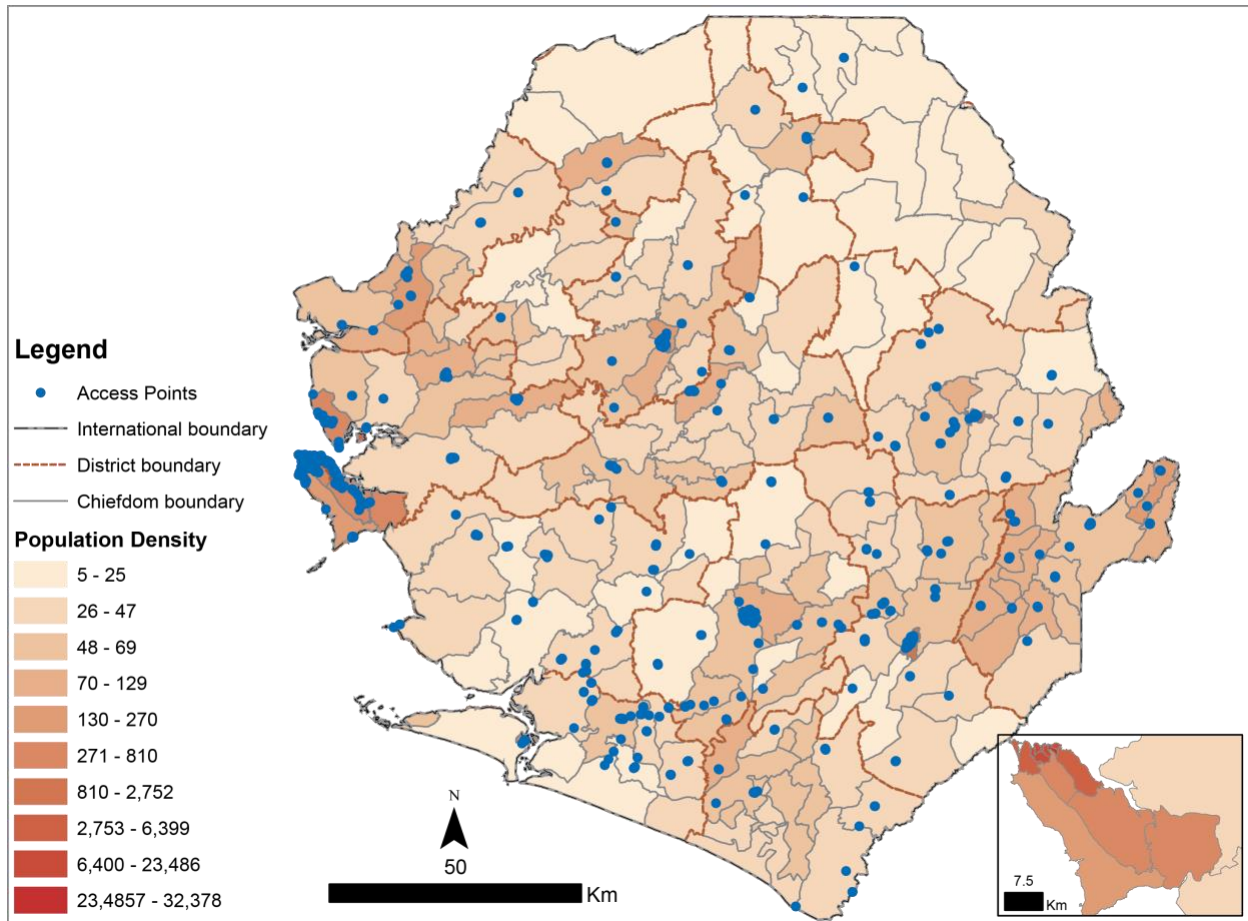


Figure 13: Access Points and population density

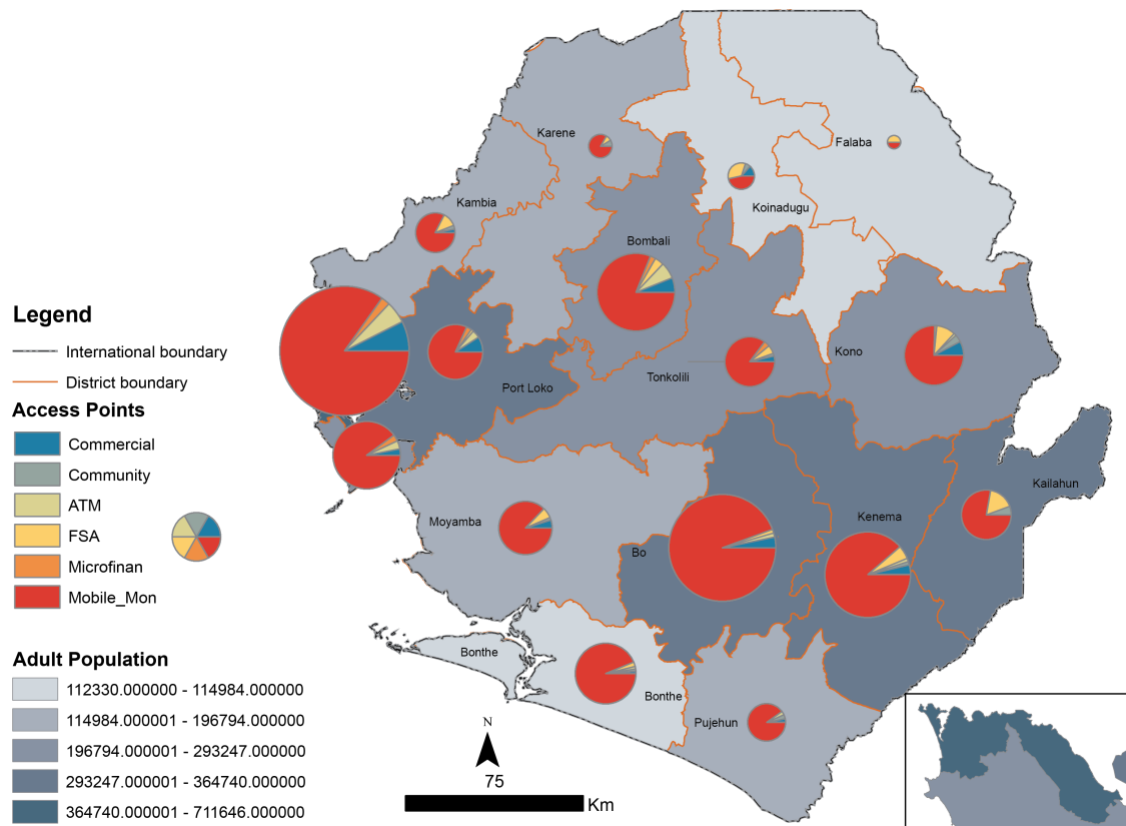


Figure 14: Access Points and Adult Population

3.4.2 Access Points and Employed Population

There is also very strong correlation (0.85) between access points and economically active population that are employed at chiefdom level. This mean that almost all locations with high employment population do have access points (Figure 15).

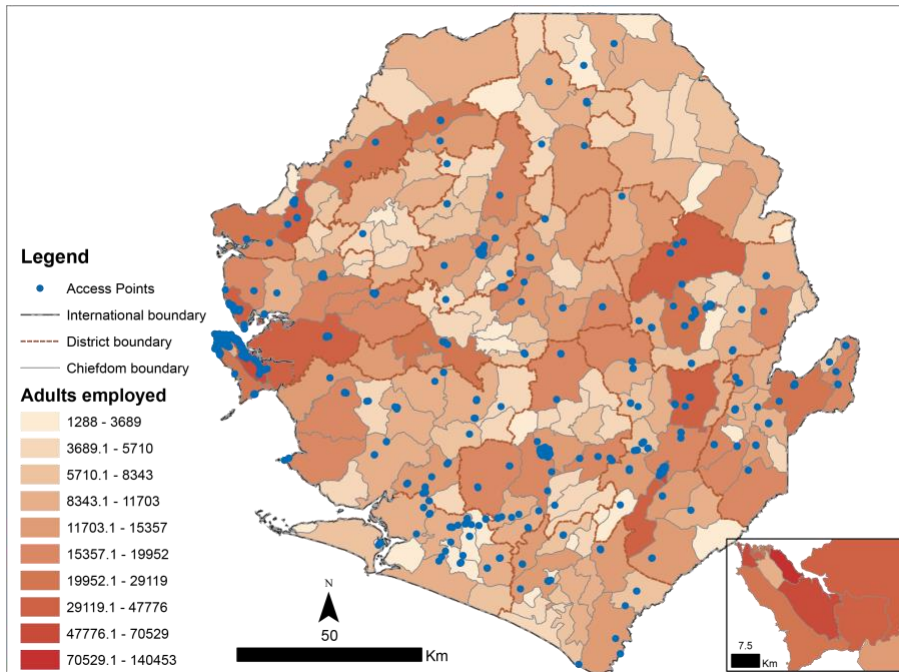


Figure 15: Access Points and Adult population employed

3.4.3 Access Points and Literate Population

There is also very strong correlation (0.93) between access points and literate population. Areas with high literate population are also areas with high number of access points. High literate population are enlightened and most likely to be financially literate about the options of utilizing the various financial access points and digital platforms for monetary transaction.

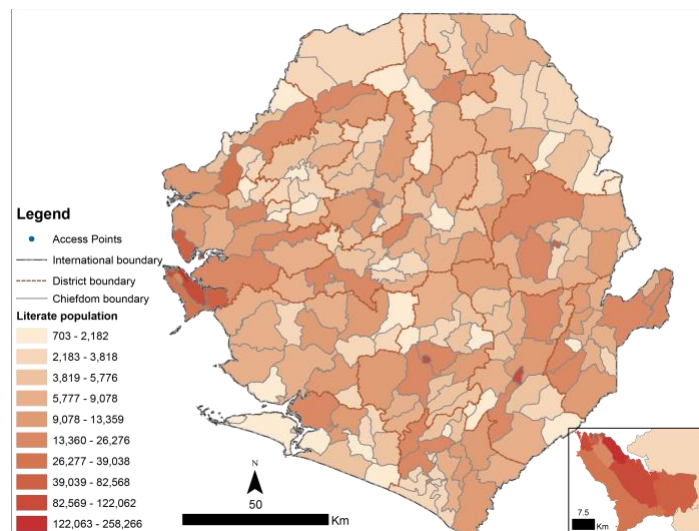


Figure 16: Access Points and literate population

3.4.4 Access Points and Mobile Subscription

Similarly, there is strong correlation between Access Points and Mobile subscription at both district (0.92) and at chiefdom level (0.78) (Figures 17 and 18), suggesting that the establishments of new financial access points were influenced in part by mobile subscription. Chiefdoms without access points are predominantly those with low mobile subscription.

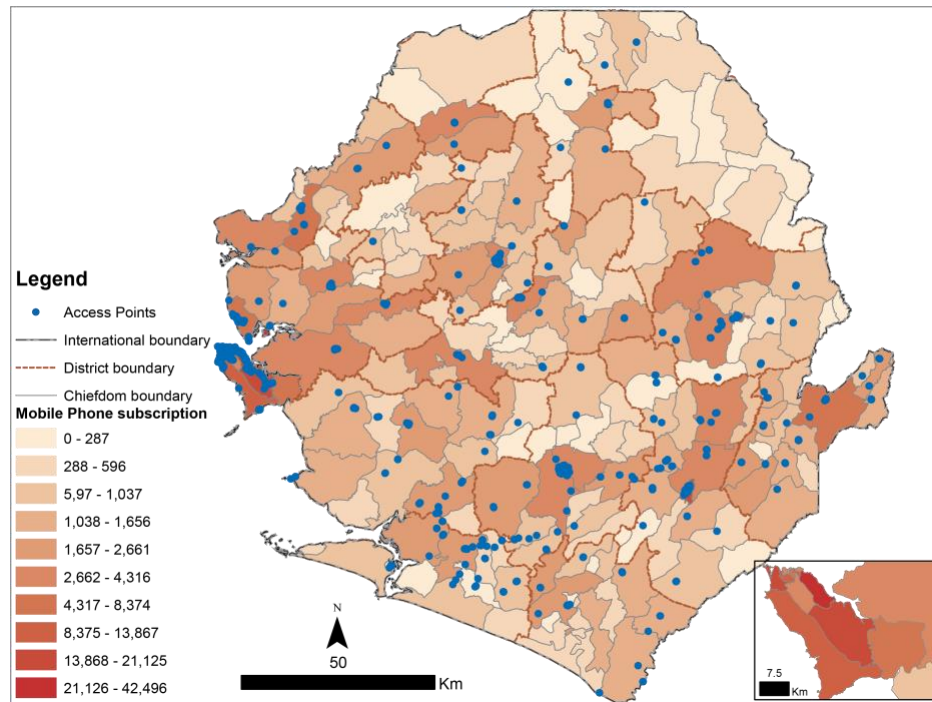


Figure 17: Access Points and Mobile Phone subscription

3.4.5 Access Points and Telephone coverage

The Access Points were also overlaid with 2014 Telephone coverage⁴, which also revealed a strong correlation between the two. All access points were within the coverage except for few Community Banks and Financial Service Associations (Figure 19).

⁴ Source: Humanitarian data exchange: <https://data.humdata.org/group/sle>

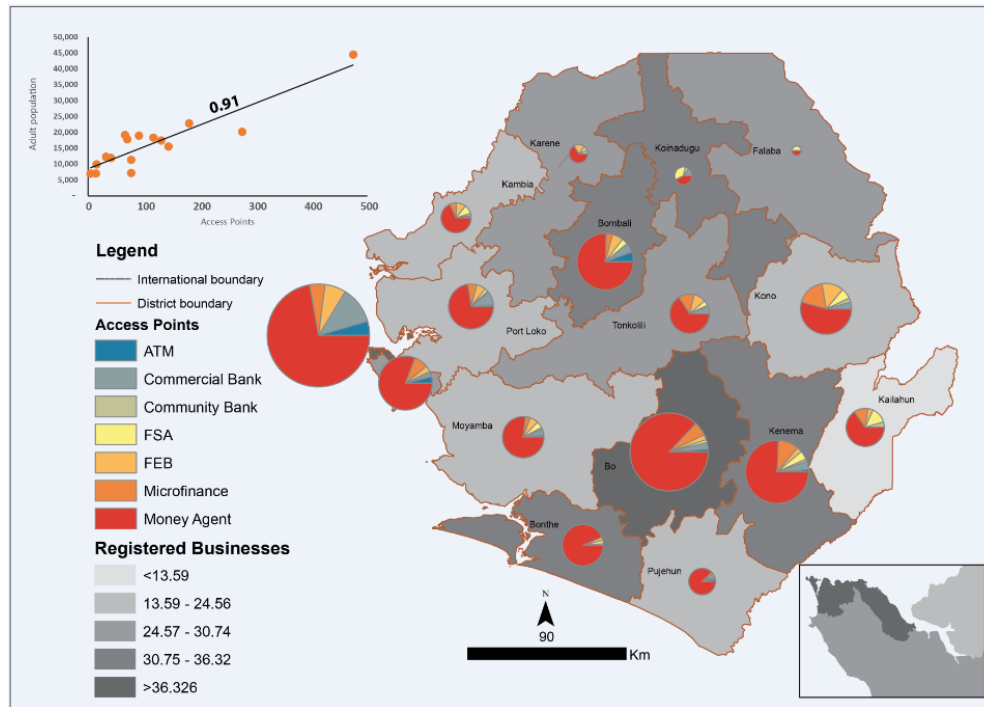


Figure 18: Access Points and Mobile Phone subscription

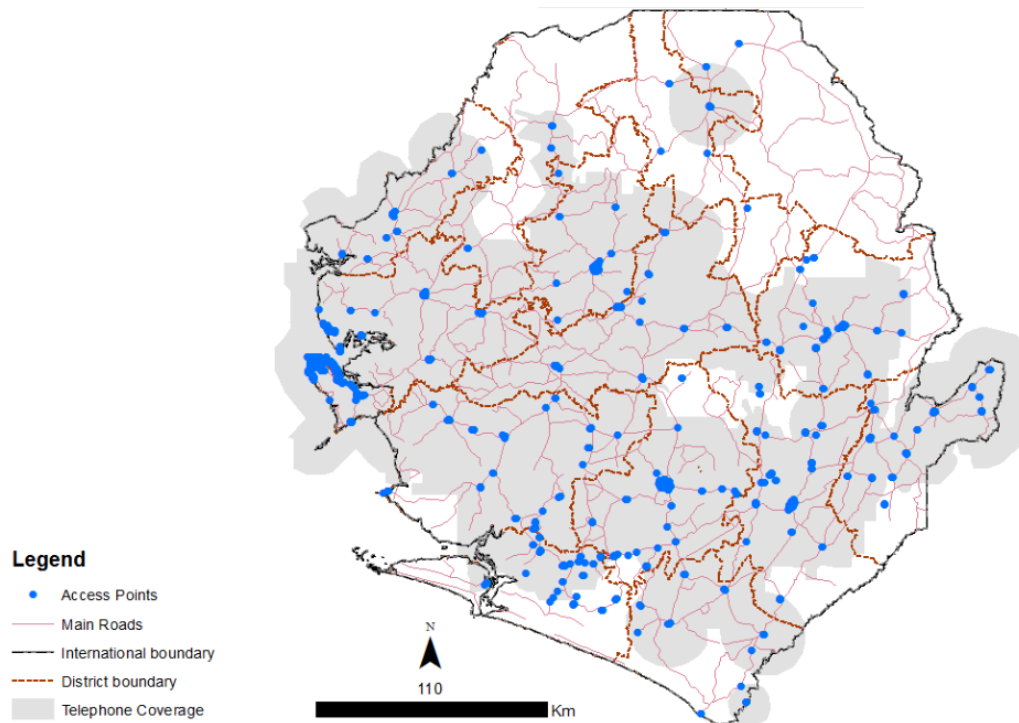


Figure 19: Access Points and Mobile Phone coverage

3.4.6 Access Points and Road Network

Overlaying Access Points with the road network reveals that all Access Points are connected by roads in the country (Figure 20). This is a very important aspect in terms of overcoming obstacles to accessing access points in the country.

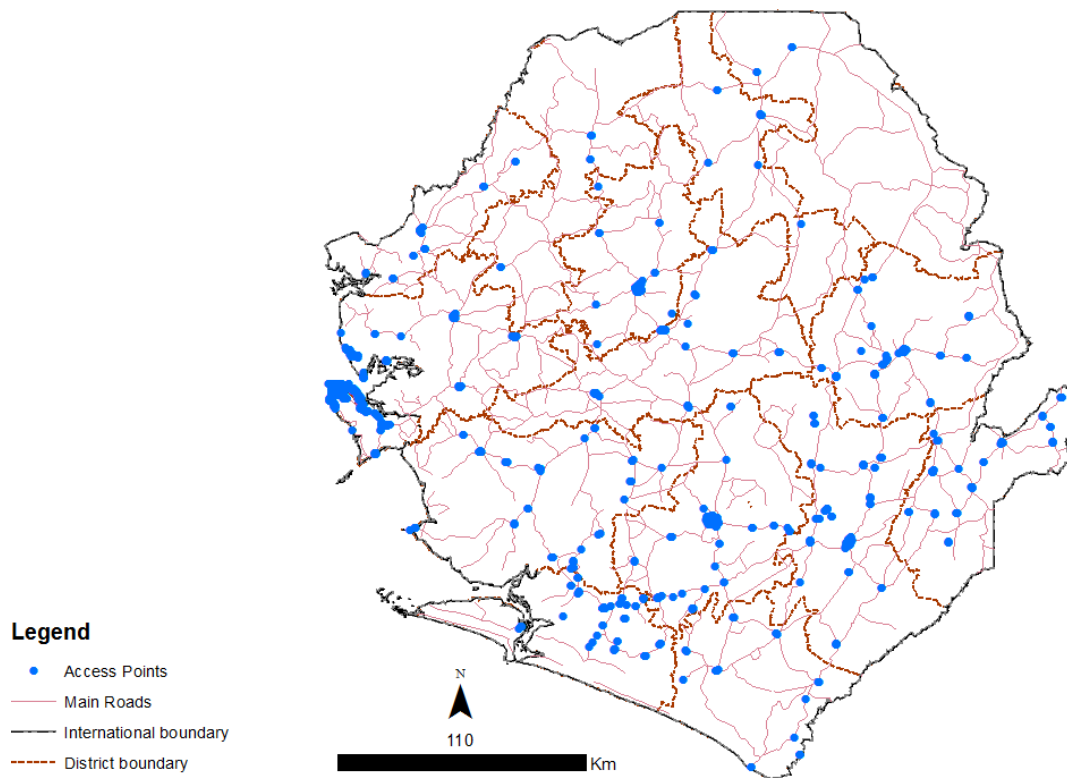


Figure 20: Access Points and Road Network

3.5 Underserved Areas

Figure 21 showed that out of 207 chiefdoms, there are 86 (42%) that do not have Access Points. Of the 86 chiefdoms, Tonkolili, Falaba, Karene, Bo, Kambia, Port Loko, and Pujehun Districts ranked high. Of the 86 chiefdoms, 25 chiefdoms showed convergence of the following map layers; population density, literate population, employed population, and mobile subscription. This meant that the 25 chiefdoms have high population density, literacy, employment, and mobile subscription. The 25 chiefdoms are found in the districts of Port Loko (5), Kambia (4), Pujehun (4), Kailahun (3), Bo (2), Kono (2), Tonkolili (2), Karene (1), Kenema (1) and Bonthe (1).

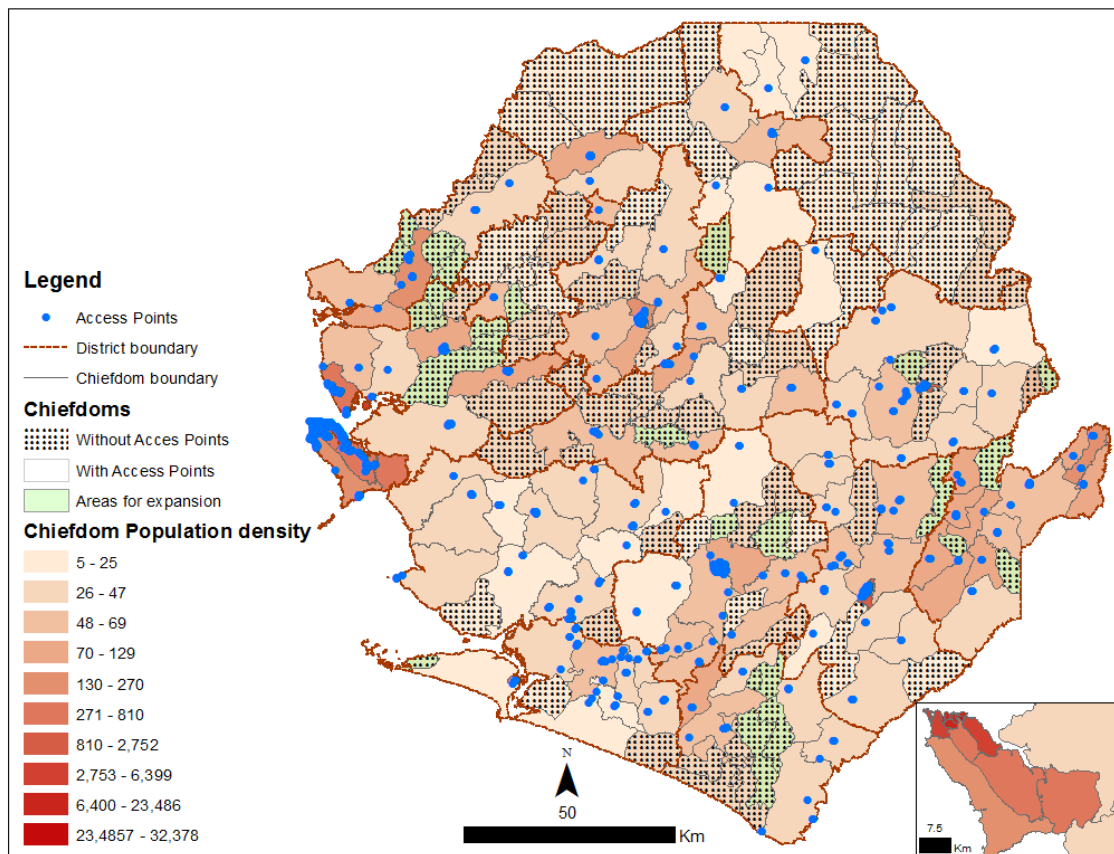


Figure 21: Areas for possible future expansion

3.6 Analysis of Financial Inclusion Indicators

For the purpose of this report, the analysis of access was limited to access points per 10,000 adults and usage dimension was also limited to number of registered businesses per 10,000 adults.

3.6.1 Access dimension

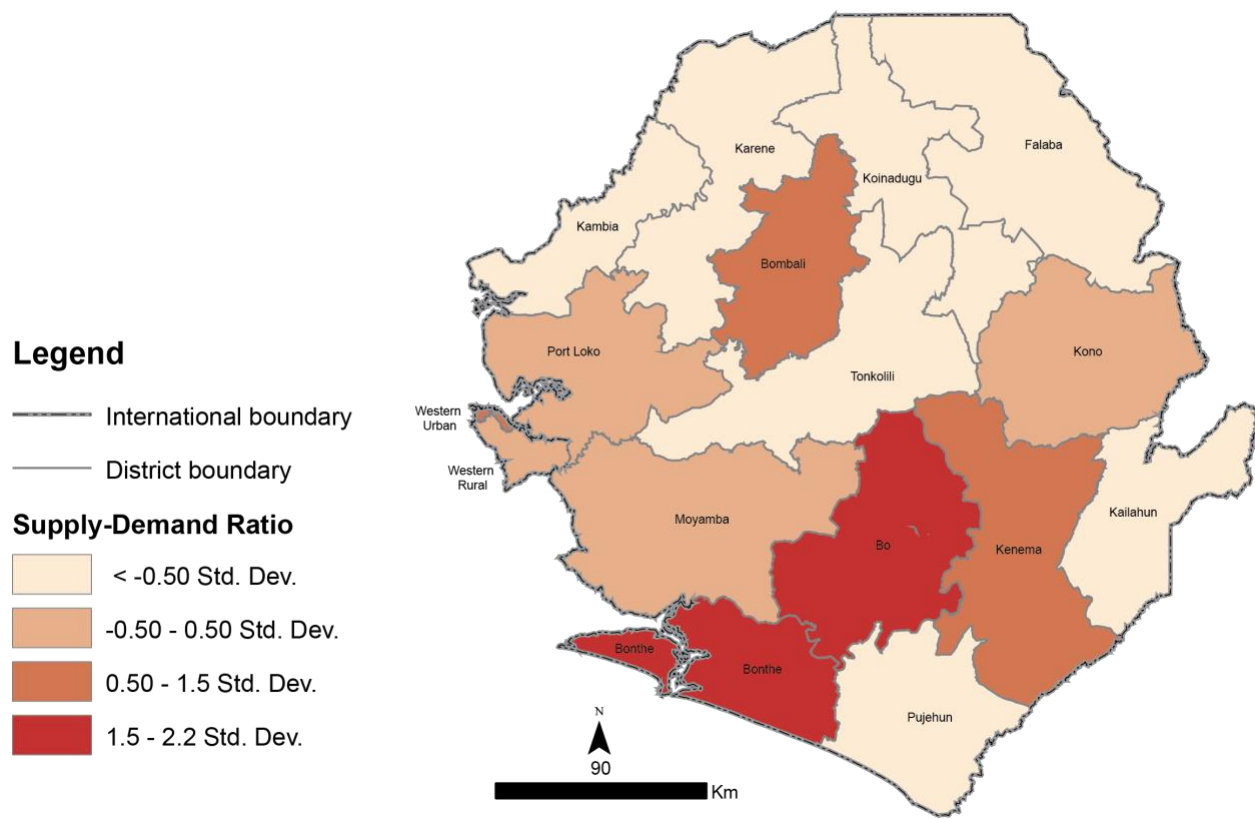


Figure 22: Supply-Demand Ratio Map

Supply-side data in relation to the demand-side data provides a more nuanced view of the financial inclusion level of different areas within a country, allowing policy makers to identify, for example, which districts or chiefdoms lag behind in terms of access or usage. In terms of total number of access points per district, Western Urban has the highest number (475) than Bo (276). However, when put in context with economically active population, adults living in Bo have better access to financial services (8.57 access points per 10,000 adults) than that of Western Urban (6.67). Figure 22 shows that Bo and Bonthe districts have better access to financial services. However, when interpreting access to

financial services, it is better to examine the underlying factors. In the case of Bonthe, ninety four percent of the access points in Bonthe are Money agents.

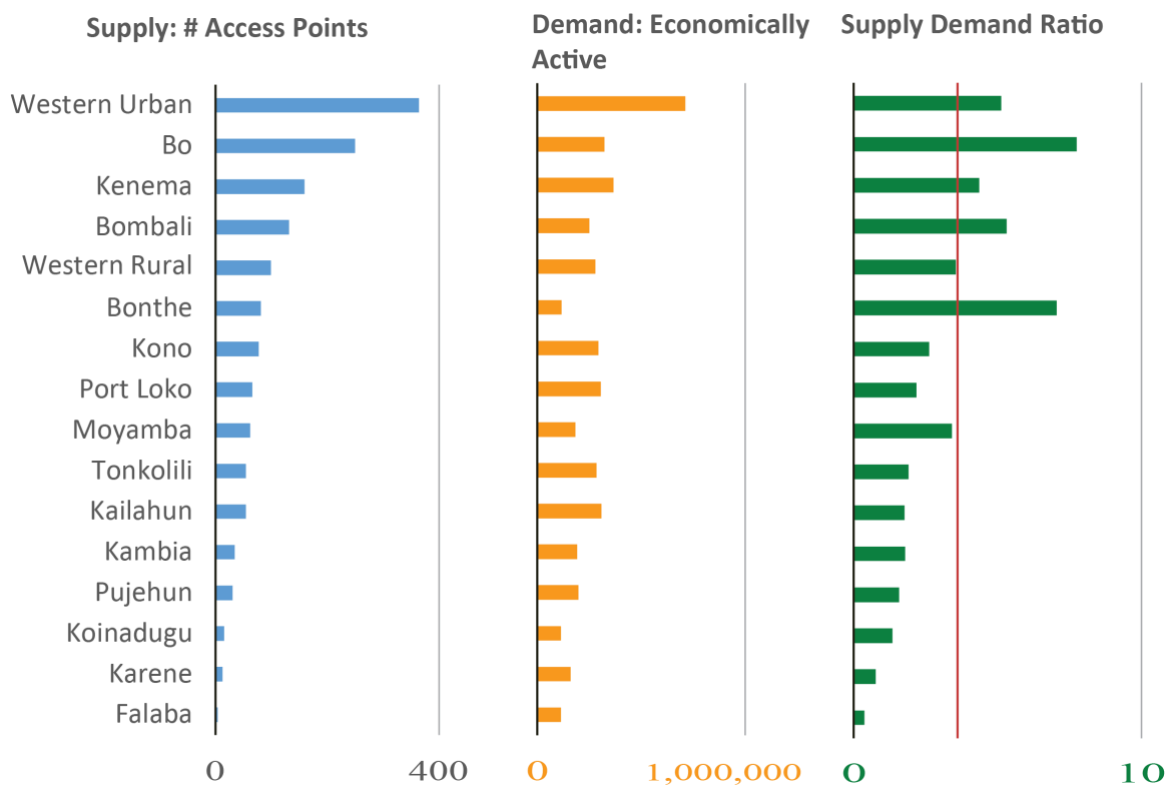


Figure 23: Supply-Demand chart

3.5.2 Usage Dimension

Due to unavailability of supply-side data, the number of registered businesses per 10,000 adults was used as a proxy to assess the usage of financial services. Data on Kono district was incomplete and cannot be compared to the other districts. There is a positive and strong relationship between access points and number of registered businesses. The information suggests that areas with high registered businesses have high access points although this does not tell us the extent and quality of the usage.

3.7 Chiefdom Analysis of Access Points

Using total number of access points and adult population for chiefdoms, we assessed chiefdoms in terms of their ability to provide access to financial services. We compared for each chiefdom the total number of access points, the adult population, and access points by 10,000 adults. Figure 24 shows analysis for only three of the districts. The rest of the chiefdom analysis for the remaining districts is in interactive dashboard on Tableau and as static analytics for uploading onto the BSL website. Within districts, there were no distinct differences, chiefdoms that ranked high in terms of access points also provided better access to financial services. One of the exception was in Western Urban where West III though with high financial access points did not provide better access compared to Central II

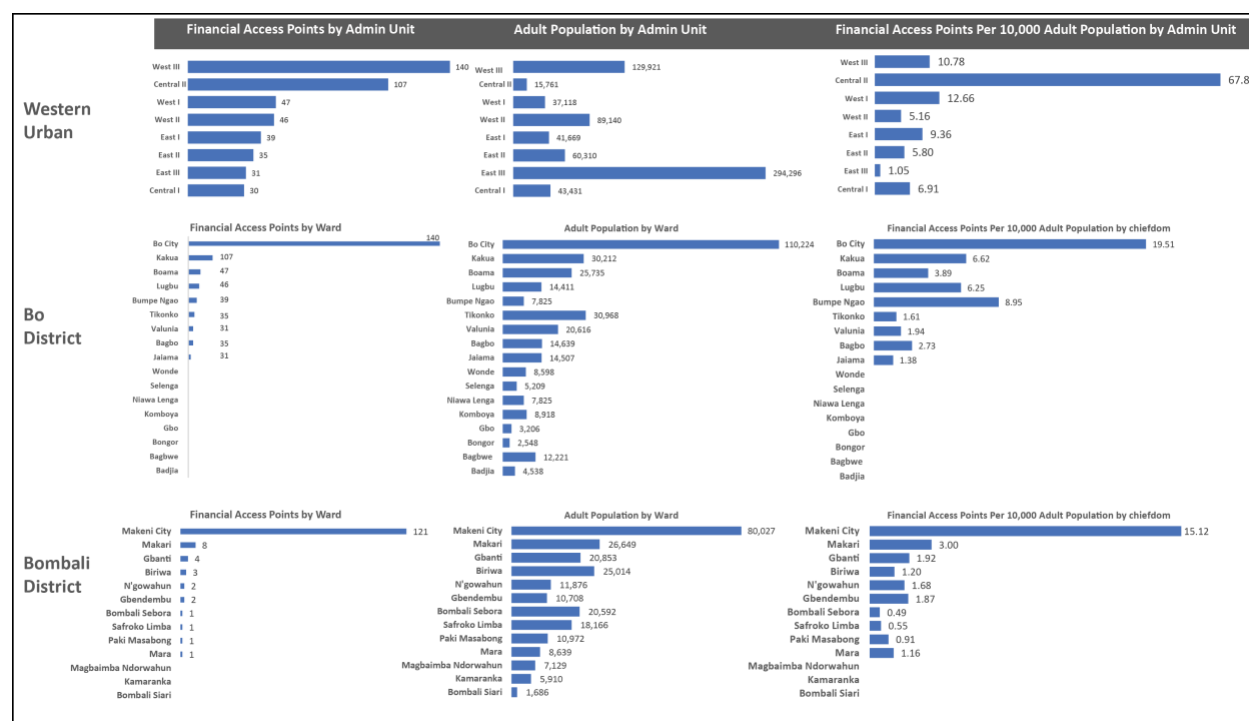


Figure 24: Chiefdom assessment of access to financial services

3.6 Interactive Web Map

Given that the principal objective of the project was to map existing access points, an interactive map of access points has been created. The essence of the interactive map is to provide information about each access point. Although there is detailed information on the general outlook of access points in the foregoing sections, it however lacks

information with respect to its name, where it is situated, the services it provide and analysis.

To operationalised the interactive map, an organizational account for ArcGIS online has been subscribed for a year (12 calendar months). The subscribed ArcGIS online organizational account provides access for three staff members at the moment: one with administrative right, the other with publishing right, and the other as viewer. Staff with administrative right can author, edit and publish map layers whilst those with viewing right can only visualized and share the map layers.

The interactive web map displays a comprehensive visual representation of the landscape of financial access points in Sierra Leone. The web map contains the following:

- Locational information for all financial access points across the country.
- On clicking each access point, a pop window shows up which shows relevant attribute information about the access point including a portrait that represents the access point. Due to the large number of mobile money agents, a standard portrait was used to represent all of them.

4 CHALLENGES AND LESSONS LEARNED

4.1 Key Challenges

Carrying out a study of this nature for an institution with no established GIS infrastructure is bound to face challenges. A number of challenges influenced the mapping exercise. For convenience, these are grouped into: before, during, and post field survey.

4.1.1 Challenges Before the Survey

A key requirement to the planning of the field survey was access to the list of banks and money agents. With the exception of the list of banks, information on addresses and locations of Orange and Africell Mobile Money Agents were received a week after the commencement of field work. The delay hampered progress as Enumerators lacked knowledge as to which streets to visit. However, in the first week of the survey, Enumerators were able to commence field work by focusing on Freetown and other district headquarter towns where local knowledge was used to identify the locations of money agents, and other APs.

4.1.2 Challenges During the Survey

Access to Access Points during field data collection – The progress in the first week of data collection was slow as some of APs were not informed of the exercise despite assurances. Most Enumerators were refused to collect pictures and GPS coordinates of APs by Security personnel and staff of APs due to lack of knowledge about the exercise. At the Lungi Airports where there are few banks within the Airport building, the Enumerator was taken to the Police Station to make a statement for taking photos of the banks. Resolving such issues required Supervisors making calls to the Consultant who in turn called FSD to resolve the issue. In cases where FSD staff could not be reached, the Enumerator is asked to abandon the AP and revisit it the next day. This interference from AP staff hampered progress.

Road Network in the rural areas - The poor road network and in addition the rains also hampered movement of Enumerators particularly in the districts of Kailahun, Koinadugu, Falaba and parts of Pujehun. In most cases the Motor bikes used by Enumerators

breakdown and in one or two cases leading to accidents, although not with severe consequences.

Mobile Money Agent list – To support the field survey, both Orange and Africell provided a list of their agents. Orange had about 1,500 agents with Africell having about 1,000. The list from Orange had a lot of errors in the addresses, making it difficult to group agents by streets, sections (e.g. Goderich, Lumley), towns or districts. In addition, most of the agents in the lists of both providers were no longer active. Enumerators invariably depended on local knowledge in seeking out locations of money agents. This was mostly done by asking locals in the community where money agents were located.

Weather conditions – Heavy down pour of rains slowed down data collection in most parts of the country. Bad weather conditions reduce mobility and the accuracy of the GPS coordinates. Enumerators were required to record coordinates within 5 meters accuracy and in exceptional cases not exceeding 10 meters. Coordinates beyond the threshold were not accepted with the Enumerator asked to revisit the AP when weather conditions improve.

4.2 Overall challenges

4.2.1 Access to supply-side data, timeliness and overall data characteristics

Delays in accessing supply-side data from BSL caused delay in the analysis and assessment of usage dimension. Supply-side data in the form of number of bank accounts and loans disaggregated by commercial banks and locations took long to compile and in the end, could not be used due to their incompleteness.

4.2.2 Overlaps and Gaps in administrative Boundaries

ArcGIS Online has a number of base maps upon which administrative boundary layers of Sierra Leone are overlaid. The administrative layers are made up of; National (Admin 0), Provincial (Admin 1), District (Admin 2), Chiefdom (Admin 3), Section (Admin 4), and Enumeration Areas (EAs) (Admin 5). These layers were acquired from Statistics Sierra Leone (SSL). In the past few months there has been changes in the total number of districts and chiefdoms leading to changes in the map layers. The new administrative boundaries had series of gaps and overlaps making it impossible to use within both

ArcGIS Desktop and ArcGIS Online. Fixing such topological errors took almost 2 weeks to address due to the gravity of the errors.

4.2.3 Mismatch between Datasets (Attribute and Spatial Datasets)

The 2015 Population Census data required extraction of socioeconomic categories. However, while the spatial datasets (administrative boundaries) were based on the recent de-amalgamated Districts and Chiefdoms, the population figures in the provisional 2015 Census report were aggregated based on the old administrative settings. Rectifying the problem required overlaying the old and new administrative section layers (administrative Section boundaries were not changed) in ArcGIS to obtain the New Chiefdom level population aggregates for different socioeconomic categories. This was very tedious and time consuming due to the nature and organisation of data which could only permit manual manipulation. Further compounding these issues was the differences in section codes which resorted to manual method of checking and aggregating section population figures for the new chiefdoms and districts. Nonetheless, the chiefdom level statistics so obtained are accurate and were shared with SSL.

4.3 Lessons learned

During the consultancy period, the following lessons were learnt:

- A 60-day duration of a project of this magnitude is too short bearing in mind the challenges of acquiring both primary and secondary data, analysis, systems development and testing and implementation. With the same budget, implementing the project for 90 days (instead of 60 days) could have seen far greater analysis and greater features in the interactive map.
- The involvement of Banking Supervision in this project could have significantly improved the turnaround time in acquisition of data from Bank of Sierra Leone.
- Involving Statistics Sierra Leone as part of a project of this nature could have far reaching benefits as custodian of government statistics.

5 CONCLUSIONS AND RECOMMENDATIONS

The consultancy was undertaken to:

- To map out current and potential access points
- To overlay Access Points with population, economic activity, financial behaviors, telephone networks, postal offices, and other parameters.
- To identify underserved areas and areas ready for financial service expansion and optimum/maximized opportunities.
- Provide information that will help assess the strategic placement of current and potential financial products and access channels and, potentially build a business case for reforms and the expansion of products and services in new areas

5.1 Conclusions

Given the objective of the consultancy, the following conclusion can be drawn

- One thousand eight hundred and eleven (1,811) access points were mapped
- The study identified that sixty-one (61) percent of financial access points are concentrated in Western Urban, Bo, Kenema, and Bombali districts, making these the main hub for financial services in Sierra Leone.
- Four (4) percent of financial access points are concentrated in Falaba, Karene, Koinadugu, and districts, making these the main targets for financial services expansion.
- Fifty-one (51) percent of commercial banks are in Western Urban area, of which a third of it are in the Central Business District (CBD) of Freetown.
- Eighty-six (86) percent of all financial access points in Sierra Leone belong to Mobile Network operators; of which Orange has the largest number of Mobile Money Agents. Over half of the money agents are in Western Urban, Bo, and Kenema districts.
- Forty two (42) percent of the chiefdoms lack financial access points; 62 percent of these are in the following; Tonkolili, Falaba, Karene, Bo, Port Loko, and Pujehun.
- There is high concentration of Community Banks, and FSAs, in the rural areas

- Commercial banks are urban driven with high concentration in Western Urban, Port Loko, Bo, Kenema, Bombali, Kono, and Western Rural.
- Money agents are predominantly concentrated in Western Urban, Bo, Kenema, Bombali, and Western Rural.
- ATMs are predominantly concentrated in urban areas of Western Urban, Bo, Kenema, Bombali, and Western Rural.
- Western Urban provides better access to commercial banks than any other district.
- Western Urban region has the highest number of access points in the country but lags behind Bo (8.57), and Bonthe (6.7) in terms of access points per 10,000 adults in all districts.
- Strong relationships exist between APs and population density, employed population, literacy, mobile subscription and telephone coverage. This suggests that areas without access points but with high population density, high adult population that is employed, high economic activity, and high mobile subscription and within telephone coverage should be considered for possible areas for expansion of financial access points in the future.
- All APs are connected by roads – making them accessible to the economically active population.
- The study has mapped 1,811 financial access points found in 121 chiefdoms spread in the 16 districts of Sierra Leone.
- The study has identified 86 of the 207 chiefdoms in Sierra Leone lacking financial access points. Of the 86 chiefdoms, 25 have been identified to require financial expansion.
- A platform has been provided to visualize and analyze spatial distribution of APs for government and financial service providers working to expand financial inclusion.
- Platform provides baseline and analysis to assess progress towards targets (services and products) under the National Financial Inclusion Strategy.
- The Interactive Map provides critical data and analysis to inform, raise awareness and to educate.

5.2 Recommendations

- BSL to encourage and promote routine collection of supply-side data by all financial service providers,
- For optimized use of the tool, it is important that BSL and its partners systematically and frequently capture latitude and longitude coordinates of access points to ensure meaningful analysis. This can be done through;
 - Financial service providers to provide GPS locations of new branches that are established.
 - Mobile Money Providers to collect the GPS locations of new mobile money agents during the period of registration.
- Mobile Money Providers to ensure that their agents' lists are periodically kept updated,
- The MIS unit of BSL should establish a GIS section to be able to maintain the developed GIS system and to respond to future demands.

ANNEXES

Annex 1: Terms of Reference

INDIVIDUAL CONSULTANT TO CONDUCT A GEOSPATIAL DATA AND ANALYSIS FOR FINANCIAL INCLUSION PLANNING

COUNTRY: Sierra Leone

NAME OF PROJECT: Financial Sector Development Plan Support Project

SECTOR: Financial Sector

Reference No: BSL/FSDPSP/IC/20016/0016

Grant

No.H-662-SL

Project ID No. 121514

The Government of Sierra Leone has received financing from the World Bank toward the cost of the Financial Sector Development Plan Support Project (FSDPSP) and intends to apply part of the proceeds for consulting services as detailed below.

Position: Consultant, GIS Technical Analyst

Summary: A GIS and planning professional, with broad technical knowledge and demonstrated experience in the use of geospatial data and analytics for financial inclusion planning, to provide technical and program management support to the Bank of Sierra Leone (BSL) toward the implementation of the FSDP in Sierra Leone.

Workload: Maximum of 80 days, with mission to Sierra Leone.

Reporting: Consultant will report to Bank of Sierra Leone (BSL) Senior Director of the Financial Sector Strategy and members of the FSDP secretariat

A. Background

Only 14 percent of Sierra Leoneans have an account at a financial institution, while many key groups, such as women and the poor (poorest 40 percent) have even lower levels of access, 11 and 6 percent, respectively. The low level of access across all groups, is due to a variety of key factors, including the geographical concentration of bank branches in urban areas and the cost of branches, among others. With more than 60 percent of the population living in rural areas, there is a need to expand access to financial services to these areas by overcoming the barriers thereto. While mobile money has the potential to

promote financial inclusion in rural areas, less than five percent of Sierra Leoneans have used mobile money accounts in the last twelve months, with women and the poor having below national average usage rates. A significant impediment to the expansion of mobile money services is managing the cash liquidity of its agents to meet client needs.

To bolster efforts to increase financial inclusion, BSL adopted the National Strategy for Financial Inclusion, 2017-2020, in December 2016. Developed with support from UNCDF, the Strategy focuses on interventions in six key areas: (1) responsive policy, regulations, and coordination; (2) client-centric products and services; (3) digital financial services (DFS); (4) access to finance for MSMEs; (5) financial literacy, financial education, and consumer protection; and (6) data and measurement. The Strategy is also supported by a governance framework, including working groups, to assist with implementation. BSL has also requested support from the World Bank to conduct a financial inclusion survey under the ongoing Financial Sector Development Plan (FSDP) Support Project. This survey will help to measure the state of and progress in financial inclusion in Sierra Leone in 2017, while also identifying consumer needs.

Within this context of increased efforts to support financial inclusion and to gain valuable data and information thereon, BSL has requested support to conduct a geospatial mapping of the financial inclusion landscape under the FSDP. The purpose of the analytical exercise is to map out current and potential access points, such as banks and mobile money agents. The mapping exercise will map and analyze access points (by size and type) overlaid with population, economic activity, financial behaviors (if feasible), telephone networks, postal offices, and other parameters. The mapping exercise will thereby identify areas that are currently underserved, areas ready for financial service expansion, and optimum/maximized opportunities. Using this information, the mapping can help assess the strategic placement of current and potential financial products and access channels and, potentially build a business case for reforms and the expansion of products and services in new areas. In doing so, the mapping exercise will serve as a public good for financial institutions and other stakeholders/partners.

BSL's Senior Director of the Financial Sector Strategy and the FSDP Secretariat will manage and implement the mapping exercise in close coordination and support from the WB's Finance and Markets Global Practice and Central GIS (GOST) team, including the GIS Analyst (consultant). The GOST team works on projects for various World Bank Group units and sectors- and these projects require extensive knowledge of GIS and remote sensing platforms. The GIS Analyst is responsible for working with BSL, the World Bank, and stakeholders in Sierra Leone, to obtain and organize spatial data, facilitate the migration of existing data to new platforms, conduct data analysis, create

maps, and work on web mapping application development. The GIS Analyst will be expected to assist with any tasks relevant to maintaining these applications.

B. RESPONSIBILITIES

1. Data collection and management: Collect and compile spatial data and prepare it for specific projects, as well as public sharing
 - o This includes, but is not limited to: designing data collection templates and data requests for authorities, managing data collection, data cleaning, metadata creation, and geodatabase management).
2. Data Migration: Assist in the migration of data from versions of ArcGIS Server to latest, including updating items in Portal for ArcGIS.
3. Assists BSL in the creation of interactive online mapping applications.
4. Provides business and technical solutions by developing, maintaining, and enhancing web mapping applications using Open Source and ESRI products.
5. Support development of various in house GIS solutions.
6. Communicates successfully with BSL, the World Bank, and other stakeholders.

QUALIFICATIONS

7. University degree in information systems, geography, cartography or a related field with concentration in GIS and technology applications with 3 years of experience. Master's degree preferred.
8. Strong theoretical base and technical knowledge of spatial and geographic systems, including working knowledge of geographic, cartographic principles, image processing, database principles, geospatial production techniques, good data management practices, and urban spatial analytics.
9. Ability to conceptualize, design, and implement major projects and to collaborate on major and complex reports.
10. Must have knowledge of the latest ESRI GIS software (ArcInfo, ArcCatalog, ArcGIS Online, Portal for. ArcGIS, and Spatial Analyst).
11. Ability to manage and render large amounts of spatial data.
12. Ability to multi-task and prioritize tasks.
13. Excellent communication and presentation skills (both written and verbal) in English. Other languages is an added advantage but not mandatory.
- 14.

Annex 2: Financial Inclusion Indicator calculation

$$1.1 \text{ Indicator} = \left(\frac{\text{Total number of access points in each administrative unit}}{\text{Total adult population in each administrative unit}} \right) * 10,000$$

Data requirements:

- Number of access points by type and by administrative unit
- Number of adults by administrative unit

Indicator 1.2: Percentage of administrative units with at least 1 access point

$$1.2 \text{ Indicator} = \left(\frac{\text{Total number of administrative units with at least 1 access point}}{\text{Total number of administrative units}} \right)$$

Data requirements:

- Number of access points by type and by administrative unit

Indicator 1.3: Percentage of total population living in administrative units with at least 1 access point

$$1.3 \text{ Indicator} = \left(\frac{\text{Total number of adults in all administrative units with at least 1 access point}}{\text{Total adult population}} \right)$$

Usage dimension

Indicator 2.1: Number of deposit accounts per 10,000 adults, and by administrative unit

$$2.1 \text{ Indicator} = \left(\frac{\text{Total number of deposit account}}{\text{Total adult population}} \right) * 10,000$$

Indicator 2.2: Number of registered businesses per 10,000 adults, and by administrative unit

$$2.2 \text{ Indicator} = \left(\frac{\text{Total number of registered businesses by admin unit}}{\text{Total adult population}} \right) * 10,000$$

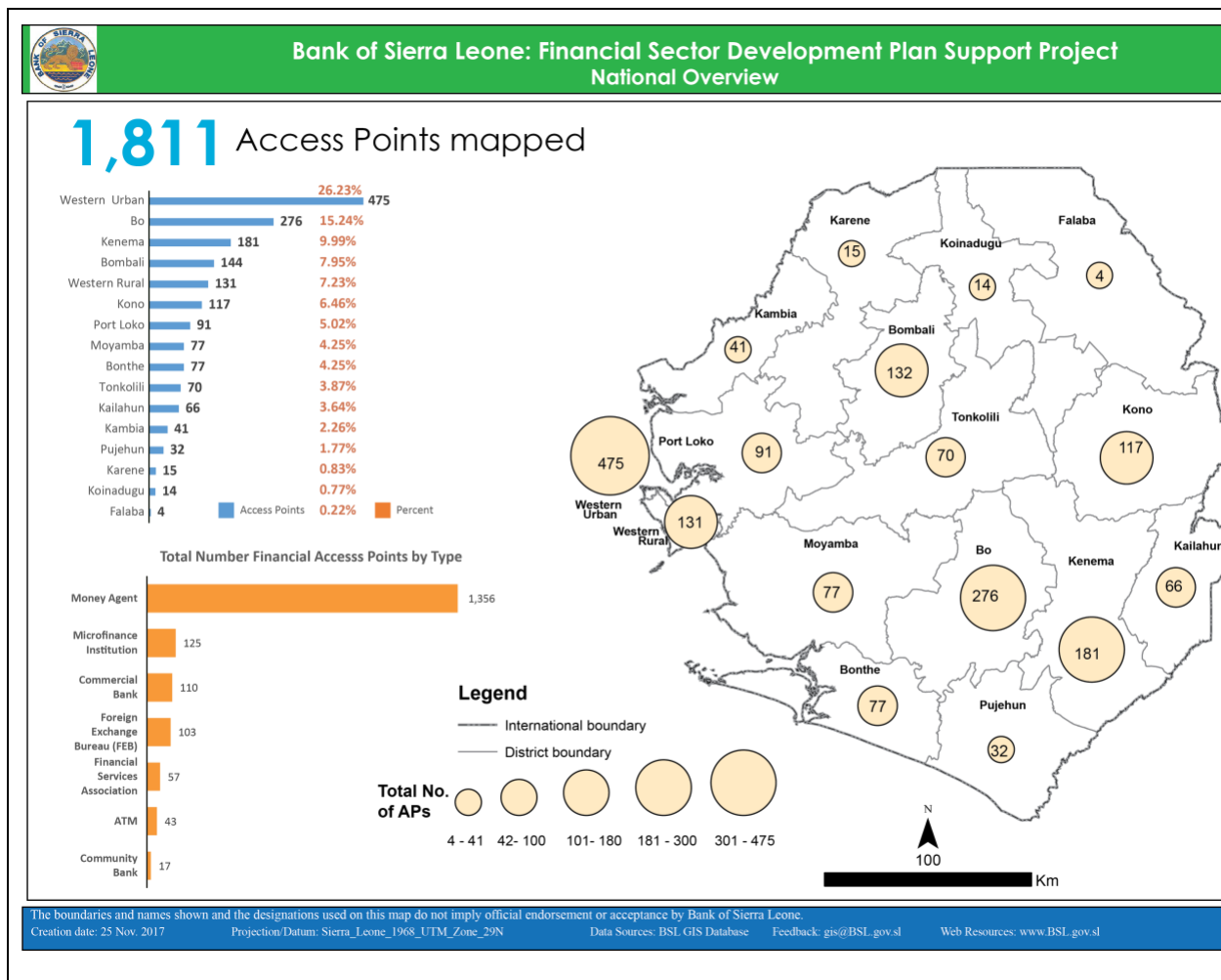
Indicator 2.3: Number of SME accounts per 10,000 adults, and by administrative unit

$$2.3 \text{ Indicator} = \left(\frac{\text{Total number of SME account by admin unit}}{\text{Total adult population}} \right) * 10,000$$

Indicator 2.4: Number of SME loans per 10,000 adults, and by administrative unit

$$2.4 \text{ Indicator} = \left(\frac{\text{Total number of SME loans by admin unit}}{\text{Total adult population}} \right) * 10,000$$

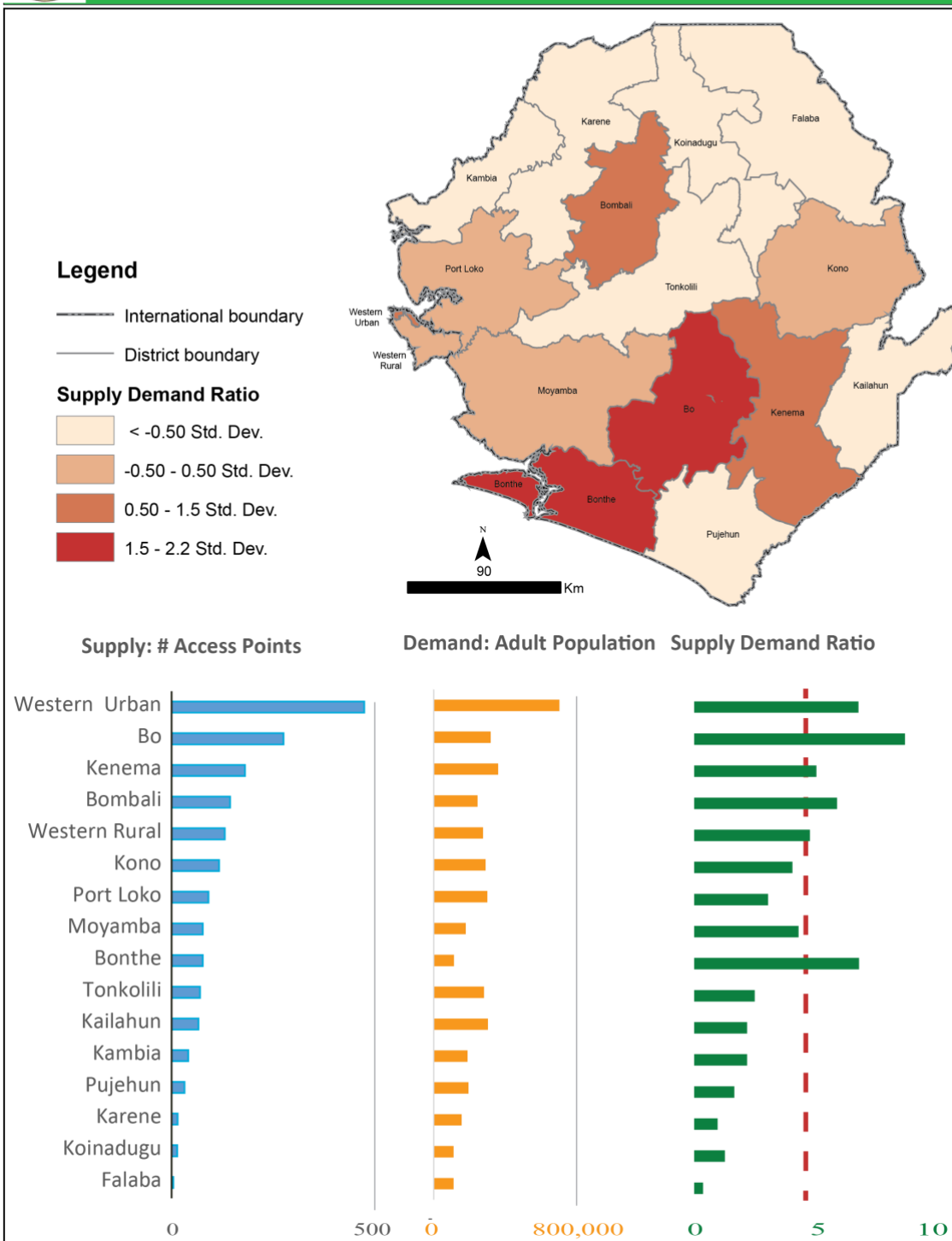
Annex 3: National Overview





Bank of Sierra Leone: Financial Sector Development Plan Support Project

Supply Demand at district level



The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by Bank of Sierra Leone.

Creation date: 23 Nov 2017 Projection/Datum: Sierra Leone_1968_UTM_Zone_29N

Data Sources: BSL GIS Database

Feedback: gis@BSL.gov.sl

Web Resources: www.BSL.gov.sl



Bank of Sierra Leone: Financial Sector Development Plan Support Project Supply and Demand Ratio

**Third of commercial
banks are in Connaught
Hospital section**

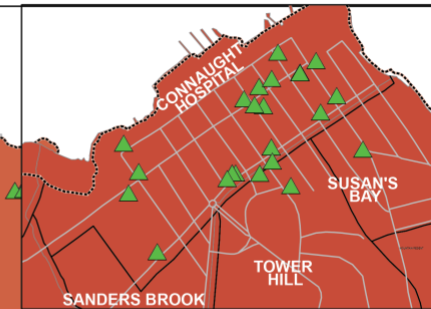
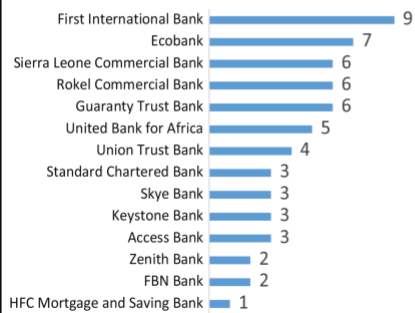
Legend

- Commercial Banks
- Western Area boundary
- Section boundary

Population density

- 129 - 270
- 271 - 810
- 811 - 2752
- 2753 - 6399
- 6400 - 23486
- 23487 - 32378

Commercial Banks in Western Area



The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by Bank of Sierra Leone.

Creation date: 26 Nov. 2017

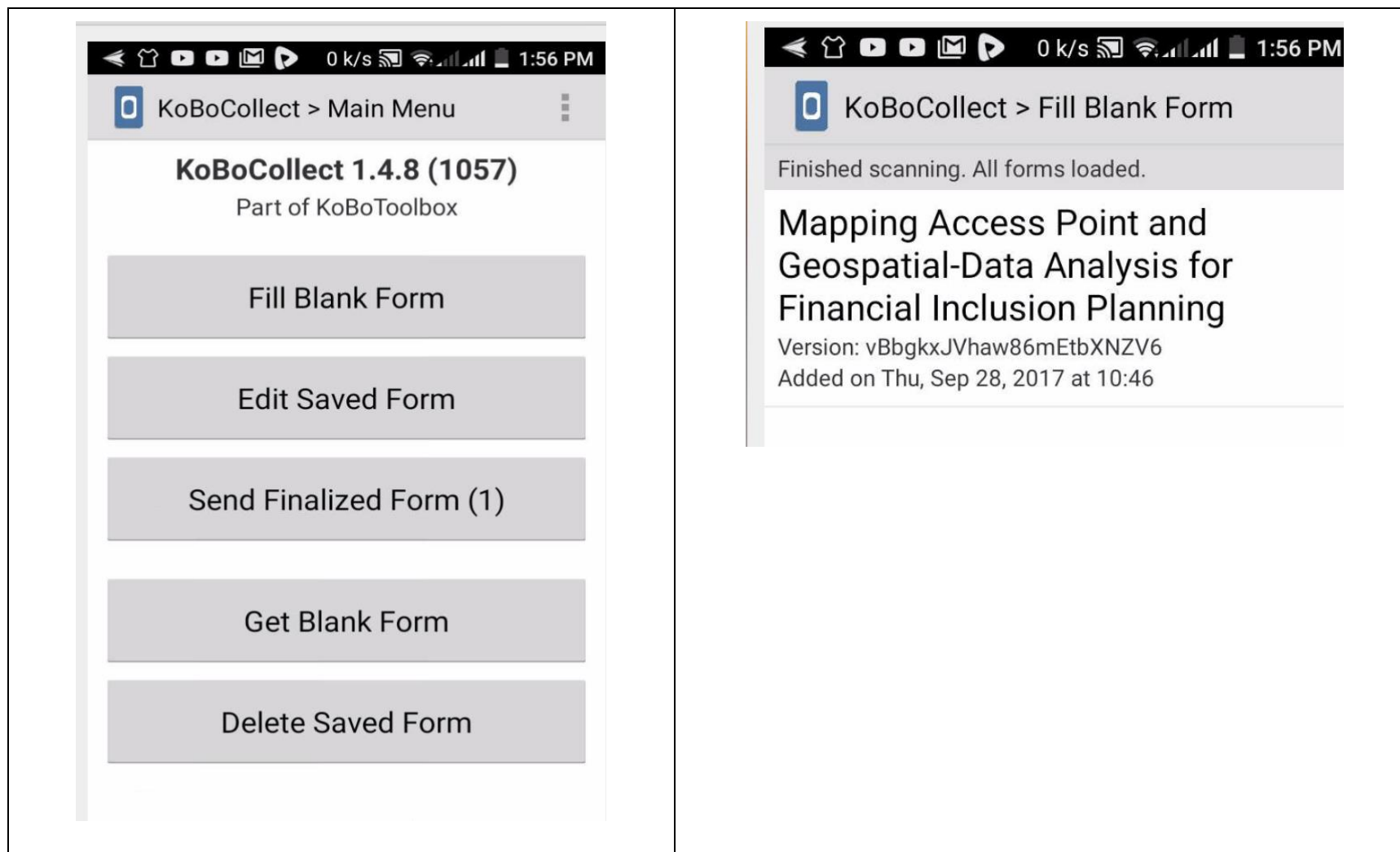
Projection/Datum: Sierra_Leone_1968_UTM_Zone_29N

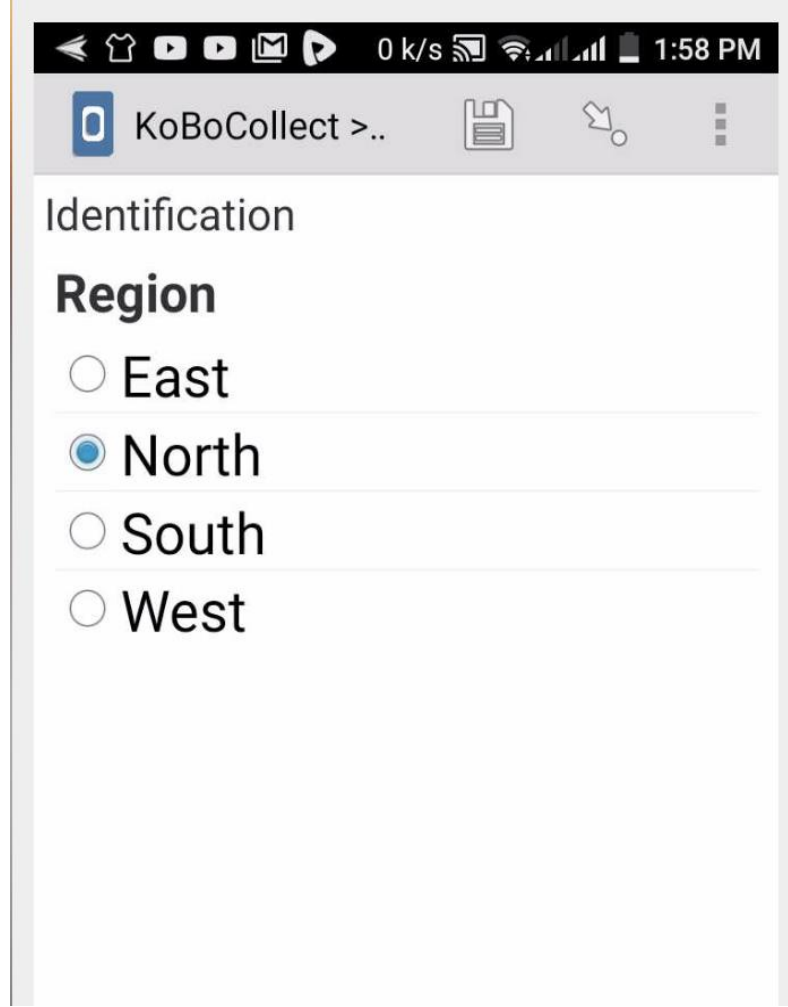
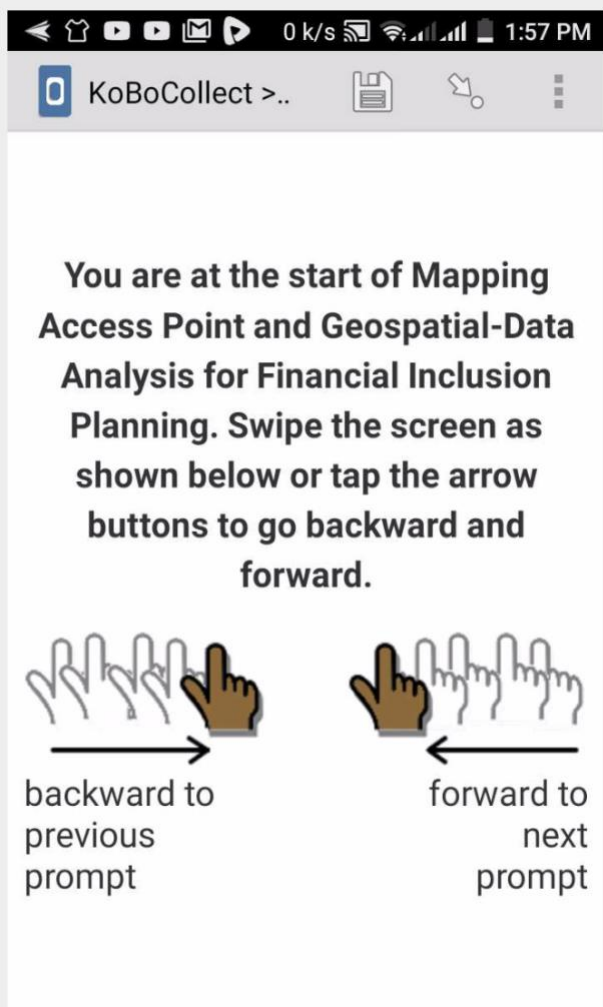
Data Sources: BSL GIS Database

Feedback: gis@BSL.gov.sl

Web Resources: www.BSL.gov.sl

Annex 4 Data Collection Tool





0 k/s 1:58 PM

KoBoCollect >..

Identification

Which District in the Northern Province?

- ☐ Bombali
- ☐ Kambia
- ☒ Koinadugu
- ☐ Port Loko
- ☐ Tonkolili

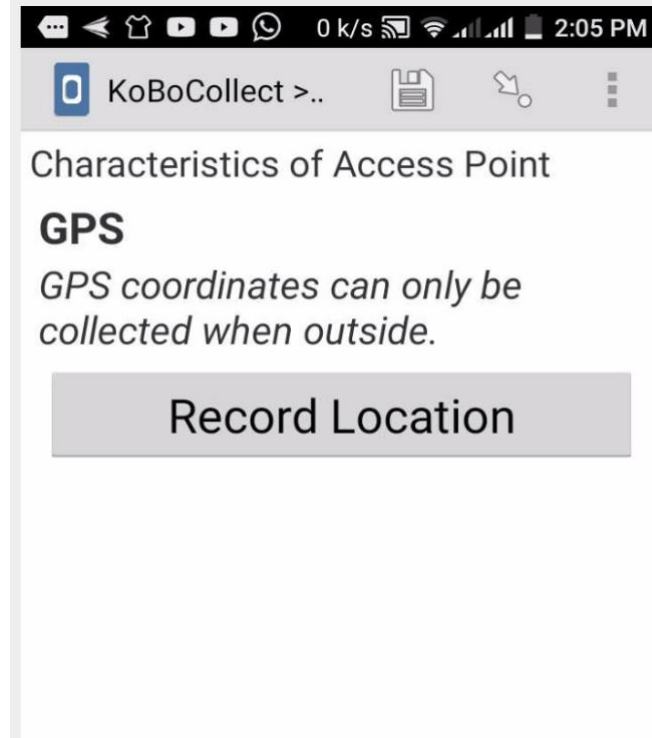
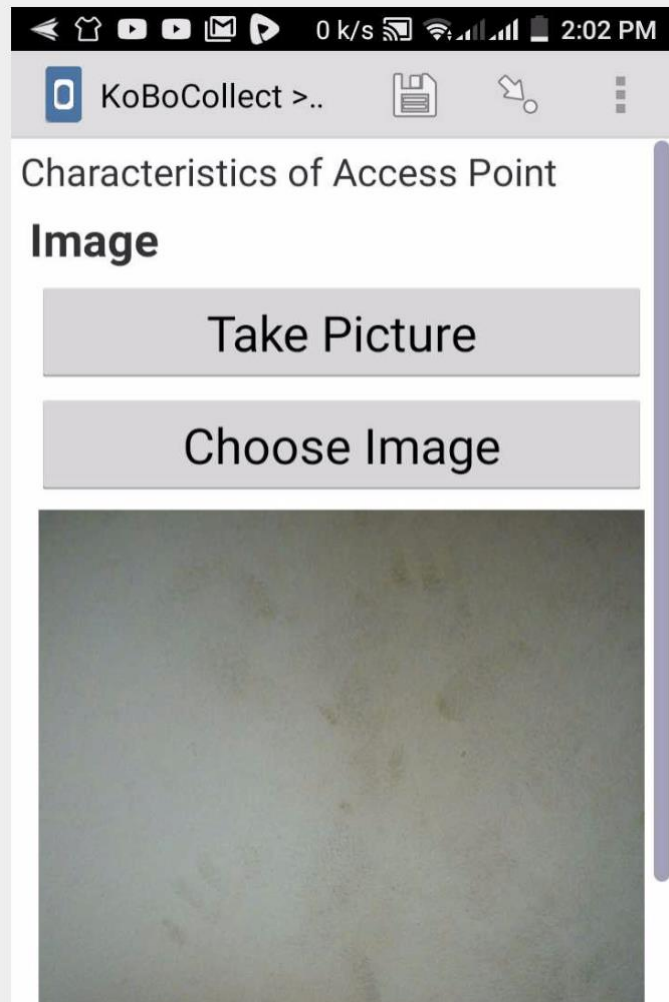
0 k/s 2:01 PM

KoBoCollect >..

Characteristics of Access Point

Tick the category of financial institution, which the access point belong.

- ☒ Bank
- ☐ Discount House
- ☐ Microfinance Institution
- ☐ Home Mortgage Finance
- ☐ Leasing Company
- ☐ Capital Market
- ☐ Foreign Exchange Bureau (FEB)
- ☐ Money Agent
- ☐ Automatic Teller Machine (ATM)



Annex 5: Area that need expansion

Region	District	Chiefdom
East	Kailahun	Dea
East	Kailahun	Jahn
East	Kailahun	Penguia
East	Kenema	Malegohun
East	Kono	Kamara
East	Kono	Mafindor
North	Kambia	Dixon
North	Kambia	Gbinle
North	Kambia	Masungbala
North	Kambia	MunaThalla
North	Karene	Safroko
North	PortLoko	Bureh
North	PortLoko	Maconteh
North	PortLoko	Maforki
North	PortLoko	Makama
North	PortLoko	Thainkatopa
North	Tonkolili	Gbonkolenkeni/Masankong
North	Tonkolili	Kalanthuba
South	Bo	Bagbwe(Bagbe)
South	Bo	Selenga
South	Bonthe	Dema
South	Pujehun	Galliness
South	Pujehun	Kabonde
South	Pujehun	Pejeh(FutaPeje)
South	Pujehun	Perri

Annex 6 Screen Shoot of the web map

