

# The Senga of Zambia

Muchinga Province  
Chama District

## Linguistic Survey Report

With recommendations for Bible translation strategy



Kenneth S. Sawka  
Christopher Mbewe  
Daka Josephat  
Ezeckia Ngulube

Survey Dates  
August 28 to September 5, 2014

1.	INTRODUCTION AND BACKGROUND .....	4
1.1.	Introduction.....	4
1.2.	Terminology.....	4
1.3.	Historical Background.....	5
1.4.	Geographical Location.....	8
1.5.	Population .....	14
1.6.	Previous Research .....	18
1.7.	Language borders and classification .....	18
1.8.	Religion.....	23
1.9.	Livelihood and Customs .....	25
2.	SURVEY PURPOSE AND APPROACH.....	28
2.1.	Purpose of the Survey.....	28
2.2.	Survey Approach.....	28
2.3.	Selection of Survey Locations .....	28
2.4.	Selection of Participants .....	29
2.5.	Individual Questionnaire.....	29
2.6.	Group Questionnaire .....	30
2.7.	Village Leader Questionnaire .....	30
2.8.	Word Lists.....	30
3.	RESULTS AND DATA ANALYSIS .....	31
3.1.	Language Viability .....	32
3.2.	Language Vitality .....	33
3.3.	Language Shift .....	35
3.4.	Word Lists Results .....	39
3.4.1.	Lexicostatistical comparison within Senga Speech Varieties .....	39
3.4.2.	Phonostatistical comparison within Senga Speech Varieties .....	43
3.4.3.	Most Linguistically Central Senga Variety.....	44
3.4.4.	Comparison of Senga to Other Languages.....	45
3.4.5.	Comparison of Languages other than Senga.....	47
3.5.	Dialect and Surrounding Language Mapping Exercise.....	49
3.5.1.	Within Senga Varieties .....	50
3.5.2.	With other Languages .....	50
4.	CONCLUSIONS AND RECOMMENDATIONS.....	52
4.1.	Language Vitality and Viability.....	52
4.2.	Language Shift .....	52
4.3.	Dialectology.....	52
4.4.	Relationship to other Languages .....	53
4.5.	Church Response.....	53
4.6.	Recommendations .....	53
4.7.	Further Research .....	54
5.	NOTES .....	55
5.1.	Distribution of Results.....	55
5.2.	Bibliography.....	56
5.3.	APPENDIX A .....	57
5.4.	APPENDIX B .....	58
5.5.	Endnotes.....	60

## Summary

The language group investigated in this survey is the Senga of Zambia's Muchinga Province which is located in Chama District. There are nearly 80,000 speakers of Senga and over 112,000 people claim Senga as their ethnicity.<sup>1</sup>

The purpose of the research included an examination of the relationships between the Senga language and related languages such as Tumbuka, Bemba, and Bisa. Another reason for this study was to obtain information on the language so that the viability of and community desire for a literature development project could be assessed. Some anthropological and historical data which was collected is also included.

The Senga language is often described as 'a dialect of Tumbuka with a lot of Bemba words mixed into it.' Our analysis shows that Senga is most closely related to Tumbuka but is a distinct language on its own. It shares 71% lexical similarity with Tumbuka and 46% lexical similarity with Bemba.

A lexical and phonostatistical comparison was done between five variations or dialects of Senga. The average lexical similarity between the five variations was 81% and the greatest difference between any two varieties was 11 percentage points. The phonostatistical similarity between the five variants was an average of 93% and the greatest difference between any two varieties was 7 percentage points.

The Kambombo dialect appears to be the most central form of the language and is the best form to use in regards to language development.

Senga was found to be a very viable language. It has a higher level of vitality than any other of the minority languages in Zambia which we have studied. However in today's changing world it will face an ever increasing influence of other languages. There are no published materials in the language and other languages like Tumbuka and Bemba which do have published materials are also occupying some domains.

## 1. INTRODUCTION AND BACKGROUND

### 1.1. Introduction

This survey was conducted as part of a larger research project that begun in 2012 which studies the remaining Bible translation needs of Zambia. This particular survey was conducted to collect information concerning the language of the Senga people of Zambia's Muchinga Province. Dialectical issues, comparisons of the language to related neighboring languages, and questions of language endangerment were the main focus of the research. A focus on measuring the vitality of the Senga language was important to this survey. Also included in these goals was an examination of the need for vernacular language development and the anticipated church and community response to a language development project.<sup>2</sup>

Data for the survey was collected through questionnaires, word lists, interviews and a dialect and surrounding language mapping exercise. Four researchers (Christopher Mbewe, Rev. Daka Josephat, Ezeckia Ngulube, and Kenneth S. Sawka) collected the majority of the information over seven days from August 28 to September 5, 2014. Additional information on the people and their language was also obtained on other occasions as well. Data was compiled by Rev. Daka Josephat and then analyzed by Kenneth Sawka who also wrote the report. SIL Tanzania supplied a word list for Nyika.<sup>3</sup>

This draft report is dependent upon the input of the Senga people to refine and correct information that may be incorrect. The Senga people themselves are the experts in the knowledge of their language and culture. Therefore we encourage them to share from their wealth of knowledge to improve the accuracy of the report.

We would like to extend our appreciation to Senior Chief Kambombo, Chief Chibale, Chief Chifunda, Chief Chikwa, and Chief Tembwe for receiving the survey team, blessing the exercise and allowing the team to collect data from their chiefdoms. Others who assisted and helped in the planning of this survey are Pastor Jackson Katete as well as many other Senga people who encouraged us along the way.

### 1.2. Terminology

*Senga* is the common term used by westerners to refer to both the people group as well as to the language. However the Bantu manner is to use the prefixes *ba-* to distinguish the people group and *chi-* to indicate the language. For example, *BaSenga* is the term to refer to the people as a group that speaks the *Chisenga* language. For the purposes of this study we will most often refer to the language simply as *Senga*.

In conclusion, it is worth repeating what was written in Sawka (2013c),

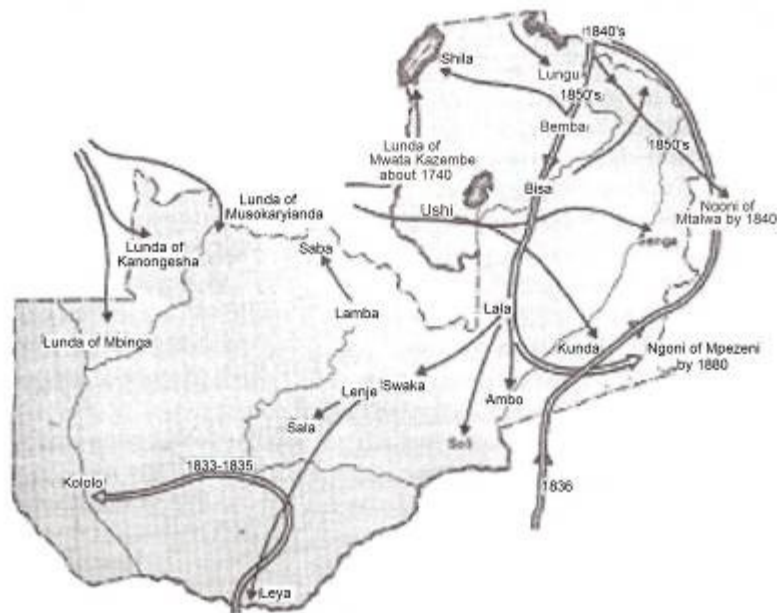
... the division of people groups into language groups rarely has clear-cut demarcations. Language use by a community is constantly shifting as smaller language groups are being absorbed by larger ones or larger groups are splintering and separating into smaller subdivisions. "Language group" divisions like the political boundaries that have been placed upon ethnic groups within Africa, can be considered somewhat artificial and not a primary way of identification in the minds of all indigenous peoples. It is not necessarily an "African perspective" to think of people groups divided according to what languages are spoken. Instead what may be

more significant is identification with a tribal kingdom and all the connected alliances that kingdom may have. With this in mind we speak of all the language groups in Zambia including the “Senga language group” knowing that these are not entirely natural subsets but are somewhat artificial groupings.

### 1.3. Historical Background

Most Bantu language groups of Zambia are assumed to be a part of the early Bantu migrations that have been thought to have occurred from 500 to 1000 AD. These migrations originated out of western central Africa approximately in what is now the area of Cameroon. Later migrations into Zambia probably came out of the Lunda and Luba Kingdoms of Mwatayamvu in the Congo. The Senga and Kunda peoples trace their roots through the Bisa people to the Luba and Lunda states that existed in the Congo Basin in the 16th century AD.<sup>4</sup> Other Bantu groups in Zambia also identify their origins from what is today the Democratic Republic of the Congo or other neighboring countries. The Lozi language group, for example, explains that they originated from what today is called Angola. Bemba speakers trace their origins back to the DR Congo, and the Chewa speakers tell how their people originated from the DR Congo via a migration through Malawi. The Ngoni have a more recent history in Zambia tracing their entrance into the country from the Zulu Kingdom south of Zambia in 1835.<sup>5</sup>

The following map from Langworthy (1972) shows some of these migrations.<sup>6</sup> Note that the map shows the Ushi people, which are closely related to the Bemba, as giving rise to the Senga and Kunda. This is in contrast with accounts gathered from the Senga and Kunda that tell that each of these groups descended from the Bisa.



**Figure 1:** Later migrations of chiefs into Zambia and migrations within Zambia.

Zambian oral histories relate how at one time a Luba king ordered that all male children yet to be born were to be killed. People began to flee the king's tyrannical rule and the resulting migration led to many tribes entering the area which today is Zambia. Along the way the diversity of tribes increased as groups split apart from one another. By the early 19<sup>th</sup> century a group from which the Bisa trace back their history had more or less formed and established themselves on the eastern side of the Luangwa River.

According to Chondoka and Bota (2007) the Bisa moved eastward from the Luapula River sometime before 1720 and settled where Mpika District is today, south of the Muchinga Escarpment. A small segment of the Bisa crossed the Luangwa River between 1780 and 1800 and settled on the east bank much farther to the north in what is today Chama District.<sup>7</sup> Mkunsha (2014) estimates that a more southern group of Bisa, which have now become the Kunda, would have crossed the Luangwa River somewhere between 1835 and 1845 if not later.<sup>8</sup>

The Tumbuka called these Bisa to the north *Biza* which in the Tumbuka language means "they have come". Later the Bisa extended their territory farther eastward along the west bank of the Luangwa River where they came into contact with the Tumbuka territory. A small segment of the Bisa crossed the Luangwa River between 1780 and 1800 in search of more land.

At one point the Bisa decided to stop wandering and were given the name *Senga*. There are two possible origins of the name *Senga*. One comes from a Tumbuka word, *musenga*, meaning 'backwoods'. It was said that the Bisa stopped wandering and settled in the backwoods. Another explanation is that a common Bantu verb *kusenga* meaning 'to ask for' was attached to the people because they would ask the Tumbuka for food or land to settle upon. Whatever the origin the name stuck and the Senga began to morph into a new people groups as they grew linguistically and culturally distinct from their Bisa origins.

They established a settlement and eventually a chiefdom at Kambombo with Chibeza as their chief. Eventually other Senga chiefdoms were established, either independently, or as a result of disputes over whom was to be the next chief when a chief died.

Often when new settlements were formed it was the men who ventured out alone. They would search for wives locally once they had begun to establish a new village. In this case the Senga men encroached upon Tumbuka areas and took Tumbuka wives. It is important to note that both the Bisa and the Tumbuka are matrilineal societies.<sup>9</sup> So when Senga men were taking Tumbuka wives the Senga chiefdom would naturally pass onto the nephews born to the Tumbuka sisters of the deceased Senga chief. Thus the Tumbuka theoretically would retain the political power over the Senga. However Chondoka and Bota (2007) recount in detail how the Senga leader, Chibeza, invited a Tumbuka chief, Chamanyavyonse to Chibeza's village to visit the chief's grandson Kasolwe. The child was born to Chamanyavyonse's daughter who had been given in marriage to Chibeza.

During his visit to Chibeza's village Chief Chamanyavyonse was held to the ground on his back with the child Kasolwe standing over him. For the Tumbuka and Senga it was improper for any chief to be on his back in the presence of others and it was a sign of submission to those who stood over him. Thus the position of chief was usurped from Chamanyavyonse and transferred to his Senga grandson Kasolwe.<sup>10</sup> Although power should have been transferred matrilineally to one of Chamanyavyonse's Tumbuka nephews it was instead shifted to his Senga grandson,

Kasolwe. The shift in power was carried out as a coup d'état. The Sengas by this time had increased in large numbers, and having spread out over areas that were previously held by the Tumbuka, were becoming more and more independent.<sup>11</sup>

Historians relate that the Tumbuka kingdom was already in decline, at least in decline on their western side, by the time this transfer of political power was made from the Tumbuka to the Senga. Such accounts help to understand how the birth of a new people group takes place. These changes occur slowly and over extended period of time spanning generations. To an outsider's point of view the transfer of political power to the Senga to become independent of the Tumbuka was a mild and non-violent change. It illustrates how language groups would grow and absorb smaller groups or smaller groups would grow and often innocuously split off into new linguistic and political entities. In the case of the Senga, the Tumbuka chief, Chamanyavyonse, had not been murdered but only forced to admit that he had relinquished the chieftainship. To the credit of the Tumbuka they did not retaliate through war by attacking the Senga.

Because of its high population, the area which would later be designated as Malawi saw terrible atrocities from the slave trade. Although slavery was endemic to pre-colonial Africa and was widely practiced among various tribes, the much larger international slave trade involving the export of slaves off of the continent had special effects that the localized forms of slavery did not have. David Livingstone and other reformers from Europe and North America are famous for the battles against slavery. The British passed the Slavery Abolition Act in 1833 but allowed slavery to continue in its East India territories until 1843 when slavery was then outlawed in India. However slave trading actually intensified in the nineteenth century and no opposition to slavery ever arose from within the Muslim world through which it continued. Estimates compiled in the 1860s by British naval patrols in the Indian Ocean, say as many as 20,000 slaves were being exported from the East African coast to Zanzibar and beyond.<sup>12</sup> Slavery has continued to be practiced covertly in North Africa even up to the present time, although these slaves today do not originate from central Africa, but from countries like Sudan and South Sudan which border Muslim dominated nations.

McCracken (1977) writes,

Europeans entering the Malawi regions in the 1860s and 1870s described that area as "one of the dark places of the earth, full of abominations and cruelty."<sup>13</sup> The Shire highlands, with its dense population and comparatively limited supplies of ivory was agreed to be one of the major sources for the slave trade, through any estimate as to the actual numbers involved must be treated with considerable caution. According to Consul Rigby, 19,000 slaves, most of them from the Malawi region, were passing through the customs house at Zanzibar in the early 1860s and considerable numbers were also exported from Kilwa in this period and from the Portuguese ports as well. Slaves were captured in raids made for this purpose, but as Livingstone noted, Manganja headmen also sold unwanted people from their villages, criminals and those convicted of witchcraft and friendless orphans who lacked influence. There is evidence to suggest that, as the demands for slaves intensified, rulers altered legal procedures to make it easier for them to sell their subjects.<sup>14, 15</sup>

In 1875 the Livingstonia mission of the Presbyterian Church began to be established in what is today Malawi and areas to the north of the Kunda.

McCracken's first mention of the Senga says that groups of Senga in northern Malawi deliberately settled under Ngoni rule in order to avoid their raids. The Ngoni had been raiding and disrupted trade in ivory and copper that had been going on in the area. In those early days of

Christian missions in central Africa evangelization most likely targeted areas where commercial prospects were brightest as well. This was only logical because populations of indigenous peoples would flock to where roads, railroads or towns were being constructed. In 1898 it was expected that the Rhodes' railway would cross the Kariba Gorge and proceed north into Tanganyika. Such a move would have brought the Bemba and Senga groups into better contact with the outside world. However when coal was discovered in Southern Rhodesia the railway followed a more westerly route.<sup>16</sup>

McCracken says that two Livingstonia missionaries, Prentice and Fraser, toured the northern and southern spheres of the Luangwa valley in 1897 and 1898. They made contact with the Senga who lived in...

... large stockaded villages, surrounded by thorn trees. A meeting was held at Ekwendeni in June of 1899 and the response was so great that three schools were quickly established in the Senga villages of Kambombo, Tembwe and Chikwa. By 1902 their number had increased to six, but this was eclipsed a year later when fifty-three senior pupils at the Institution, assisted by a small party of agricultural apprentices, spent their long vacation working from twenty-nine separate centers in the Marambo, spread over an area of 400 miles. In 1904, evangelists and teachers went out from all the major stations, Ekwendeni, Loudeon, Bandawe and the Institution, not only to the Senga but beyond into Bemba and Bisa country, where twenty-four teachers and one travelling evangelist were employed for three months working from seven major centres.<sup>17</sup>

In 1907 ten schools were being worked from Loudon among the Kundu, Bisa and Chewa, and nine among the Senga; Bandawe had thirty-five teachers spending six months of the year with the Senga; temporary settlements linked to the Institution had been established in Bembaland.<sup>18</sup>

"In the months of August, September, October, the Livingstonia Church sent away some men to the Bembaland to teach and to preach the great words of Jesus-Christ our Lord," wrote one of the students involved. "The Bemba are very ready to receive Christ as their King. I witness this because I was one of them who went there. I and Samson were teaching and preaching in Chibeza village; the chief of the Biza people and many people came around our preaching of Jesus crucified."<sup>19</sup>

#### **1.4. Geographical Location**

Zambia is divided into ten provinces as shown in the following map:

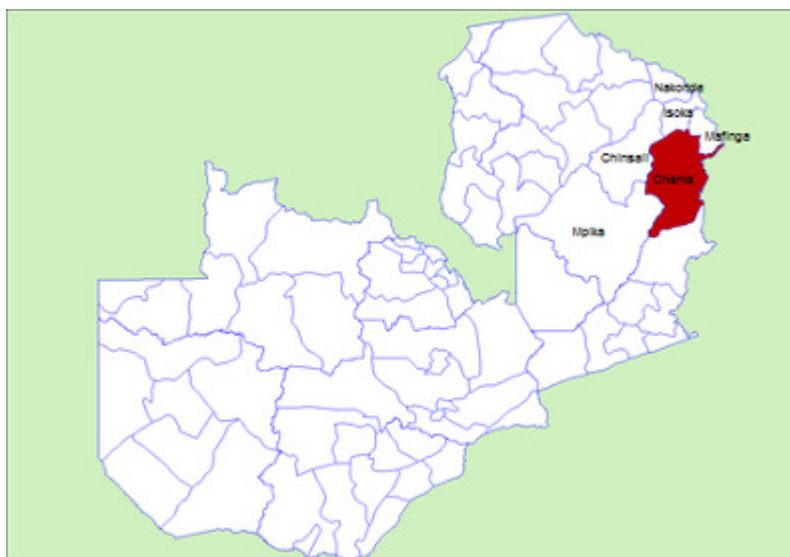




**Figure 2:** Zambia's ten provinces. The Senga are in Muchinga Province which is in the eastern part of the country.

Each of the ten provinces is further subdivided into administrative districts. There are total of 89 administrative districts in the entire country. The Senga people are located mostly in the Chama District in Zambia's Muchinga Province in the northeast of the country. Muchinga Province has seven districts. Besides Chama, the other six are Chinsali, Isoka, Mafinga, Mpika, Nakonde and Shiwangandu.

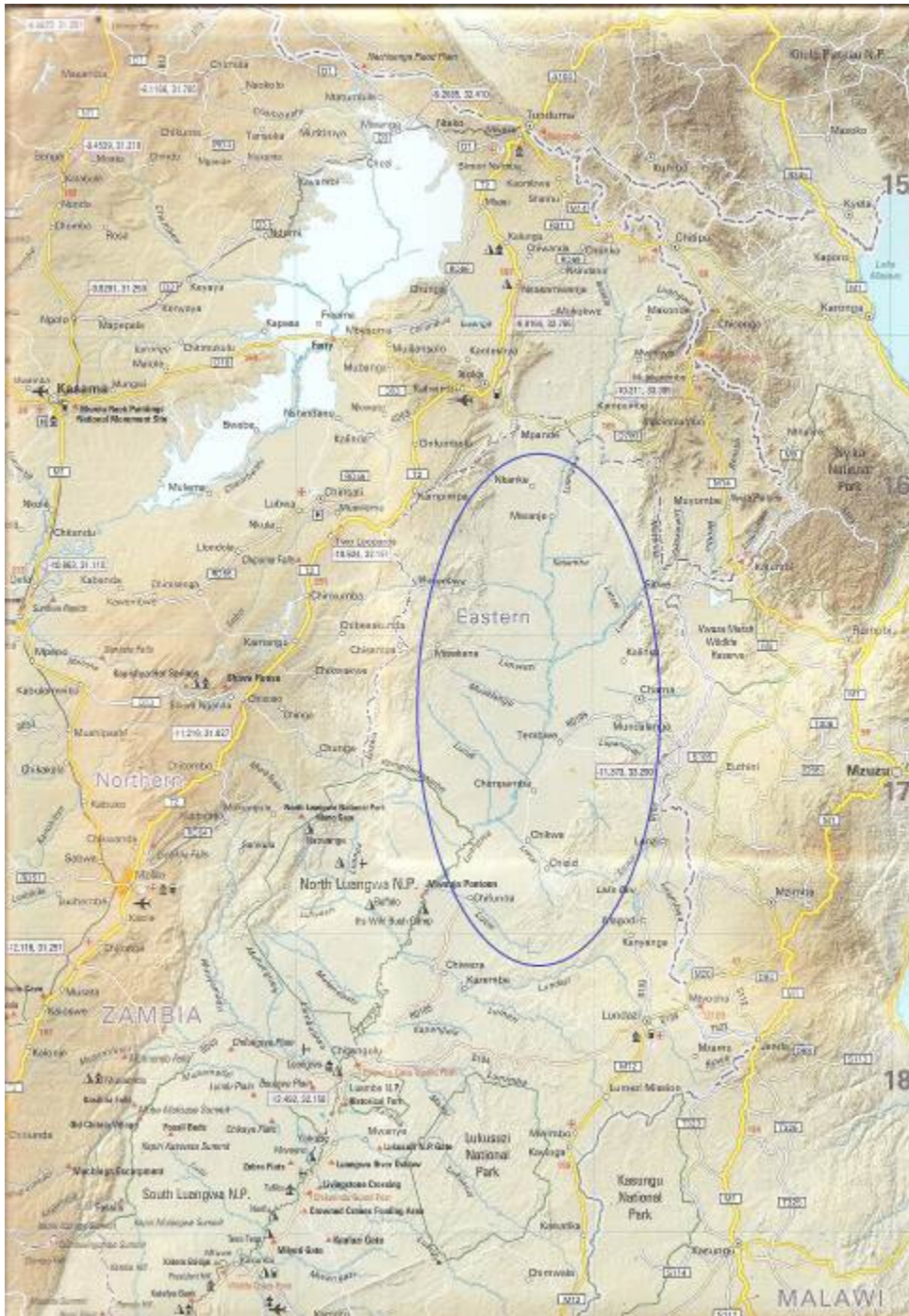
The following map shows Zambia's district lines for all the 89 administrative districts. Muchinga province is outlined in black and Chama District is colored in red.



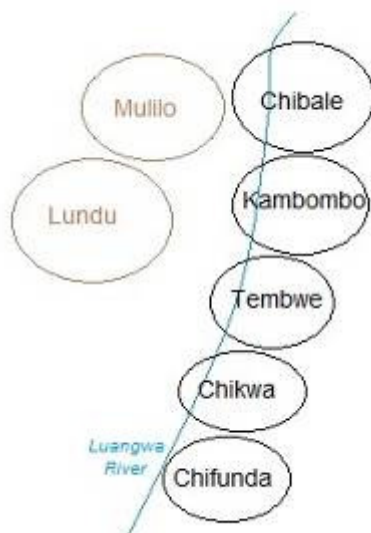
**Figure 3:** Districts within Zambia's Muchinga Province with Chama District in red.<sup>20</sup>

Muchinga Province is the newest of Zambia's ten provinces. It was created in 2011 from portions of the Eastern and Northern Provinces. It borders Tanzania in the north and Malawi in the east. Muchinga province borders Zambia's Eastern Province on its southern side and Central Province on the southwest, Luapula Province in the west, and Northern Province in the northwest. Chinsali is the administrative center. The province is named after the Muchinga Mountains which divide the watershed of the Zambezi River which flows into the Indian Ocean, and the Congo River that flows west to the Atlantic Ocean. The largest river in the province is the Luangwa River which is a major tributary of the Zambezi.<sup>21</sup>

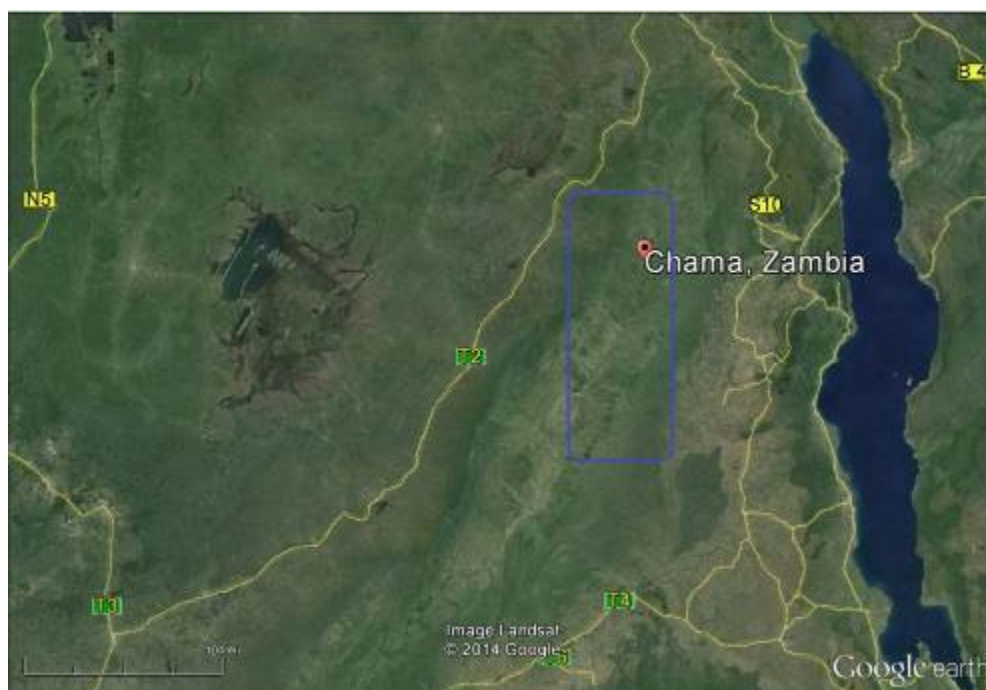
The Luangwa River is the main geographical feature of Chama District. It flows through six of the Senga chiefdoms generally from North to South. There are more than 30 major tributaries that flow into the Luangwa and they are generally perpendicular to it. The Kamimimbi, Kasamba, Mampanda, Kapembu, Lupamadzi, Luwumbu, Lumpa, Lunzi, Luela, and Lumezi are names used for some of the tributaries that flow through mostly Senga areas and join the Luangwa River on its eastern bank. The Nkanka, Musi, Mwambwa, Mancha, Limezi, Musalango, Lundi, and the Kamanangombe are names used for some of the tributaries that flow through Senga areas and unite with the Luangwa River on its western bank. Many small rivers and streams cease to flow in the dry season but the Luangwa River continues to have water throughout the year as it meanders through the Senga chiefdoms. This enables the Senga people to fish and use the water for small scale, often hand powered, irrigation for crops planted along the river.



**Figure 4:** Map showing portion of Zambia's Muchinga Province.<sup>22</sup> The blue circle indicates the approximate location of the Senga chiefdoms.



**Figure 5:** Drawing of approximate locations of Senga chiefdoms



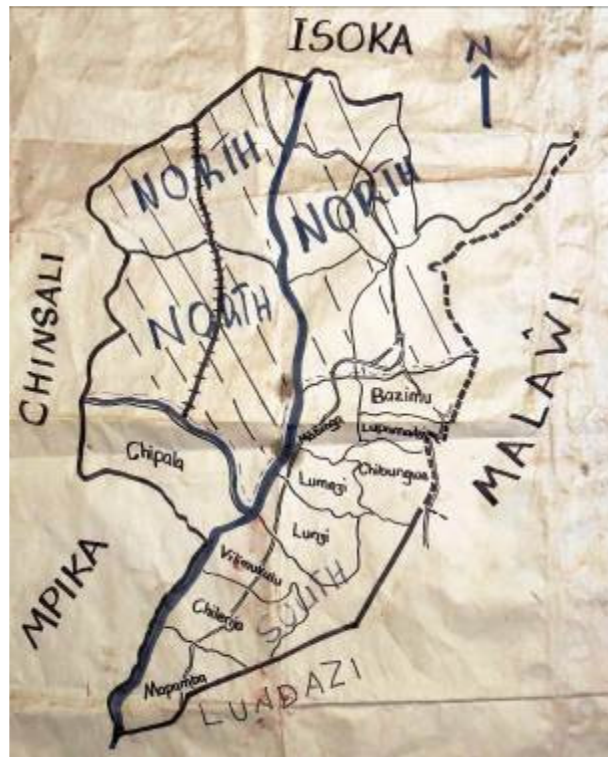
**Figure 6:** Google earth map showing the district's administrative center, Chama, and the T2 road which is the main road between Zambia's capital city, Lusaka, and Zambia's Northern Province. The Senga people inhabit the northern and southern regions to the west of Chama, indicated here by the blue rectangle.

Chama District is the largest and least populated district of Muchinga Province. The district includes an area of 17,630 km<sup>2</sup>. Chama District was previously part of Zambia's Eastern Province while the other four original districts were transferred from Zambia's Northern Province.<sup>23</sup>

The headquarters for Chama District is in Chama Town. The district includes the large wilderness areas north-east of Zambia's North Luangwa National Park. Much of the population of Chama District lives close to the Malawi border and shares tribal and cultural links with the people of the northern highlands of that country.<sup>24</sup>

Besides the staple crop of maize, Chama is also known for producing rice. Cotton, tobacco and sunflowers are grown as cash crops. Sorghum, soya, groundnuts, sweet potatoes, pumpkins, and cabbages are also grown. Besides agriculture and tourism for North Luangwa Park there are not many opportunities for employment and there are not many other industries in the district.<sup>25</sup>

Chama District is divided into Chama North and Chama South. The following map shows Chama South and their respective wards.



**Figure 7:** Locally produced map of Chama South constituency of Chama District



**Figure 8:** Map of Senga chiefdoms after 1945 from Chondoka & Bota (2007). Chiefdoms included in this survey were Chifunda, Chikwa, Tembwe, Kambombo and Chibale.

## 1.5. Population

Zambia has recently taken a census of their population every ten years. A 1990 Zambian Census listed Chama District as having a population of 55,172 people. In 2000 the census recorded 74,890 people and in 2010, 103,894 inhabitants.<sup>26</sup> The 2010 population density is 5.9 inhabitants per square kilometer. From 2000 to 2010 the change in population density is 3.33% per year. The population growth figures include emigrants from other language groups as well as expatriates who have moved to the area.

The following table includes data from Zambia's 2010 census report. It summarizes the population figures for Senga and related languages, separating those who identify themselves as Chewa from Nyanja.

	<b>Ethnic Origin</b>	<b>Language of Predominant Communication</b>
<b>Chewa</b>	929,842	499,671
<b>Kunda</b>	83,467	40,029
<b>Nsenga</b>	660,947	328,793
<b>Nyanja<sup>27</sup></b>	50,761	1,643,686
<b>Senga</b>	112,118	79,546
<b>Tumbuka</b>	549,665	284,917

**Table 1.** 2010 Population by Ethnic Origin and Language of Predominant Communication

The Senga population resides in the Chama administrative district of Zambia's Muchinga Province. Chama District has two constituencies: Chama North and Chama South. Chama North has 12 wards and Chama South has 10 wards. The results for these two constituencies by ward in the 2010 census are tabulated in the following table. Those wards in which questionnaires for this survey were gathered are Nkhankha, Luangwa, Kalinkhu, Kamphemba, Mabinga, Lumezi, Lunzi, Vilimukulu, and Chilenje. Those that were visited but in which no questionnaires were administered are Mphalausenga, Bazimu, Lupamazi, and Chibungwe.

<b>Number of Households and Population of Chama District by Ward</b>				
	<b>Households</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
<b>Chama District</b>	<b>19,420</b>	<b>103,894</b>	<b>50,856</b>	<b>53,038</b>
<b>Chama North Constituency</b>	<b>9,974</b>	<b>53,313</b>	<b>26,285</b>	<b>27,028</b>
Mazonde	296	1,587	761	826
Nkhankha	1,039	5,339	2,642	2,697
Luangwa	760	3,868	1,906	1,962
Chisunga	729	3,812	1,874	1,938
Ndunda	391	1,919	946	973
Mbazi	566	2,969	1,478	1,491
Manthepa	408	2,183	1,088	1,095
Mphalausenga	1,159	6,421	3,177	3,244
Kalinkhu	394	2,193	1,045	1,148
Kamphemba	2,468	13,542	6,711	6,831
Mwalala	1,124	6,377	3,129	3,248
Muchinga	640	3,103	1,528	1,575

<b>Chama South Constituency</b>	<b>9,446</b>	<b>50,581</b>	<b>24,571</b>	<b>26,010</b>
Chipala	483	2,555	1,220	1,335
Bazimu	1,112	5,936	2,896	3,040
Mabinga	1,070	5,543	2,711	2,832
Lupamazi	437	2,392	1,177	1,215

Lumezi	918	5,284	2,520	2,764
Chibungwe	954	5,352	2,611	2,741
Lunzi	1,458	7,772	3,781	3,991
Vilimukulu	1,054	5,513	2,710	2,803
Chilenje	1,124	6,052	2,940	3,112
Mapamba	836	4,182	2,005	2,177

**Table 2.** 2010 population figures by ward for Chama District.

The following table shows the wards for the two constituencies of Chama District sorted by population. The table also shows the percentage of each ward out of the total population for the district as well.

<b>Chama District sorted by Population Size</b>			
<b>District or Ward</b>	<b>Households</b>	<b>Population</b>	<b>Percentage</b>
<b>Chama District</b>	<b>19,420</b>	<b>103,894</b>	<b>50,856</b>
<b>Chama North Constituency</b>	<b>9,974</b>	<b>53,313</b>	<b>51%</b>
Kamphemba	2,468	13,542	13%
Mphalausenga	1,159	6,421	6%
Mwalala	1,124	6,377	6%
Nkhankha	1,039	5,339	5%
Luangwa	760	3,868	4%
Chisunga	729	3,812	4%
Muchinga	640	3,103	3%
Mbazi	566	2,969	3%
Kalinkhu	394	2,193	2%
Manthepa	408	2,183	2%
Ndunda	391	1,919	2%
Mazonde	296	1,587	2%

<b>Chama South Constituency</b>	<b>9,446</b>	<b>50,581</b>	<b>49%</b>
Lunzi	1,458	7,772	7%
Chilenje	1,124	6,052	6%
Bazimu	1,112	5,936	6%
Mabinga	1,070	5,543	5%
Vilimukulu	1,054	5,513	5%
Chibungwe	954	5,352	5%
Lumezi	918	5,284	5%
Mapamba	836	4,182	4%
Chipala	483	2,555	2%



Lupamazi	437	2,392	2%
----------	-----	-------	----

**Table 3.** Wards of Chama District 2010 by population sorted from largest to smallest.

The 2013 Demographics Profile for Zambia says that on average 46.2% of the country's population is from zero to 14 years of age.<sup>28</sup> The 2010 census included the breakdown in age showing that 51% of the population of Chama District is 14 years of age or under:

<b>Chama District Population by age</b>				
	<b>0 -14 Years</b>	<b>15 - 34 Years</b>	<b>35-above</b>	<b>Total</b>
<b>Chama District</b>	<b>52,745</b>	<b>33,106</b>	<b>18043</b>	<b>103,894</b>
<b>Chama North Constituency</b>	<b>27,101</b>	<b>17,169</b>	<b>9043</b>	<b>53,313</b>
Mazonde	859	455	273	1,587
Nkhankha	2,865	1,666	808	5,339
Luangwa	2,092	1,194	582	3,868
Chisunga	2,093	1,101	618	3,812
Ndunda	998	590	331	1,919
Mbazi	1,450	995	524	2,969
Manthepa	1,148	646	389	2,183
Mphalausenga	3,230	1,991	1,200	6,421
Kalinkhu	1,183	650	360	2,193
Kamphemba	6,373	4,814	2,355	13,542
Mwalala	3,282	2,036	1,059	6,377
Muchinga	1,528	1,031	544	3,103

<b>Chama South Constituency</b>	<b>25,644</b>	<b>15,937</b>	<b>9,000</b>	<b>50,581</b>
Chipala	1,306	836	413	2,555
Bazimu	2,902	1,932	1,102	5,936
Mabinga	2,813	1,756	974	5,543
Lupamazi	1,232	734	426	2,392
Lumezi	2,653	1,664	967	5,284
Chibungwe	2,650	1,688	1,014	5,352
Lunzi	3,850	2,513	1,409	7,772
Vilimukulu	2,835	1,694	984	5,513
Chilenje	3,172	1,907	973	6,052
Mapamba	2,231	1,213	738	4,182

**Table 4.** 2010 Age Demographics for wards of Chama District

Age demographics of a population are some of the most important considerations when studying language vitality and language shift. Among the Senga the above shows that only about 18,000

out of 103,900 or 17.4% of the population is 35 years or older. This older segment of the population is that which would speak a vernacular language best and have the responsibility of passing it on correctly to the younger generation.

An inventory of 158 villages listed according to their location within the chiefdoms is included in Appendix A. Appendix B contains a list of population data and the composition of Senga villages. Appendix B is a compilation of data collected from the village leader questionnaires. The average population of a village was 230 people. Sixty-three out of the 75 villages (84%) sampled had a homogenous population of Senga people. Of those that were not 100% Senga only a tiny fraction, (the highest being only 1.82%) were not Senga by ethnic origin.

The following table shows those language groups that were also present in the Senga villages included in the survey.

Percentage of Non-Senga groups in Senga dominated villages								
Bemba	Namwanga	Tambo	Tumbuka	Ngoni	Chewa	Tonga	Lozi	Unclassified
1.83	0.93	0.57	0.41	0.17	0.13	0.13	0.13	0.07

**Table 5.** Percentage of non-Senga groups present in Senga dominated villages.

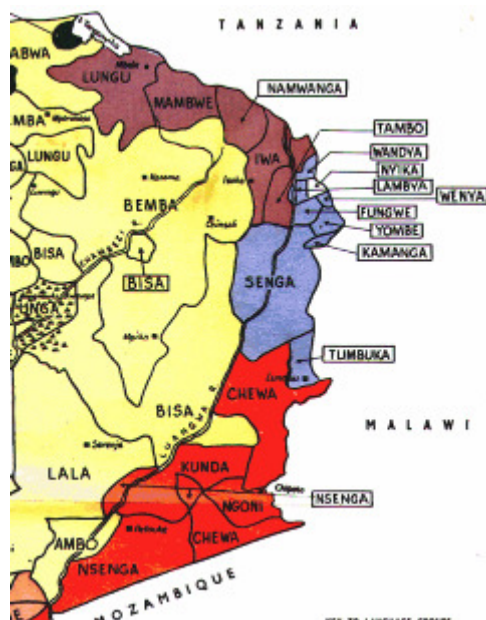
Naturally, those villages that border other neighboring language groups will have a higher percentage of residents who are not mother-tongue Senga speakers.

## 1.6. Previous Research

The largest published source of information on the Senga is included in Chondoka and Bota's great resource *A History of the Tumbuka from 1400 to 1900. The Tumbuka under the M'nyanjagha, Chewa, Balowoka, Senga and Ngoni chiefs*, (2007). This work begins with much information on the historical lineage of the Tumbuka chiefs, but has very valuable chapters on the Tumbuka customs and ways of life. Other chapters tell about the entrance of other groups into the Tumbuka area including an entire chapter dedicated to the arrival of the Senga and their impact upon the Tumbuka. The work does not have information about the linguistic differences of Senga or Tumbuka although many examples of names and places are explained.

## 1.7. Language borders and classification

The following map shows a portion of Zambia's eastern regions. This map is published within Zambia to show the different ethnic groups in the country.



**Figure 9:** Portion of a map widely used in Zambia showing the location of the Senga and Tumbuka language groups

When the groups are listed as in Figure 9 it appears that the Tumbuka language does not form a very large border on the Senga language area even though Tumbuka is the language that is most closely thought of by Zambians as being related to Senga. There are two reasons for this. One the map boundaries end at the country boundaries and Tumbuka is spoken also in Malawi to the east of the Senga areas. Also, in Figure 9 at least three of the groups on the northeastern border, the Kamanga, Yombe, Fungwe can be considered as dialects of Tumbuka. Indeed, Chondoka and Bota (2007) state that the Yombe are culturally a strong part of the Tumbuka group. They explain how the Tumbuka were once a strong empire but were invaded by foreign groups of people from the north-west and west.

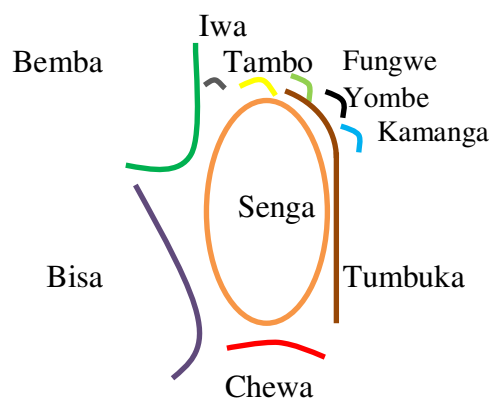
From the north-west, six small groups of culturally related people entered the Tumbuka territory before 1800. These were: Tambo, the Wandya, the Lambya, the Nyika (also known as the Wenya), the Fungwe and the Yombe, the largest of the seven small groups. Other than the Yombe, the rest have had very insignificant impact on the Tumbuka. The important thing is that all these groups have over the centuries, either collectively or individually adopted, accepted or understood the language and known the culture of their demographically superior neighbours, the Tumbuka. The degree of acceptance is naturally greater at the frontier than further from it.<sup>29</sup>

The group which has had the largest effect upon the Senga in terms of encroachment upon Tumbuka territory is the Senga. Some describe Senga as a combination of Tumbuka and Bemba. The word list analysis in section 3.4 will explore this.

The Ethnologue lists the three languages that are shown on the northeastern side of the Senga (Lambya, Nyika, Wandya) in Figure 9 above as a single language called Nyiha. Tambo is listed by the Ethnologue as a dialect of Nyamwanga.

The following is a simplification of the approximate geographic positions of the different languages in relation to Senga taken from the Tribal and Linguistic Map of Zambia and the

Ethnologue map. The Senga people have a different understanding of what languages surround their territory. This will be explained in Section 3.5.1. Representing any language boundaries with a definite line results in obviously imperfect representations but the diagram helps to show that the most influential languages upon the largest segment of the Senga population is Tumbuka, Bemba, and Bisa since they form the largest borders.



**Figure 10:** Depiction of approximate positions of bordering languages

One of the purposes of this study is to examine the linguistic similarities of Senga to other languages. The following is some information on each of the languages that closely affect the Senga language. Much of this information is from the internationally recognized index of the world's languages, the Ethnologue. These languages are listed beginning with those that are most influential. More information on the lexical similarities is included in section 3.4.

### **Tumbuka**

Tumbuka [tum] is spoken in Zambia's Muchinga province and a 2006 census reported that there were 480,000 in Zambia. In Malawi there are 2,200,000 speakers. It has total population of over 2,566,000 speakers in both countries.

Tumbuka is an EGIDS<sup>30</sup> Status 5 that carries the designation of a "Developing Language". This means that the language is used for face-to-face communication by all generations and has effective educational support in parts of the community. It is not yet classified as a Status 4 "Educational Language" meaning that the language is being transmitted and standardization is promoted through the Department of Education in Zambia. There are seven official languages of Zambia which are currently taught in the school system. They are Bemba, Chewa, Lozi, Kaonde, Lunda, Tonga, and Luvale. The Zambian government has recently put a renewed emphasis upon children doing most of their first four years of primary schooling in the vernacular languages.

Some alternate names that the Ethnologue lists with Tumbuka are Chitumbuka, Tambuka, Tew, Timbuka, Tombucas, Tumboka.

Senga is listed in the Ethnologue as a dialect of Tumbuka as are the following: Chikamanga (Henga, Kamanga), Chipoka, Chitumbuka, Fililwa (Filirwa), Fungwe, Hewe (Hewa), Kandawire, Nenya, Ngoni (Magodi), Nthali, Wenya, Yombe.

Tumbuka is classified as a Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid, Southern, Narrow Bantu, Central, N, Tumbuka (N.21) language.

### **Bisa**

Bisa [leb] according to many accounts the Senga people originated from the Bisa tribes that traveled east into the Tumbuka territories. The Senga language began when Bisa men crossed into Tumbuka territory and married Tumbuka women. This history is explained in section 1.3.

The Ethnologue includes Bisa as part of a “Lala-Bisa” conglomerate. Bisa is located in Zambia’s Northern, Central, and Eastern provinces. The eastern part of this area along the Luangwa River is inhabited more by Bisa speakers and the southwestern part is more or less considered the area of the Lala. The 2010 census reports that there are 197,744 ethnic Bisa and 112,016 people use it as their primary language of communication.<sup>31</sup> The total Lala-Bisa 2010 census lists 589,627 people who listed it as their ethnicity in Zambia. There are also speakers of Bisa in the Democratic Republic of the Congo.

Bisa has an EGIDS Status 5 meaning that the language is used for face-to-face communication by all generations and has effective educational support in parts of the community.

Alternate names for Bisa or Lala-Bisa are Ambo, Biisa, Ichibisa, Wisa, Wiza, Ichilala, Luano, Swaka. Lala-Bisa is classified as Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid, Southern, Narrow Bantu, Central, M, Bisa-Lamba (M.51).

### **Bemba**

Bemba [bem] is arguably the most widely used of Zambia’s indigenous languages. Besides being predominant in the Northern, Copperbelt and Luapula provinces the language is widespread across Zambia’s capital city and other major towns. It is also spoken in the Democratic Republic of the Congo. There are an estimated 3,300,000 speakers in Zambia (Johnstone and Mandryk 2001) but its influence is decreasing as Chewa becomes more prominent.

The Ethnologue lists 741,000 Bemba, 32,000 Luunda [sic], 5,190 Shila, 26,400 Tabwa, 16,800 Cishinga, 28,200 Kabende, 6,710 Mukulu, 42,600 Ng’umbo, 14,000 Twa-Unga (1969 census).

The total population of Bemba speakers in all countries is 3,600,000. It is an EGIDS Status 2 (Provincial) Language. Some alternate names are Chibemba, Chiwemba, Cibemba, Ichibemba, Wemba. Some of the major dialects are the Chishinga, Kabende, Lembue, Lomotua (Lomotwa), Lunda (Luapula), Mukulu, Ngoma, Ng’umbo, Nwesi, Town Bemba, Twa of Bangweulu, Unga. Town Bemba has a Bemba base with heavy code mixing with English and neighboring Bantu languages.

Bemba is classified as a Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid, Southern, Narrow Bantu, Central, M, Bemba (M.42).

### **Chewa**

Chewa [nya] is spoken in Zambia's Eastern and Central provinces and has become the lingua franca of the capital city, Lusaka, where it is often referred to as Nyanja.<sup>32</sup> A 2010 census reported that there are over two million Zambians that listed Chewa or Nyanja as their primary language of communication.<sup>33</sup> Its use is growing and has become common in major cities where the Senga people may relocate.

Dialects listed for Chewa in the Ethnologue include: Chingoni (Ngoni), Manganja (Waganga), Nyasa, and Peta (Chipeta, Cipeta, Malawi, Marave, Maravi). Chewa's classification is as a Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid, Southern, Narrow Bantu, Central, N, Nyanja (N.31) language.

### **Nyika**

Nyika [nkɪ] was included in the lexical comparisons done in this survey because a Nyika word list was obtained and the language is spoken geographically close to Senga although the two languages do not share a common border. Nyika is spoken in the Northern Province, Isoka District, Mulekatembo village area. There are 5,000 Nyika speakers in Zambia according to a 2007 survey. It has an EGIDS status of 6a meaning that the language is classified as vigorous. Alternate Names for Nyika include Chinyika and Kinyika. It is classified as a Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid, Southern, Narrow Bantu, Central, M, Nyika-Safwa (M.23) language.

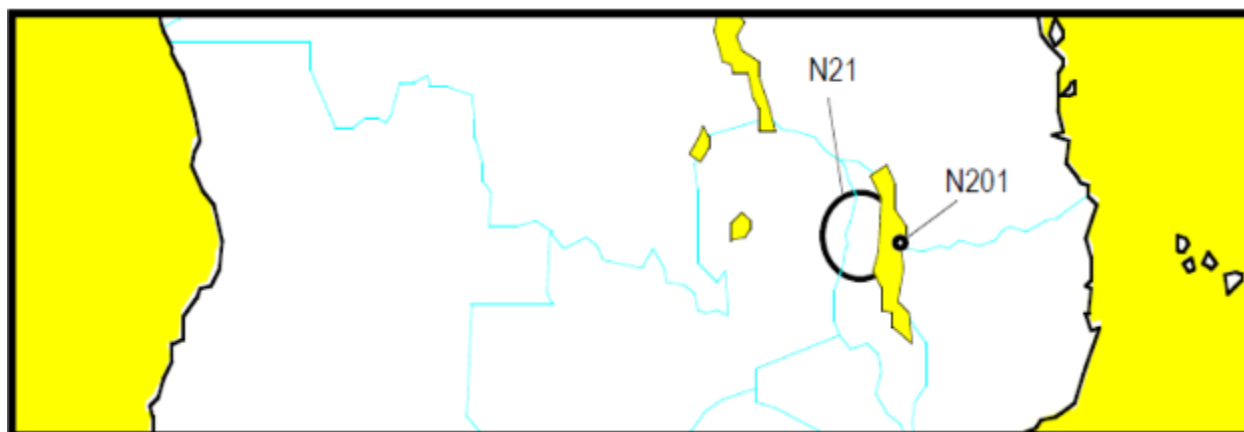
### **Lambya**

Lambya [lai] is spoken in Zambia's Northern Province, Isoka district. The Ethnologue lists only 2,000 speakers in Zambia (1958) and the Zambian Central Statistics office has not listed it as a language spoken in Zambia. However it is included here because the northern most Senga chiefdom that we visited, Chibale chiefdom, listed Lambya as the language spoken on their northeastern border. The Ethnologue says that Lambya is an EGIDS 6a language meaning that the language is classified as vigorous. It is classified as a Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid, Southern, Narrow Bantu, Central, M, Nyika-Safwa (M.201) language.

### **Kunda**

The Kunda of Zambia's Mambwe District is also compared with Senga in this report since both groups claim a common origin with the Bisa. The 2010 census found that there were 83,467 Zambians that claimed Kunda as their ethnic origin but only 40,029 claimed it as their primary means of communication.

The New Updated Guthrie List compiled by Maho (2009) includes Senga as part of the N20 Tumbuka Group.



N201 .....	Mwera of Mbamba Bay mjh
N21 .....	Tumbuka cluster tum, Chitumbuka
N21a * .....	– Tumbuka proper
N21b * .....	– Poka
N21c * .....	– Kamanga, Henga
N21d * .....	– Senga
N21e * .....	– Yombe
N21f * .....	– Fungwe
N21g * .....	– Wenya

(\* = not in map)

**Figure 11:** N20 : Tumbuka Group

Some information on the historical links of these languages is in section 1.3.

Having looked at other languages related to Senga we now want to examine Senga itself and explore whether it should be listed separately as a language on lists such as the Ethnologue. It is already recognized within Zambia as one of the country's 73 languages and is placed on the language map popularly published within the country. Senga is also listed as a separate language and ethnic group in the 2012 Central Statistics Office reports for Zambia.

## 1.8. Religion

Even before the advent of Christianity the Senga people have been monotheistic. They have been greatly influenced by the Tumbuka in their religious and cultural practices and follow the religion of the *kavuba* shrine. Worship at these shrines gives the Senga a sense of security and a means for help and protection. Likewise they have an assurance of life after death and a sense of individual fulfillment and meaning in life.<sup>34</sup>

Although the Senga believe in one supreme god, called *chiuta*, this god cannot be reached directly by them and can be described of as being distant. Rather than praying to *chiuta* the Senga will interact and deal with the spirits (*mizimu*) of deceased relatives. These spirits can have interactions with *chiuta* and therefore act as mediums for the people.

A *kavuba* is a small shrine or temple that is commonly seen in Senga villages or along roads. It is a miniature thatched structure resembling a traditional meeting place having a roof and

supporting poles but no walls, doors or windows. It usually measures no more than a meter high. At first sight one may think that the *kavuba* is something built by children similar to a doll house that western children play with. The wood used to build the shrine must come from the *musolo* tree. The Senga believe that the ancestral spirits live under the roots of the *musolo* tree. Thus the shrine is a residence for the deceased spirits.

Inside the *kavuba* carved sticks or stones are placed in a particular order. These stones commemorate the headmen of each clan or village. Each family may have one or more shrines for deceased relatives but there is normally at least one for each deceased chief.

At the *kavuba* people may pray and seek to appease the spirits in times of famine, drought, floods, plagues or other natural disasters. It is believed that when such calamities come it is because the spirits of their ancestors are angry. Offerings can be made of food (whether cooked or uncooked) including meat, beer, or newly harvested crops. If the offerings were disturbed by vermin overnight, for example, or missing then the Senga believe that they were actually consumed by the ancestors. It was a good sign that the ancestors were appeased and that the calamity would cease or their prayers would be answered.

Chondoka and Bota (2007) explain that the Tumbuka do not pray to natural forces such as winds, rain or to natural objects such as trees, hills, or rocks. Their concerns, as are those of the Senga, are for the unseen spirit world of the ancestors that inhabit these objects but not the physical objects themselves.<sup>35</sup> The Senga are concerned for what can be called the ‘living dead’ which are the spirits of the deceased relatives. These spirits are assumed to be active and watching every step or action of the relatives that live in the village.

Despite these widespread and entrenched animistic beliefs many Senga people today would call themselves Christian. Our survey collected the names of 24 different denominations or groups that respondents said were found were in the five Senga chiefdoms we visited. These are the following:

- African National Church
- Anglican
- Apostolic Church in Zambia
- Apostolic Faith Mission
- Assemblies of God
- Baptist
- Bible Gospel in Africa - BIGOCA
- Bread of life
- Catholic
- Church of Central Africa  
Presbyterian
- Church of God
- Covenant (Chipangano)
- Deeper life
- Divine Truth Ministry
- Four Square Church
- Hilltop Church
- New Apostolic
- Pentecost
- Pentecostal Assemblies of God
- Pentecostal Holiness
- Reformed Church in Zambia
- Seventh Day Adventist
- United Church of Zambia
- Zion

Besides the more commonly considered mainline Christian denominations there are also the following groups with congregations among the Senga:

- African National Church
- Covenant (Chipangano)

The Jehovah’s Witness Watchtower Society is also present in Senga areas.



## 1.9. Livelihood and Customs

### Livelihood

Most Senga people are farmers. Crops grown for food are the following:

- beans
- Finger millet
- groundnuts
- kafir corn
- maize
- millet
- rice
- sorghum
- sunflowers
- sweet potatoes
- vegetables

Most of these crops are produced for home consumption or local trade but the area is also known for its rice production which is exported to urban areas. Maize is also produced and sold since the Zambian government buys maize from farmers for government food reserves. Cotton and tobacco are also grown as cash crops on a small scale. Large trucks patrol the Senga areas during the latter part of the dry season to buy bags of cotton. Tobacco is normally for local trade.

Those who do not subsist through farming may have government jobs. They may be employed as teachers or health workers for example. Some Senga people work for the Zambia Wildlife Authority or the tourist industry which caters to those visiting the North Luangwa National Park. A few Senga have shops and unlike many areas of Africa most of the shops, even comparatively large ones, are owned and operated by Sengas within their home areas. The Senga we interviewed said that they do not keep livestock such as cattle, goats or pigs such as the Tumbuka do. Neither do they use oxen for plowing. This is likely due to the infestation of the tsetse fly which harbors the sleeping sickness virus that attacks both humans and domestic animals. (??? How is it that humans are there but not large domestic animals if both are affected??). The Senga can fish along the Luangwa River or its tributaries. A small amount of money can be earned through cutting timber, making brooms or making charcoal.

### Rites of Passage

The process of passing from adolescence into adulthood is an important rite of passage for the Senga girls, however there is no special ceremony or training for the boys. They are left to discover things among their peers. The Senga do not circumcise while other groups like the Tonga and Lozi in Zambia do.

For girls the passage from adolescence into womanhood is called *uzamba*. When a girl has her first menstruation she will inform her aunt or grandmother. The girl is then hidden for seven days, often at her aunt's house. During this time she is taught by a group of women about her menstrual cycle, how to bath and wear protective clothing. She is also taught how to satisfy a man sexually but is warned not to have sex with any man until marriage. She is also taught how to care for a baby. On the last day she is taught how to dance, how to interact with elders in the village and to respond to men who may be attracted to her.

## Matriarchal system

The Senga people are organized along a matriarchal system, which is different from the Tumbuka who are patrilineal. In a matrilineal system descendants trace their ancestry through the clan of their mother's side. In such a system it is believed that a true blood relation is one born from a woman. A man's inheritance is reserved for the nephews of his sisters as they are considered his true blood relations. He cannot carry on his original blood line and it cannot therefore be passed onto his children through his wife. She is not part of the original family tree and in any case children born to her could have been fathered by someone else.

However his sisters, even if they marry husbands who are not part of the original family, or even if they have children through an adulterous relationship will always bear offspring that carry on the family blood line. Children are reckoned as 'belonging to the mother' or 'the mother is the owner of the children.' For the Senga, the women are the true owners of the children.

Under the matriarchal system the father's children do not inherit the father's possessions or any position in society that he may have had. These will go to the uncles and nephews from the mother's side. Under both the matriarchal and patriarchal systems the wife (or wives) receive/s nothing upon the death of her spouse, however under the patriarchal system the father's children do receive his inheritance and the wife often benefits more in this system because she may still be the guardian of the children and would have access to whatever assets remain. More recently the widow has been permitted to stay in her late husband's home until she also passes on or she may leave if she marries someone else. In 1996 the Succession Law in Zambia was enacted which stated that the inheritance of the father would go to his spouse(s) as well as to the surviving children. Although enacted nearly twenty years ago very few of the ethnic groups in Zambia are following this law.

When a man becomes of marriageable age, he will inform his uncle who will begin to look for a suitable wife. The uncle as well will likely pay the dowry on behalf of his nephew. The dowry can include several things such as a small amount of money (such as K500<sup>36</sup> or K1000), a hoe, beer and a chicken. Other groups such as the Namwanga set the price of marriage much higher and may require cattle to be given. Besides a dowry to the family of his future wife the husband will also pay for each of the children they will have as they are born.

After the marriage process is completed, the husband will remain with his wife and her family for at least two rainy seasons. During this time period he is to prove to his in-laws that he is capable of taking care of their daughter. If the parents are not convinced that the man is responsible enough to be with their daughter as wife, they simply pay him back his dowry and order him to leave their village. However, when the new husband performs well by doing all the works required he can then request of his in-laws to take his wife to his own village and settle there.

Under the Senga system, a woman does not abandon her maiden name and only use the name of her husband. Instead she will maintain her maiden name and differentiate her husband's name from hers with the prefix *nya* before the name. For example she may say *Katete Nya Banda*. She can also be referred to as *a muka Katete*, the 'wife of Mr. Katete.' The husband's name is not changed, however he can be referred to as *a muka Nya Zimba*, 'the husband of Nya Zimba.'

When a Senga man dies the widow is forced to start crawling along the ground with her elbows. This is proof of her grieving and is part of the cleansing process which shows that she is not at fault in the man's death.

### **Selection of a Chief**

When a Senga chief dies candidates for his replacement are chosen from among his nephews. The selection is usually a long and drawn out process involving much discussion. It is overseen by elders within the family who know the lineage and the history of the chiefdom well. The most suitable nephews are chosen taking into account a number of issues including the best characteristics such as exhibiting responsibility, generosity, and who has cultivated enough food for his family. Once that nephew is chosen then the senior village chief counselor, the *induna* holds a secret meeting. The chosen nephew is invited but is not informed as the reason for the meeting. At the meeting his head is anointed with millet or sorghum flour. This is called *kumuthila unga*, meaning anointing him with flour. After this person is chosen, the people begin to brew beer for the installation. Guests are invited including the paramount chief from Kambombo.

To obtain the approval of the deceased relatives beer is poured into a bowl and left in the kavuba shrine overnight. If it is determined that the spirits of the dead approve the candidate then those that are living will accept him as well. Traditional dances are performed and to seal the selection a special drum known as *kwenje* is played to signal to the people that the new chief has been installed. The Zambian government also accepts the chief by adding his name to an official list of chiefs which specifies the area he is to rule over. This is a process called *gazetting*.

### **Traditional Ceremonies**

When asked what distinguished the Senga from other groups such as the Tumbuka several answers were given but the most common response is that the Senga have their own important cultural ceremony called *kwenje*. *Kwenje* means "big drum". The ceremony takes place during the first week of October. It is always held at the senior chief's location in Kambombo. During the ceremony there are different dances performed which are in commemoration of the ancestors.

Besides its use at the traditional ceremony the *kwenje* drum is beaten only for four reasons; a funeral, to alert the people of a dangerous animal, if someone has gone missing in bush, and for the installation of a new chief.

The *isopo* ceremony is held at the end of September at the chief's palace. In preparation for this ceremony traditional beer is brewed. This beer is then poured out as a libation at shrines. Some of the harvested crops from the previous years are also placed in the shrines. Then the Senga pray to the ancestors for rain and often for more children.

One traditional dance Senga dance is called *chidiwiti*. It is used to express happiness and is performed by both men and women simultaneously. Two lines are made, one for men and boys and another for the women and girls. As a drum is played and songs begin the men and women pair up with a member of the opposite sex and usually of the same age group. They hold each other and dance two by two. Another dance called *visango* is performed only by girls or women but is also used to express joy and happiness.

## **2. SURVEY PURPOSE AND APPROACH**

### **2.1. Purpose of the Survey**

The purpose of this survey was to obtain information concerning the Senga people and their language in order to assess the need for a vernacular language development program. Such a language development program could include a translation of the Scriptures in Senga as well as other language development activities including literacy programs, mother-tongue authorship and translation of materials which the Senga people would find useful to their advancement.

The following questions outline the purpose of the survey:

1. Language Viability, Vitality, and Shift
  - 1.1. Is the Senga language alive and being widely used among all segments of society?
  - 1.2. Is the Senga language vital or necessary for all domains in the daily life of the Senga communities?
  - 1.3. Does a shift away from Senga, to the use of another language, appear likely in the future?
2. Dialectology
  - 2.1 What dialects of Senga are identified by the community?
  - 2.1 Are the various speech varieties mutually intelligible? Can speakers of all the dialects use the same literature and educational materials?
3. Relationship to other languages
  - 3.1 What are the lexical similarities between Senga and neighboring languages such as Tumbuka, Bemba, and Bisa?
  - 3.2 What are the lexical similarities between Senga and other languages such as Tumbuka, Bemba, and Bisa with which Senga is said to be related.
4. Church and community response to a language development project
  - 4.1 Would the Senga people use vernacular literature if it were available?
  - 4.2 Is the Senga community likely to support and respond well to a language project?

### **2.2. Survey Approach**

The surveyors worked in cooperation with government and traditional leadership in order to obtain permission to do language survey in each region. In order to familiarize them with our work, we arranged meetings with traditional leaders and church leaders of the area. In each case the survey questions were translated orally from English into Senga at the time of the interview for the participants. Responses were normally given back in Senga, Tumbuka, Chewa or English and responses were written in English.

### **2.3. Selection of Survey Locations**

We visited a total thirteen wards of Chama district. Most of the data was collected along the main road, RD 105 that connects of the five Senga chiefdoms which are in the heart of the Senga areas. Those five Senga chiefdoms are Kambombo, Chibale, Tembwe, Chikwa and Chifunda. Group questionnaires were administered, and word lists were collected all five of the chiefdoms. Individual questionnaires and village leader questionnaires were administered in all five chiefdoms as well.

Villages to gather data in were selected largely upon their ease of access to the main road. There were many other Senga villages that are located away from the main road that the survey team was not able to visit. Of those along the road, villages were selected according to their social conditions such as their centrality within the language community and their homogeneity. In other words, villages were chosen based upon what were the most centrally located Senga villages, or what were the best locations to find Senga speakers instead of randomly selecting a set of locations. Although this method does not present an equal and complete representation of the entire community, it is most effective method for the purpose of this survey.

There is a margin of error in any survey because of mistakes, misinterpretations in the responses obtained, and inherent faults in the tools used. For example, words from the word list could easily be misunderstood and or have a semantic domain that is not identical across languages. One example is ‘belly’ which could include meanings ranging from ‘belly’, ‘abdomen’, ‘stomach’, or ‘pregnancy’. Use of Zambian surveyors who had some knowledge of the language and culture helped to minimize many misunderstandings although time did not always permit that respondents clearly understood the nuances of meanings that they were being asked. Thus, like any survey the results from this testing are only an indicator of what the actual situation may be.

#### **2.4. Selection of Participants**

The categories for the selection of participants used were ‘young’ (those who are fifteen to thirty-five years old) and ‘old’ (those who are thirty-six years old and older). Respondents were classified as either ‘educated’ (having completed Standard Seven school level and above) or ‘uneducated’ (Standard Six school level and below). There was no other categorization such as by occupation since this was not significant to the survey.<sup>37</sup>

The questions in the survey often distinguished between ‘children’ and ‘young people.’ ‘Children’ are those under the age of 13 approximately, and ‘young people’ are those who are between 13 and roughly 22 years of age.

For the group, village leader, and individual questionnaires all of the participants were Senga. The average age of the participants in the individual questionnaires was 40 years old. The youngest participant was sixteen and the oldest was seventy-nine years old.

#### **2.5. Individual Questionnaire**

Forty-eight individual questionnaires were administered in thirty-one different locations. They were designed to collect information on the issues of language vitality and viability, language

attitudes, and desire for vernacular materials. Mother-tongue usage in the home and neighborhood domains was investigated as the primary indicator of vitality.

## 2.6. Group Questionnaire

Ten group questionnaires were administered in five different chiefdoms. Each group consisted of anywhere from 6 to 30 people. Several groups had an equal number of men and women. When men were present they tended to give most of the responses. Most of the participants in the group questionnaires tend to be older rather than younger as the older members of the community are customarily called upon to represent and share information about the village or people.

The group questionnaire included questions about differences between dialects, language vitality and viability, attitudes toward the mother tongue, and attitudes towards the development of vernacular literature. Also included in the group questionnaire was a dialect mapping exercise as described by Hasselbring (2010). Dialect mapping helped to clarify the relationships between varieties of Senga and the bordering languages and obtain an insider's perspective on intelligibility between the speech varieties.

Group interviews were given at each of the following locations in these five chiefdoms:

Kambombo Chiefdom:	Lyetuba village Nthowaimo village
Chibale Chiefdom:	Malama Chibale School
Tembwe Chiefdom:	Mbubeni Village Tembwe Village Chitheba Village
Chikwa Chiefdom:	Chiponda Village
Chifunda Chiefdom:	Muzumbwa Village Mazakabinga Village

## 2.7. Village Leader Questionnaire

Sixteen village leader questionnaires were conducted. These included interviews with fifteen village headmen and one pastor. These questionnaires gather information on the demographics of the villages including the villages' composition of different ethnic groups as well as development, religious, educational and language development issues.

## 2.8. Word Lists

Analysis of wordlists, or lexicostatistics, is used to determine the relatedness of languages.

A language may split into two (or more) dialects, [and] later [develop into] two [distinct] languages. As they move through time, they share progressively less vocabulary. The more vocabulary they share, the

more recent the split; the less they share, the more distant the split. Lexicostatistics is based on counting these shared words and is thus a measure of lexical similarity and retention.<sup>38</sup>

For this study we collected word lists of 202 words from each of the five chiefdoms. The words lists were double checked for accuracy. Then they were entered into the WORDSURV program for lexicostatistical analysis and phonostatistical comparisons. The three varieties of Senga were compared to each other. Comparing these lists from different dialects within a language helps to know their relatedness. This is especially important in determining whether more than one translation project is needed in a language group or if the speakers of each dialect may use a common translation.

The same word list was used for phonological and lexical comparisons to the related languages Tumbuka, Bisa, Bemba, Chewa and Kunda. Tumbuka, Bisa, Bemba, and Chewa share borders with Senga, by far the largest border and largest influence being Tumbuka. Kunda was included because of historical ties to Senga since they both claim lineage from Bisa. Chewa was included not because of its linguistic relatedness but merely as a matter of interest and its common border.

According to the Ethnologue (2013),

The percentage of lexical similarity between two linguistic varieties is determined by comparing a set of standardized wordlists and counting those forms that show similarity in both form and meaning. Percentages higher than 85% usually indicate a speech variant that is likely a dialect of the language with which it is being compared. Unlike intelligibility, lexical similarity is bidirectional or reciprocal.

The analysis of word lists in this survey will be examined in relation to this 85% lexical similarity. The number is a debatable limit, but it provides a point of demarcation between what is considered a distinct language and what is considered to be a dialect or variation of a language.

### 3. RESULTS AND DATA ANALYSIS

The individual questionnaire collected 58 questions or pieces of information from each informant. Not every person answered every one of the 58 questions. In several instances, such as in a 'yes or no question,' the follow-up question was only answered by a sub-set of the respondents because the follow-up question may or may not have applied. The responses from these ten open-ended questions were analyzed separately. Responses from the remaining 48 questions were tabulated into a spreadsheet for comparison and totaled in various ways. Many of the endnotes are included to help the researchers validate and pinpoint the source of a particular piece of data.

From the 48 questions that were tabulated 28 questions were selected for special consideration and divided into three categories: language viability, language vitality and language shift. Often it is impossible to divide data that supports one of these three categories from the other two because they are all interrelated. Simple definitions to keep in mind are the following:

**Language viability** – How alive a language is, that is, how much it is used in daily life.

**Language vitality** – How important a language is in the community.

**Language shift** – When a community stops using one language to begin using another.

### 3.1. Language Viability

Language viability is how well a language is thriving or how ‘alive’ it is. The opposite of a viable language is one that is being used less and less, is dying, or going extinct. Survey questions related to this focus upon the language which is being studied as opposed to questions on language shift which focus upon other languages that the primary language is in contact with.

Some summary statements regarding Senga language viability are:

- 96% of adults speak only Senga to their children at home.
- 96% of the children respond to adults using Senga at home.
- 96% said that children use Senga when playing together with other children.
- 100% said that Senga alone is used when the Senga people gather together.

Details on the above summary statements are as follows:

The primary indicator that a language is no longer serving a community is when children no longer use the language and parents speak it only to older people. At that point the language is in danger of dying and will likely be replaced by another language within a generation. When asked what language adults use with children at home 96% of adults responded that only Senga is used.<sup>39</sup> Two respondents said that they speak Senga and another language, Chewa or English, at home with their children. The following chart indicates these findings.

<b>Language adults speak to children at home?</b>	
Only Senga	Senga and Chewa or Senga and English
96%	4%

**Table 6.** Languages adults use when speaking to children at home

When asked what language the children respond to at home results were identical to the above question.<sup>40</sup>

<b>Language children speak at home?</b>	
Only Senga	Senga and Chewa or Senga and English
96%	4%

**Table 7.** Language children respond to adults in at home

When asked what language children use when playing with other children, results were identical to the above as well, however instead of English, Tumbuka was an optional language children also used.<sup>41</sup>



Language children speak when playing?	
Only Senga	Senga and Chewa or Senga and Tumbuka
96%	4%

**Table 8.** Language children use when playing

When asked what language those interviewed use with friends of the same age, 98% used only Senga and the remaining 2% responded that they use Senga and English.<sup>42</sup>

Language adults use when speaking with friends?	
Senga	Senga & English
98%	2%

**Table 9.** Language adults use when speaking with friends

When asked what language is used when the Senga people gather in the evening and talk the respondents said only Senga.<sup>43</sup>

Language used when Senga people gather	
Senga	
100%	

**Table 10.** Language used when Senga people gather

### 3.2. Language Vitality

Language vitality considers how important or necessary the language is to the daily life of the people. If other languages work just as well or are being used in certain contexts, then the first language is said to have lost some of its vitality. For example, if the Senga people do not use their language for some particular aspect of life, such as praying, then we can say that Senga has lost some of its vitality. According to SIL, language vitality is “demonstrated by the extent that the language is used as a means of communication in various social contexts for specific purposes”.<sup>44</sup>

Besides the points above on language viability that also apply to language vitality, some additional summary points are as follows:

- 98% of the respondents said that Senga was sufficient to express all their thoughts and 100% said that an argument, such as a dispute in court, could be totally resolved by using Senga.<sup>45, 46</sup>
- 88% said that in a religious domain, such as praying, they would use Senga alone, while 12% of the respondents would use another language either with or without Senga when praying.<sup>47, 48</sup>
- 98% said they use Senga to discuss politics with other Senga.<sup>49</sup>

Details on the above summary statements are as follows:

Regarding language use in different domains, what language is used to resolve an argument in court, for example, all the respondents said they would use their mother tongue Senga. However the top second choice of languages, if they had to use another language, was English. Twenty-five percent of the respondents said if they had to use another language it would be English. Bemba and Chewa tied the second most popular choice. Twenty-one percent of the respondents said that if they had to use another language it would be Bemba or Chewa. Only 12.5% of respondents said they would use Tumbuka as a second language in court.<sup>50</sup> The following table includes all the languages cited when this question was asked:

<b>Language used besides Senga to resolve an argument in court</b>			
English	Bemba	Chewa	Tumbuka
25%	21%	21%	12.5%

**Table 11.** Second languages used in court

When asked what language is used for religious functions such as praying for a sick person 88% said Senga alone is used while another 4% said that both Senga and another language such as Tumbuka, Bemba or English or are used. Six percent said that Tumbuka alone is used.<sup>51</sup> Some reasons given as to why other languages are used are because the Bible is printed in these languages.<sup>52</sup>

<b>Language used for religious purposes</b>			
Senga alone	Senga and some other language	Tumbuka	Bemba
88%	4%	6%	2%
92%		8%	

**Table 12.** Language used for religious purposes

Nine factors used to judge low language vitality (Bergman 2001) include the following:

1. Generational shift. Children no longer speak the language.
2. Lack of homogeneity. When a stronger surrounding language group, or groups, intermingles and lives among the group such that there is mixture of languages being used especially by the children.
3. Small proportion of speakers within the ethnic group. The language is likely to have some people who use it and others who do not.
4. Small population for the region.
5. High proficiency in a second language.
6. Positive attitude toward a second language.
7. No use in religious domain.
8. Use of vernacular not strategic for reaching the people at the deepest level.
9. Education in a language of wider communication is widespread.

Regarding homogeneity, it was explained in section 1.5 that 84 percent of the villages in which data was gathered were found to be 100% Senga and those that are not purely Senga have a very small (less than 2%) of the population which are not Senga.

After studying the above results, the following chart is an attempt to express the overall impressions of the surveyors for where Senga may be in regards to these nine indicators of language vitality.

	<b>Factor</b>	<b>Vitality</b>	<b>Lack of Vitality</b>
1	Generational shift	Parents speak to children in Senga	
2	Lack of homogeneity	Low degree of mixture in villages	
3	Small proportion of speakers within the ethnic group <sup>53</sup>	High proportion	
4	Small population for the region		Small population of speakers (79,546) relative to other Bantu groups
5	High proficiency in a second language.		Yes, most often in Tumbuka
6	Positive attitude toward a second language.	Not opposed to other languages but proud of their own	
7	Use in religious domain.		No written scriptures in Senga
8	Use of vernacular not strategic for reaching the people at the deepest level.	Yes, churches are often weak	
9	Education in a language of wider communication is widespread.		Yes, in Chewa
	<b>Total</b>	<b>5</b>	<b>4</b>

**Table 13.** Nine indicators of Language Vitality for Senga

From this attempt we see that Senga has just one more factor indicating its vitality as opposed to its lack of vitality. The feeling is that the Senga language is likely to be around for a long time but will face continual and slow loss of status and vitality in the coming generations.

### 3.3. Language Shift

Language Shift is the process whereby a language community gradually stops using one language in favor of using another language. This obviously occurs when the language community has a large amount of influence or contact with a second language community. Language shift research focuses upon the speakers' attitudes toward their own language as well as their attitude towards the second language that they may be shifting to use. It includes, for example, studying in what domains speakers use each language.<sup>54</sup>

Some summary statements related to language shift among the Senga found in this survey are:

- 19% of the Senga interviewed said they did not know any other language.<sup>55</sup>
- Tumbuka and Bemba are the predominant second languages for Senga speakers.<sup>56</sup>
- Only 7% of adults married someone of another language group.<sup>57</sup>
- 100% of the Senga people said that their grandchildren would continue to speak Senga.<sup>58</sup>

- Only 13% of adults believed that young people are leaving Senga to use other languages.<sup>59</sup>
- Rather than Tumbuka being the most likely language to which the Senga speakers are switching to, Nyanja was chosen by the majority (60%) of respondents who said that children were leaving Senga to speak another language.
- Every group responded that they are proud of the Senga language and want to hold on to it.

Details on the above summary statements are as follows:

Of the nine out of 48 respondents (19%) who said that they do not know any other language besides Senga, we looked further to see if they were only the very old people. Four of the nine were in the 'young' category, that is, below 35 years of age. Their ages were 16, 18, 19 and 21 years old. The average age of all nine respondents who did not know Senga was 38 years old. This and other factors indicated that a significant percentage of the population is monolingual.

From the individual questionnaires it was found that 93% of the Senga are married to another Senga person. Only seven percent of the Senga people have a spouse from another language group, either Namwanga, Ngoni or Nyika.<sup>60</sup>

When participants in the group interviews were asked how often intermarriage with other language groups occur, 70% said it occurred rarely. Sixty percent concluded that it was good to marry outside of your language group. Forty percent decided that it was bad to do so. Intermarriage may not necessarily be a clear indicator of language loss because whether or not it influences language shift depends of course upon whether a Senga man or a Senga woman is marrying an outsider. It is usually the mother's language that is taught to the children first, but it also depends upon where the intermarried couple reside. However compared to four surveys among other people groups we have done in Zambia, it can be shown that a high level of intermarriage means that there is usually a greater degree of language shift occurring in the society. In other words, the more a relatively small language group's attitude is positive to intermarriage, the more likely their language is going to be influenced towards language loss simply because they are a minority in comparison to larger language groups such as Bemba, Tonga, Lozi or others that are more influential across Zambia.

The Senga language like other minority languages in Zambia could face decline due to several factors. A major factor is the government's endorsement of only seven official languages for use in Zambia's primary and secondary school system. Chewa is the language taught in schools in the Zambia's Muchinga Province where the Senga reside. The Zambian government in 2014 decided that instruction in primary schools, from grades 1 to 4 should be predominantly in one of the vernacular languages. The amount of English used at these grades should gradually increase so that by grade 5 children, having learned in the vernacular the concepts of reading and other cognitive skills, can then become better learners in a second language like English. After Grade 4 English is the primary medium for teaching, but the vernacular, in this case Chewa, remains a separate and compulsory subject in all grades of primary schools. Secondary schooling is dominated by the use of English although Chewa can be taken as an elective course. If other languages beyond the present seven now permitted, were used in schools it would help other languages, such as Senga, to be less threatened.

But in comparing the linguistic situation of Senga with other groups in Zambia, such as the Soli [sby] of Zambia's Lusaka Province, the Senga language is more stable. The Soli people have a higher exposure and influence from the Chewa language due to the Soli areas being bisected by a road that is Zambia's major trade route with Malawi. When the Soli were surveyed 92% of them believed that their language community was shifting to another language while only 13% of the Senga believe that their children are leaving their language.<sup>61, 62</sup>

<b>Are young people leaving Senga for other languages only?</b>	
Yes	No
13%	87%

**Table 14.** Young people leaving Senga for other languages

Of the 13% of the respondents who said that young people are leaving Senga to speak another language, 60% said they are leaving Senga to speak Nyanja, 20% included Bemba as an option and Tumbuka and English were chosen 10% of the time.<sup>63</sup>

<b>Languages children are switching to use besides Senga</b>			
Nyanja	Bemba	Tumbuka	English
60%	20%	10%	10%

**Table 15.** Languages children are switching to use

However in the group questionnaires when the question was asked, "What language will the children of your children speak?" 100% said that their grandchildren would continue to speak Senga.<sup>64</sup>

Senga is the language most often used by adults in a variety of settings. When asked what other languages adults know, we found that Tumbuka and Bemba were the second most commonly used neighboring languages. Twenty-seven out of the 48 respondents included Tumbuka as a second language that they know, and 25 included Bemba.<sup>65</sup> Because the sampling size was so small the difference between Tumbuka and Bemba here is inconsequential. The following results of Table 16 were collected. Percentages total more than one hundred percent because respondents could include more than one language as an answer.

<b>Second neighboring language adults know</b>				
Tumbuka	Bemba	Nyanja	Namwanga	Nyika
56%	52%	23%	10%	1%

**Table 16.** Second neighboring language adults know

When asked if there are Senga people who do not know how to speak Senga well, 55% the respondents said that they are familiar with such people.<sup>66</sup> Most often respondents will say that such people live in larger towns where the language is not spoken. A number of respondents said that there are some Senga people scattered in villages as well who do not know Senga well. The reason cited for this was that these people have grown up outside the Senga areas and have now moved back.

Speaking ones vernacular language is an important part of a Zambian's heritage. To explore the people's attitudes towards their language and cultural ties we asked if there were people who are ethnically Senga yet do not speak Senga and instead speak other languages. Seven of the nine, or 78%, of the group interviews said that there were. Most often they explained that this was due to people living in towns or in villages far from Senga land.<sup>67</sup> When asked if a person was still a Senga if they could not speak the language, an equal number of respondents said that a person was no longer considered to be Senga compared to those who said that such a person was still Senga.<sup>68</sup> This is in contrast to some other groups we have surveyed such as the Batwa and the Kunda. They tend to be more inclusive with who they consider to be a member of the language group.

<b>If someone no longer speaks the mother tongue are they still a member of the language group?</b>							
Senga		Toka-Leya		Batwa		Kunda	
Yes	No	Yes	No	Yes	No	Yes	No
55%	45%	50%	50%	88%	13%	84%	16%

**Table 17.** Comparison of Language Attitudes

From this we can postulate that groups like the Batwa in which the language has a much higher degree of endangerment are more likely to include those who do not know the language. They are open to others being in their group, even though they may have lost the language identity battle and they want to claim the membership of those who have already shifted to speaking a different language. While groups in which the language is less threatened are more likely to deny membership to those who no longer can speak the language. They can afford to do this, while groups that are more endangered cannot afford to exclude others. In other words the greater level of exclusiveness in language attitudes would indicate a lower level of endangerment level of the language. From this we conclude that Senga is less endangered than Batwa or Kunda.

One hundred percent of those who took part in the group interviews said that the children were speaking the language correctly and the same percentage said that the young people (those between 13 to 20 years old) were speaking the language correctly.<sup>69</sup> As already mentioned as well, 100% of the Senga people believed that their grandchildren would be speaking Senga.<sup>70</sup>

Fifteen headmen and one pastor gave responses through Village Leader Questionnaires. One question asked about developmental needs. The most requested need for development was roads, bridges and improved transportation. This was requested by 69% of the time. The second highest developmental need was for education. Sixty-three percent of respondents of the village leader interviews included education as a major need for development. Some who included this as a major need specifically mentioned the need for books that are written in Senga. Not having anything printed in Senga is a significant factor. Equal with education and books in Senga was the request for water for human consumption. Health care such as clinics was expressed 50% of the time.<sup>71</sup>

Every group felt without a doubt that it was important to keep speaking Senga and they expressed great pride in their language.<sup>72</sup> They do not think that the Senga people will stop using Senga to speak only some other language. None of the groups we interviewed said they have ever seen anything published in Senga, except for one which said that a storybook was written in

Senga a long time ago. All were very enthusiastic about the possibility of having something written.<sup>73</sup>

### 3.4. Word Lists Results

#### 3.4.1. Lexicostatistical comparison within Senga Speech Varieties

Eighty percent of the Senga group interviews agreed that there are dialectical variations in their language. Ninety percent said that they could tell where a person is from by how they spoke the language.<sup>74</sup> The most common differences expressed are differences in vocabulary and pronunciation.

Most people in the group interviews said that the purest form of the language is in the chiefdom in which they themselves are located. An exception to this is Chibale Chiefdom which said that the purer form of Senga is spoken in Kambombo Chiefdom. Tembwe Chiefdom also said Kambombo Chiefdom had the purer form of Senga, but they maintained as well that Tembwe had what they considered to be pure Senga.

A word list of 202 words was collected from each of the five chiefdoms. The percent similarity for each of the five varieties is as follows. Highest values are marked with a darker highlight and lowest values with a lighter shade of color.

Senga Variety	Kambombo	Chibale	Tembwe	Chikwa	Chifunda
Kambombo	100	77	87	79	77
Chibale	77	100	82	78	76
Tembwe	87	82	100	84	83
Chikwa	79	78	84	100	85
Chifunda	77	76	83	85	100

**Table 18.** Percent of lexical similarity among Senga varieties

The following table shows the five varieties reorganized from the highest to lowest percent of lexical similarity for the ten pairs of possible comparisons.

<b>Highest to Lowest Similarities of Senga Varieties</b>		
Varieties	Percent similarity	Percent difference
Kambombo - Tembwe	87	13
Chikwa-Chifunda	85	15
Chikwa -Tembwe	84	16
Tembwe-Chifunda	83	17
Tembwe-Chibale	82	18
Kambombo - Chikwa	79	21
Chikwa-Chibale	78	22
Kambombo - Chibale	77	23
Kambombo - Chifunda	77	23
Chifunda-Chibale	76	24
<b>Average</b>	<b>81</b>	<b>19</b>

**Table 19.** Highest to lowest lexical similarities of Senga varieties

The above table shows that the overall average lexical similarity between all the five dialects is 81%. As a comparison with another language in Zambia, Chitwa, its three varieties have 93% similarity, Toka-Leya has 88% similarity with the three varieties that were surveyed, and Soli and Kunda each have 86% similarity with their varieties.<sup>75,76,77</sup>

The above results show that in the simplest analysis, the Kambombo and Tembwe dialects are the most closely related dialects, sharing 87% lexical similarity. The percent lexical similarity between the Chifunda and Chibale is the lowest among any two varieties at 76%. As mentioned above speakers of most chiefdoms said that their form of the language was the purest form of Senga, however the Kambombo variety was also mentioned by two chiefdoms as also having the best spoken form of Senga.<sup>78</sup>

To carry the analysis further we can investigate how geographical distance affects the lexical similarity between these five dialects. One would expect that if there were no other factors involved (such as political allegiances, non-uniform trade routes, or irregular geographical barriers), that the farther apart two dialects are the greater their lexical difference would be.

The following table shows the varieties reorganized according to their distance from each other. The Chifunda Chibale chiefdoms, for example are at the extreme north and south limits of the Senga areas, separated by 227 kilometers of difficult roads. They, understandably, have the highest percent lexical difference. However the Kambombo and Tembwe dialects have the lowest percent difference (13%) but are not the closest geographically.



<b>Senga varieties sorted by geographical distance</b>			
Varieties	Percent similarity	Percent difference	Distance in Km
Chifunda-Chibale	76	24	227
Chikwa-Chibale	78	22	191
Tembwe-Chibale	82	18	149
Kambombo - Chifunda	77	23	138
Kambombo - Chikwa	79	21	102
Kambombo - Chibale	77	23	89
Tembwe-Chifunda	83	17	78
Kambombo - Tembwe	87	13	60
Chikwa -Tembwe	84	16	42
Chikwa- Chifunda	85	15	36
<b>Average</b>	<b>81</b>	<b>19</b>	<b>111</b>

**Table 20.** Lexical similarities of Senga varieties sorted by geographical distance between them

To carry the analysis further we can investigate how the factor of geographical distance affects the lexical similarity between these five dialects. One would expect that if there were no other factors involved (such as special political allegiances, traditional trade routes, or irregular geographical barriers between the dialects), that the farther apart two dialects are the greater their lexical difference would be. By dividing the lexical similarity by geographical distance we can get a more even comparison between the three dialects.

In our study we divided the percent of lexical similarity between the dialects by the distance between those two dialects are from each other. The lower the result, the more similar those two dialects are to each other regardless of their geographical distance.

The following table shows the results organized according to the correlation of lexical similarity divided by geographical distance.

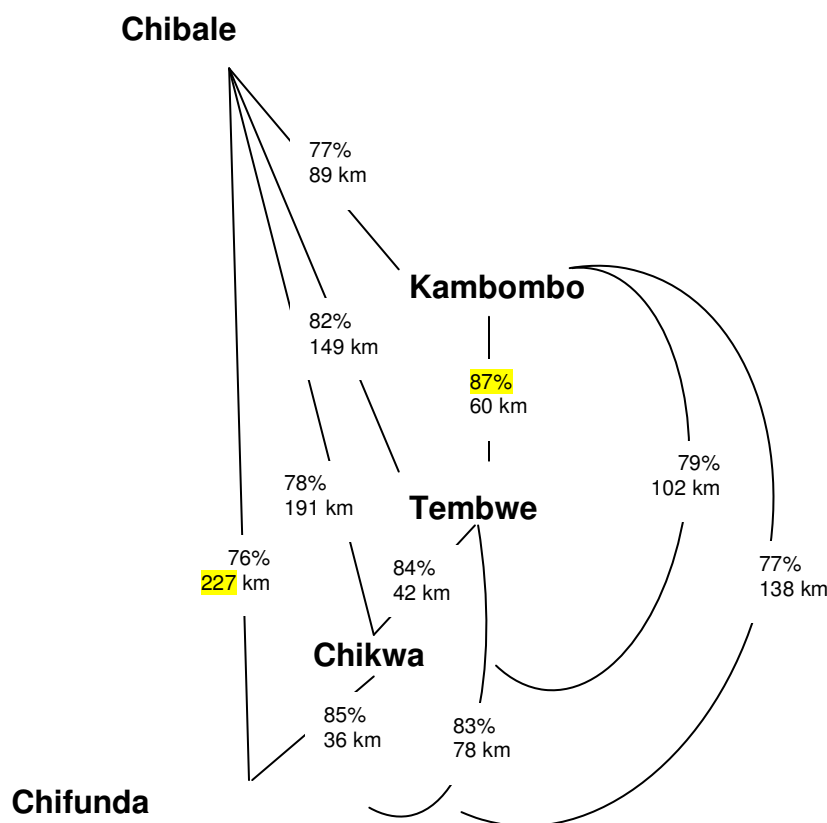
<b>Senga varieties sorted by lexical similarity divided by geographical distance</b>				
Varieties	Percent similarity	Percent difference	Distance in Km	Correlation of lexical similarity divided by distance
Chifunda-Chibale	76	24	227	0.335
Chikwa-Chibale	78	22	191	0.408
Tembwe-Chibale	82	18	149	0.550
Kambombo - Chifunda	77	23	138	0.558
Kambombo - Chikwa	79	21	102	0.775
Kambombo - Chibale	77	23	89	0.865

Tembwe-Chifunda	83	17	78	1.064
Kambombo - Tembwe	87	13	60	1.450
Chikwa -Tembwe	84	16	42	2.000
Chikwa-Chifunda	85	15	36	2.361
<b>Average</b>	<b>81</b>	<b>19</b>	<b>111</b>	<b>1.037</b>

**Table 21.** Lexical similarities of Senga varieties sorted by the correlation of lexical difference divided by geographical distance

**Error! Reference source not found.** shows the five varieties reorganized from the lowest correlation of lexical distance divided by distance to the highest value. The results are surprising and show that the Chifunda dialect at the extreme south of the Senga area has the highest lexical similarity with the Chibale dialect, which is at the far north of the Senga territory, when the similarities are factored for distance. Likewise Chibale factored in the top three (lowest correlation values) sharing high lexical similarity with Chikwa and Tembwe when distance is factored in. The Chikwa and Chifunda varieties which have the lowest geographical distance between them (36 km) are the least similar when their shared lexical similarity percentage is divided by distance.

The fact that the correlation values are not closer to one another shows that the differences between the dialects are not exactly linear in relation to their geographical distances from each other. The following diagram is a rough layout showing the five chiefdoms that were surveyed with distances and percentage of lexical similarity between each. The highest percent of lexical similarity and the highest distance between chiefdoms are highlighted in yellow.



**Figure 12:** Depiction of Senga speech varieties locations and lexical similarity

### 3.4.2. Phonostatistical comparison within Senga Speech Varieties

Besides the lexicostatistical analysis a phonostatistical comparison was made as well using the WORDSURV program. The phonostatistical analysis calculates the average degrees of difference per correspondence of phonetic segments. The WORDSURV program exports this analysis as the degrees of difference values divided by the correspondences value. Therefore the lower the ratio, the closer the similarity is between the two varieties.<sup>79</sup> However for our purposes and to more easily show the correspondences to the lexicostatistical data we converted the ratios to percentages. The following table shows the phonostatistical similarities between the varieties of Senga,

Variety	Kambombo	Chibale	Tembwe	Chikwa	Chifunda
Kambombo	100	97	94	92	94
Chibale	97	100	94	90	91
Tembwe	94	94	100	93	92
Chikwa	92	90	93	100	95
Chifunda	94	91	92	95	100

**Table 22.** Phonostatistical Analysis results for Senga varieties

Surprisingly the Chibale and Kambombo varieties have the highest phonostatistical ratio. This means that among the five varieties compared that these two varieties shared the highest number of phonemes. This was true despite the fact that their lexical similarities were only 77%. Put into very simple terms, while these two varieties may only share about 77% vocabulary, the choice of vowels and consonants that are used to form words by each of these two dialects is as high as 97%. The average for the phonostatistical analysis for all the varieties was 93%.

The following table shows the percentage of lexical similarity between the varieties of Senga as well as the percentage of phonostatistical similarities.

<b>Senga lexical &amp; phonostatistical similarity</b>		
<b>Varieties</b>	<b>Lexical similarity</b>	<b>Phonostatistical similarity</b>
Kambombo - Tembwe	87	94
Chikwa - Chifunda	85	95
Chikwa - Tembwe	84	93
Tembwe - Chifunda	83	92
Tembwe - Chibale	82	94
Kambombo - Chikwa	79	92
Chikwa - Chibale	78	90
Kambombo - Chibale	77	97
Kambombo - Chifunda	77	94
Chifunda - Chibale	76	91

**Table 23.** Lexical and Phonostatistical similarities for Senga varieties

From the above table we can see that the phonostatistical similarity generally follows the lexical similarity with some exceptions such as the Kambombo – Chibale and the Kambombo – Chifunda comparisons. The reason for these anomalies is not known but they could be due to errors intrinsic to the small amount of data sampled or because of differences in recording and eliciting the words lists.

### **3.4.3. Most Linguistically Central Senga Variety**

The comparison within varieties is important when making decisions as to what variety of Senga will be most understood by the largest portion of the Senga population. For example if Chibale is chosen as the variety for written materials the population of Chifunda chiefdoms could understand perhaps only 76% of the vocabulary.

One more analysis is in the following table. The percent lexical similarities for the five varieties of Senga as shown in Table 18 are organized into separate columns and totaled as follows:

	Chibale	Chifunda	Chikwa	Kambombo	Tembwe
Chifunda-Chibale	76	76	--	--	--
Chikwa -Tembwe	--	--	84	--	84
Chikwa-Chibale	78	--	78	--	--
Chikwa-Chifunda	--	85	85	--	--
Kambombo - Chibale	77	--	--	77	--
Kambombo - Chifunda	--	77	--	77	--
Kambombo - Chikwa	--	--	79	79	--
Kambombo - Tembwe	--	--	--	87	87
Tembwe-Chibale	82	--	--	--	82
Tembwe-Chifunda	--	83	--	--	83
<b>Total</b>	<b>313</b>	<b>321</b>	<b>326</b>	<b>320</b>	<b>336</b>
<b>Average</b>	<b>78</b>	<b>80</b>	<b>82</b>	<b>80</b>	<b>84</b>

**Table 24.** Percent lexical similarity organized for each Senga variety

The totals above show that the Tembwe variant has a highest total lexical similarity compared to the other four variants, but another three variants, Kambombo, Chikwa and Chifunda are not far behind. These other variants all have a difference of no more than 13 total points, or 4 percentage points. The Chibale variant has the lowest total similarity and it would not be a good candidate as a variant which would be most understood by the greatest number of Senga speakers. In summary, Tembwe, Kambombo or Chikwa variants are the best alternatives for reaching the largest number of Senga people. However, as mentioned in section 3.4.1, some of the group interviews pointed to Kambombo as the location at which the best form of the language is spoken.<sup>80</sup> For reasons of status then, as well as the evidence of lexical similarity, the Kambombo variant, is the best choice as a medium to reach all Senga areas.

#### 3.4.4. Comparison of Senga to Other Languages

Senga will be compared to Bemba, Bisa and Tumbuka because of their historical connections as explained in section 1.3. Chewa and Nyika are included because they share a common border with Senga areas. Since Kunda of Mfuwe District reportedly shares a common heritage from Bisa it is also included. Two variants of Kunda, Kunda-Nsefu and Kunda-Malama were analyzed separately but to simplify the results are shown as combined into one average. Nsenga is included partly because of its close relationship with Kunda, but more so to establish that it is unrelated to Senga, despite the similarity in names. Chikunda is probably the least related language and it is included as a control to show how different other Bantu languages are to each other.

	Senga Variety					
	Kambombo	Chibale	Tembwe	Chikwa	Chifunda	Average
Bemba	46	43	47	44	48	45.6
Bisa	44	41	45	42	44	43.2
Tumbuka	72	70	73	69	72	71.2
Nyika	24	23	23	21	24	23
Chewa	41	40	41	39	40	40.2
Nsenga	47	45	48	44	47	46.2
Kunda	45	44	46	45	46.5	45.3
Chikunda	35	35	36	34	35	35

**Table 25.** Lexical similarity of Senga varieties compared to other languages

This shows that of the eight languages compared to Senga, Tumbuka shares the highest lexical similarity at 71.2%. Considering that Senga has been classified, by the Ethnologue, as a dialect of Tumbuka and that normally, dialects of a language have 85% or more lexical similarity, this lexical similarity of 71.2% is low.

It is also worth noting that Senga shares only 43.2% lexical similarity with Bisa and 45.6% with Bemba. We had been told that Senga is mixture of Tumbuka and Bemba. This is true. However if we took the percent lexical similarities of Tumbuka to Senga and Bemba to Senga the ratio of Tumbuka in Senga as compared to Bemba in Senga is 1.56 to 1. Simply stated, Senga shares about one and a half times as many Tumbuka words as it does Bemba words.

If we take the above table and reorder it according to the highest lexical similarity to Senga the following is obtained:

	Senga Variety					
	Kambombo	Chibale	Tembwe	Chikwa	Chifunda	Average
Tumbuka	72	70	73	69	72	71.2
Nsenga	47	45	48	44	47	46.2
Bemba	46	43	47	44	48	45.6
Kunda	45	44	46	45	46.5	45.3
Bisa	44	41	45	42	44	43.2
Chewa	41	40	41	39	40	40.2
Chikunda	35	35	36	34	35	35
Nyika	24	23	23	21	24	23

**Table 26.** Lexical similarity of Senga varieties compared to other languages sorted from highest to lowest

Surprisingly, Nsenga has a slightly higher lexical similarity than Bemba and Bisa. It has a slightly higher lexical similarity than Kunda as well, even though both Kunda and Senga, claim to have a common origin from the Bisa. Regardless of these numbers we do not think that Senga and Nsenga are related historically but the similarity in names is coincidental.

Nyika although it shares a common border has the lowest lexical similarity with Senga. It is surprising that Chewa has not exerted more influence upon Senga and that despite it having a common border with Senga.

When the group interviews were asked which language is most similar to Senga, eight out of nine groups (88%) said Tumbuka. One groups included Bisa as well and another group included Namwanga. According to the results shown in table Table 25 Bemba should have been mentioned. Since the Senga people do not have contact with the Kunda or Nsenga, it is understandable how these two groups were not mentioned. Tumbuka is by far the most similar to Senga in the minds of those interviewed as well as according to the analysis of the word lists.

### 3.4.5. Comparison of Languages other than Senga

The following is an average of all the Senga varieties combined into one average and all the other 8 languages compared to each other:

	Bemba	Bisa	Senga	Tumbuka	Nyika	Chewa	Nsenga	Kunda	Chikunda
Bemba	100	84	46	37	21	30	47	49	29
Bisa	84	100	43	35	20	30	44	48	28
Senga	46	43	100	71	23	40	46	45	35
Tumbuka	37	35	71	100	26	48	45	40	37
Nyika	21	20	23	26	100	22	22	23	21
Chewa	30	30	40	48	22	100	56	46	56
Nsenga	47	44	46	45	22	56	100	70	46
Kunda	49	48	45	40	23	46	70	100	40
Chikunda	29	28	35	37	21	56	46	40	100

**Table 27.** Lexical similarity of Senga and other languages

Nyika was included because it is spoken near Senga territory but the two languages do not share a common border. A word list was obtainable and we wanted to explore if there was any linguistic relationship. It was found that Nyika shared the lowest lexical similarity with Senga of the eight languages compared, only 23%. Nyika had the lowest lexical similarity with any of the eight languages, only 20% lexical similarity with Bisa. Chewa is included, not because it is considered to be closely related but because it shares a border and is one of Zambia's most influential languages. Chewa has 40% lexical similarity with Senga.

The following table sorts the lexical similarity of these nine languages from largest (most related) to lowest (least related). Comparisons with Senga are highlighted.

Nine language comparison ordered			
Ranking	Language Pair	% Lexical Similarity	Grouping
1.	Bemba-Bisa	84	High Lexical Similarity
2.	Senga-Tumbuka	71	
3.	Nsenga - Kunda	70	
4.	Nsenga - Chewa	56	Medium Lexical Similarity
5.	Chewa - Chikunda	56	

6.	Bemba - Kunda	49		
7.	Bisa - Kunda	48		
8.	Chewa - Tumbuka	48		
9.	Bemba - Nsenga	47		
10.	Senga - Nsenga	46		
11.	Chewa - Kunda	46		
12.	Nsenga - Chikunda	46		
13.	Senga - Bemba	46		
14.	Senga - Kunda	45		
15.	Nsenga - Tumbuka	45		
16.	Nsenga - Bisa	44		Low Lexical Similarity
17.	Senga - Bisa	43		
18.	Senga - Chewa	40		
19.	Tumbuka - Kunda	40		
20.	Kunda - Chikunda	40		
21.	Bemba - Tumbuka	37		
22.	Tumbuka - Chikunda	37		
23.	Tumbuka - Bisa	35		
24.	Senga - Chikunda	35		
25.	Bemba - Chewa	30		
26.	Bisa - Chewa	30	Very Low Lexical Similarity	
27.	Bemba - Chikunda	29		
28.	Bisa - Chikunda	28		
29.	Tumbuka - Nyika	26		
30.	Senga - Nyika	23		
31.	Kunda - Nyika	23		
32.	Chewa - Nyika	22		
33.	Nsenga - Nyika	22		
34.	Bemba - Nyika	21		
35.	Chikunda - Nyika	21		
36.	Bisa - Nyika	20		

**Table 28.** Sorted lexical similarity comparison of languages other than Senga

A few things can be said from looking at the above table. Bemba and Bisa are more closely related than Senga and Tumbuka are related to one another. Nsenga and Kunda have nearly the same percentage of lexical similarity as Senga and Tumbuka. The Kunda language is often considered as being closely related to Nsenga or a dialect of Nsenga however the Kunda people have recently started their own Bible translation project despite the fact that there is an Nsenga Bible translation project ongoing as well. The comparisons can be placed into four categories: high lexical similarity, that is having approximately 70% lexical similarity or more, medium (having between 70 and 45% lexical similarity), low (having 44% to 30% lexical similarity), and very low (having less than 30% lexical similarity). The classification of these languages into these four groupings are what would be expected by those are familiar with Zambian languages.

A few examples from the word list are included to show some differences in these languages.



	head	God	dog	eye	liver
<b>Bemba</b>	<i>umutwe</i>	<i>lesa</i>	<i>imbwa</i>	<i>ilinso</i>	<i>amabu</i>
<b>Bisa</b>	<i>umutwe</i>	<i>lesa</i>	<i>imbwa</i>	<i>ilinso</i>	<i>iliuu</i>
<b>Senga</b>	<i>mutu</i>	<i>chiuta</i>	<i>nyimbwa</i>	<i>jiso</i>	<i>cu</i>
<b>Tumbuka</b>	<i>mutu</i>	<i>chiuta</i>	<i>ncheŵe</i>	<i>jiso</i>	<i>chiwwindi</i>
<b>Nyika</b>	<i>kichwa</i>	<i>mungu</i>	<i>mbwa</i>	<i>jicho</i>	<i>ini</i>
<b>Chewa</b>	<i>mutu</i>	<i>mulungu</i>	<i>galu</i>	<i>diso</i>	<i>ciu</i>
<b>Nsenga</b>	<i>mutu</i>	<i>mulungu</i>	<i>imbwa</i>	<i>liso</i>	<i>ciu</i>
<b>Kunda</b>	<i>mutu</i>	<i>mulungu</i>	<i>imbwa</i>	<i>liso</i>	<i>ciu</i>
<b>Chikunda</b>	<i>m'solo</i>	<i>mulungu</i>	<i>mbwaya</i>	<i>diso</i>	<i>cilopa</i>

**Table 29.** Examples from word list

According to Grimes (1988),

The threshold levels high enough to guarantee good communication from the central dialect to its periphery is usually 85% or above. When the percentage of similarity in the two languages is 85% or above, it is then reasonable to speak of the two as a dialect cluster of a single language. From the linguistic point of view speech varieties that come together only at 70% or below are too distinct to qualify as the same language. In between, 70% to 85% is an area of marginal intelligibility where some communication is satisfactory and some is not. The threshold depends on the risk associated with not communicating well. The final criteria for making these decisions are normally not purely linguistic criteria.

Senga's lexical similarity with any other language is below the 85% that is often used to distinguish one language from another and close enough to the 70% threshold (71.2%) with its most closely related language, Tumbuka. Therefore, it should be considered as language separate and distinct from Tumbuka, Bemba or Bisa.

### 3.5. Dialect and Surrounding Language Mapping Exercise

The mapping exercise depends upon the speakers' knowledge and insight of their language. A group of knowledgeable speakers are gathered and asked to identify the different varieties of their language. The names of each dialect are written on a card and the speakers are asked to arrange them in how they are geographically located in relation to each other. The participants are also asked general questions about the degree to which the speakers of each variety can understand one another or whether or not they must change how they speak in order to effectively communicate. After mapping dialects of their language the group is then asked about other surrounding languages that they have contact with.

Two mapping exercises were conducted, one in the northern most chiefdom visited, Chibale Chiefdom and one in the southern most chiefdom visited, Chifunda Chiefdom. One purpose of the exercise is to gather data on the geographical locations of dialects and surrounding languages. Another purpose is to explore the comprehension and communication difficulties that exist between the speech varieties and of bordering languages.

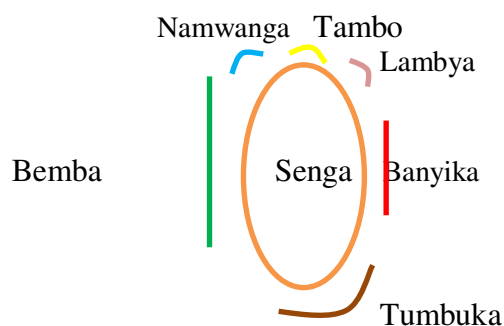
Besides asking what languages are spoken surrounding the Senga areas, participants were asked, "How much do Senga speakers understand of the other language?" and "When you meet someone of the other language do you, they, or both of you change the way you speak in order to communicate?"

### 3.5.1. Within Senga Varieties

Participants from both chiefdoms, Chibale and Chifunda, would not identify any distinct varieties or dialects of Senga, except to say that each chiefdom speaks Senga in its own slightly unique way. Therefore, there we could not collect any additional information on different Senga varieties through a dialect mapping exercise.

### 3.5.2. With other Languages

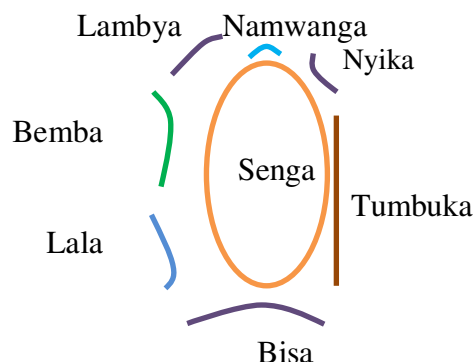
When asked what languages surround Senga on each side the Chibale chiefdom participants identified six languages. They are depicted in the following diagram. This diagram can be compared with a more complete depiction in Figure 10 on page 20.



**Figure 13:** Chibale Chiefdom depiction of bordering languages

It is notable that Chewa, which forms the largest southern border depicted in Figure 10 is absent from Figure 13: Chibale map. This is because the northern most groups of Senga are probably the least familiar with those languages which are on their southern borders. Note also that Bisa, which is on the south western side of Figure 10 is absent as well.

The southernmost chiefdom, Chifunda, listed seven surrounding languages depicted in Figure 14 as shown here. We can note that Chewa, which should according to the Tribal and Linguistic Map of Zambia and the Ethnologue map, form a southern boundary is missing as well from the Chifunda map.



**Figure 14:** Chifunda Chiefdom depiction of bordering languages

Table 30 below summarizes the exercises completed in the dialect mappings done in Chibale chiefdom.

NEIGHBORING LANGUAGE	COMPREHENSION BY SENGA SPEAKERS	COMMUNICATION	
		Other language	Senga
1. Bemba	Half	No change	Change: will speak half Senga/half Bemba
2. Tumbuka	A little	No change	No change
3. Banyika	A little	No change	No change
4. Tambo	A little	No change	No change
5. Lambya	A little	No change	No change
6. Namwanga	A little	No change	No change

**Table 30.** Surrounding Language Mapping Exercise results for Chibale Chiefdom

Table 31 below summarizes the exercises completed in the dialect mappings done in Chifunda chiefdom.

NEIGHBORING LANGUAGE	COMPREHENSION BY SENGA SPEAKERS	COMMUNICATION	
		Other language	Senga
1. Bemba	A little	No change	No change
2. Lala	A little	No change	No change
3. Bisa	A little	No change	No change
4. Tumbuka	A little	No change	Change
5. Nyika	A little	No change	No change
6. Namwanga	A little	No change	No change
7. Lambya	A little	No change	No change

**Table 31.** Surrounding Language Mapping Exercise results for Chibale Chiefdom

The only differences noted that are the Chibale speakers say that they understand only half of the Bemba spoken to them and in order to communicate they will change the way they speak, adding in more Bemba. For the Chifunda group the only change they make to communicate with another language is with Tumbuka. Considering that Senga originates from Bemba (via Bisa) and Tumbuka one would think that changes to communication would have been more often with less

related languages such as Lala, Nyika, Tambo, Lambya and Namwanga. Obviously more work needs to be done to determine what are the surrounding languages and what is the level of comprehension and communication difficulty with each.

## **4. CONCLUSIONS AND RECOMMENDATIONS**

From the data gathered several conclusions for each of the areas studied can be formulated.

### **4.1. Language Vitality and Viability**

For the majority of the Senga people their language is essential for them and is used in all domains of daily life. Ninety-six percent of adults speak only Senga to their children at home and an equal percentage of children respond back to their parents in Senga. When Senga people gather together, 100% of them said that the Senga language alone is used. The people are proud of their language but there are no materials written in Senga and in some domains, such as religion, languages like Bemba or Tumbuka which have a complete Bible, are more commonly used.

### **4.2. Language Shift**

Of the five other Zambian languages (Soli, Ila, Toka-Leya, Chitwa, and Kunda) that this researcher has surveyed Senga shows the highest level of stability and lowest degree of language shift. Only seven percent of Senga adults intermarry with people of other language groups. All of those involved in the group interviews said that their grandchildren would speak Senga. Only 13% percent of adults believed that children are leaving Senga to use other languages. All these numbers are low compared other minority languages in Zambia which experience greater pressures of language shift. However there are some signs of loss to other languages like Tumbuka, Bemba, and English in some aspects of life, such as in education and in daily life in large towns. It is surprising that only 17.4% of the population is 35 years or older. This is the portion of the population that has the responsibility of passing the language onto the younger generation.

A language development project is important at this time if Senga is to continue to be viable and not regress in relation to encroaching languages. A language development project would help the Senga language community to have a better prospect of preserving their language, be better prepared to adopt languages of wider communication (like English or Chewa), and bring more recognition to Senga as a separate and distinct language.

### **4.3. Dialectology**

Because the Senga chiefdoms are arranged more or less linearly along the Luangwa River a central variant of Senga that avoids the extreme north or southern boundaries would be the most accepted standard form of the language. Responses from those interviewed and evidence from the word list includes the Kambombo dialect as the central form of the language. While there are certain to be differences between the varieties, a major challenge for any language development

project would be the reconciling the differences between the different forms of the language and the acceptability of a standard form of Senga that can be used throughout the chiefdoms.

#### **4.4. Relationship to other Languages**

Senga has the highest lexical similarity with Tumbuka (71.2%) than with any other language to which it was compared. Senga was found to have a slightly lower lexical similarity with Bisa (43.2%), from which it is said to have originated, than with Bemba (45.6%). The results are congruent with what is said regarding Senga's history, that is, Bisa men who took Tumbuka wives and a new language, Senga, resulted.

#### **4.5. Church Response**

Responses to the surveys indicate that the Senga people would greatly welcome any literature or Scriptures written in Senga. The Senga area is one of the least evangelized areas of Zambia and a translation would be of great benefit to them. The few church leaders that we interviewed during our survey expressed an interest in having Senga scriptures and a showed a willingness to participate in a language project.

The use of the vernacular language in written or audio materials may not stem the influence of other languages like English but that is not the goal of a language development project. Rather development of the Senga language would help raise the literacy level, give greater recognition to the Senga language and help the Senga people adopt other languages of wider communication while positively affecting the survival of their own language.

The Senga community would likely respond well to a project but much needs to be done in this area to educate the people to help them understand their important role in supporting the project. We suggest that a program of church education and mobilization for the support of the project begin immediately with the guidance of an organization like Partners in Bible Translation. Support of the project needs to be sought not only from the church but from all who are interested in the Senga language.

It is important that the support of the project be centered among Senga people themselves for it to be sustained. Local support and involvement in the project are key factors in ensuring the wide acceptance and use of literacy materials. These factors are also important for changing the attitudes that would enable long term advances in literacy and education.

#### **4.6. Recommendations**

Based on the results showing that the Senga language is a vital part of daily life for a significant percentage of the population, the following is recommended:

- That the Senga people convene to discuss the present situation of the Senga language and the language's decline which will occur in today's changing world. To not take action at this time would be to allow Senga culture and the Senga language to further

degenerate. They should invite qualified linguists such as those available from Partners in Bible Translation to help guide their discussions and planning.

- Discussions should include the level of commitment that the people would need to put forward to support of a language development project.
- Discussions should include what are the goals of the project. These can include the creation of literacy primers in Senga, small booklets of interest to the Senga people such as folktales or their history, the translation of Scriptures such as portions of the Old Testament or the Gospel of Luke, for example. Depending upon the reception of these Scripture portions, as well as the continued support of the Senga people, efforts could later be made to translate the entire Bible or other materials in Senga.

Should there be enough local support for a language project, some factors related to the location of the project should be considered. The Senga community needs to also discuss these issues:

- The acceptance of the Kambombo variant as the standard form of the language across different chiefdoms.
- Networks need to be established to build a translation team. This will include contacts from within the Senga community as well as commitments from individuals outside the community who will fill roles of consultants for example.
- The location which is best suitable for a professional work environment, including access to reliable electricity and communication networks (phone and Internet services).
- What location would allow the highest degree of community ownership and access to all the Senga areas?

It is important to note that the location where most of the translation work occurs does not limit the participation of other areas. There are needs for local revision committees, literacy centers and other related project activities to occur throughout the Senga areas.

- Senga should be listed in the Ethnologue as a separate language and not as a dialect of Tumbuka.

#### **4.7. Further Research**

- Further work needs to be done to determine the grammatical similarities of Senga with Tumbuka or Bemba. Such a study of the grammar can greatly help a translation project. For example, linguists today are able to do scripture adaptations that would assist Senga translators to produce a draft copy of translated scriptures fairly quickly.
- Levels of bilingualism and literacy among all age groups should be studied. How could the translated Scriptures most effectively be presented, through printed, audio or other mediums?

## 5. NOTES

### 5.1. Distribution of Results

The results of the survey will be distributed to the following Senga leaders:

Chief Chibale  
Chief Chifunda  
Chief Chikwa  
Chief Kambombo  
Chief Tembwe  
Chief Mulilo  
Chief Lundu

A copy will be given to the Office of the President, Provincial Administration, Chama, and to the Chama District Commissioner. Copies will be submitted to the University of Zambia Linguistics and Literature Department, the Bible Society of Zambia and also to the headmen in those centers that helped us during the survey. Copies may also be available to interested agencies upon requests.

Some information will be made available to the public by making our survey results available in public libraries or the Internet.

-----

## 5.2. Bibliography

- Bergman, T. G. 2001. When not to translate. SIL International.
- Brelsford, W.V. 1965. The Tribes of Zambia. Government Printer, Lusaka.
- Chondoka, Yizenge A., and Bota, Frackson Fwila. 2007. A History of the Tumbuka from 1400 to 1900. The Tumbuka under the M'nyanjagha, Chewa, Balowoka, Senga and Ngoni chiefs. Academic Press.
- Decker, Kendall D. 1993. Measuring language vitality. Paper presented to the Second Summer Institute of Linguistics Language Assessment Conference, held at Horsley's Green, June 2-9, 1993.
- Grimes, Barbara F. 1988. Ethnologue: Languages of the world, (Eleventh Edition). Dallas: SIL.
- Grimes, Joseph E. 1986. Area norms of language size. In Benjamin F. Elson, ed. 1986. Language in global perspective. Dallas: SIL International.
- Guthrie, Malcolm. 1970. Comparative Bantu: An introduction to the comparative linguistics and prehistory of the Bantu languages. London: Gregg International Publishers Ltd.
- Hasselbring, Sue. 2010. Participatory approaches for engaging communities: A mindset for language development work. Dallas, TX: SIL International.
- Johnstone and Mandryk. 2001. Operation World. Paternoster Lifestyle.
- Langworthy, H.W. 1972. Zambia Before 1890: Aspects of Pre-Colonial History. Dai Nippon Printing Company (HG) limited. Hong Kong.
- Lewis, M. Paul, Gary F. Simons. 2009. Assessing Endangerment: Expanding Fishman's GIDS. *Revue Roumaine de Linguistique*. September 2009. [http://www.lingv.ro/resources/scm\\_images/RRL-02-2010-Lewis.pdf](http://www.lingv.ro/resources/scm_images/RRL-02-2010-Lewis.pdf)
- Lewis, M. Paul, Gary Simons and Charles Fennig (eds.). 2013. Ethnologue: Languages of the World, 17th edition. Dallas, TX: SIL International.
- Livingstone, David. 1857. Missionary Travels and Researches in Southern Africa. London.
- Livingstone, D. and Livingstone C. 1865. Narrative of an Expedition to the Zambezi and its Tributaries. London.
- Maho, Jouni Filip. 2009. New Updated Guthrie List Online. <http://goto.glocalnet.net/mahopapers/nuglonline.pdf>
- Sawka, Kenneth S., Richard Mukang'ombe. Daka Josephat. 2013. Twa of Zambia's Kafue Flats. Linguistic Survey Report. August 2013.
- Sawka, Kenneth S., Daison, Banda. Mbewe, Christopher. Daka, Josephat. 2013. The Kunda of Zambia. Linguistic Survey Report. September 2013.
- Sawka, Kenneth S., Mbewe, Christopher. Daka, Josephat. 2013. The Toka-Leya of Zambia. Linguistic Survey Report. November 2013.
- Sawka, Kenneth S., Kachinda & Kabwe. 2006. Soli Survey Report.
- WordSurv. 2006. Version 6.0.2. Student Manual. Taylor University and SIL International.
- Zambia. 2000 Census of Population and Housing. 2000 Central Statistics Office, Lusaka Zambia.
- Zambia. 2010 Census of Population and Housing. 2010 Central Statistics Office, Lusaka Zambia.



### 5.3. APPENDIX A

#### 158 SENG A VILLAGES BY CHIEFDOM

##### Kambombo

1. Biti
2. Bunsala
3. Chaumbwa
4. Chibisi
5. Chiboyela
6. Chigobi
7. Chikhalanga
8. Chimbundu
9. Chinkhalanga
10. Chiroyela
11. Chipapate
12. Chipeta
13. Chipundu
14. Chiwozya
15. Chiyabe
16. Chiyabi
17. Ituba
18. Kabilo
19. Kadongo
20. Kafuka
21. Kambombo
22. Kambwili
23. Kapilingizya
24. Kasama
25. Kasolwe
26. Kaululumo
27. Khumka
28. Lindila
29. Luwaniko
30. Malama
31. Masakamika

32. Mphundu
33. Muzyeba
34. Mwininkhonde
35. Naka
36. Ng'anjo
37. Ngwalala
38. Nthonkho
39. Nthowaimo
40. Simuzandu
41. Yibili

##### Chibale

1. Chibelekete
2. Chipingo
3. Chitapankhwa
4. Chontho
5. Fukatila
6. Fyatwe
7. Kabanda
8. Kabangila
9. Kayoyo
10. Kazembe
11. Khafoma
12. Kolera
13. Maimbi
14. Malama
15. Masankhule
16. Matola
17. Mengo
18. Muzalira.
19. Mwami
20. Sarala

##### Tembwe

1. Chaula A
2. Chaula B
3. Chazankhu
4. Chibenkhu
5. Chikhazika
6. Chilubaluba
7. Chinyondo
8. Chitheba
9. Chitimbe
10. Chola
11. Chuma
12. Dewe
13. Jenkhu
14. Kalangalika
15. Kamulibwe
16. Kasesewo
17. Kavimba
18. Kazilondo
19. Kwinya
20. Lambwe
21. Lundu
22. Lwambo
23. Mbang'andwe
24. Mbubeni
25. Mbwauke
26. Msasu
27. Mucheleka
28. Muhobe

##### Chikwa

1. Akuzanga
2. Boobo
3. Chibaula
4. Chimphamba
5. Chinkhalanga
6. Chipalukwe
7. Chiponda
8. Chowa
9. Fokolani
10. Fwanamimi
11. Kabilo-tondo
12. Kakuni,
13. Kanabeza
14. Kanthangwa
15. Kapingila

##### Chifunda

1. Chalowazyola
2. Chuchi
3. Game camp
4. Gunda
5. Jentu
6. Kalimasenga

16. Kauzeba
17. Kwangifya
18. Lungululu
19. Makondola
20. Malepa
21. Malinga
22. Matanda
23. Mateyo
24. Mlusika
25. Mongo
26. Mukuluwe
27. Mulamba
28. Mulozi
29. Musangwe
30. Musapheni
31. Mwanasamba
32. Mziba
33. Tembezani
34. Tereka
35. Tondo
36. Tundwe
37. Tungwa
38. Zeru
39. Zoole

7. Malunga
8. Mulinda
9. Mwazakabinga
10. Ng'oma
11. Selema
12. Tema
13. Yambani



	Mulondola	200	100	15	0	5	0	10	0	0	0	0	0
	Mulondola	90	100	0	0	0	0	0	0	0	0	0	0
	Mwami	30	100	0	0	0	0	0	0	0	0	0	0
	Ng'anjo	150	100	0	0	0	0	0	0	0	0	0	0
	Ngwala	40	100	0	0	0	0	0	0	0	0	0	0
<b>Chikwa</b>	Chibaula	40	100	0	0	0	0	0	0	0	0	0	0
	Chimphamba	514	86	0	2	0	0	0	12	0	0	0	0
	Chinkhalanga	40	100	0	0	0	0	0	0	0	0	0	0
	Chiponda	83	100	0	0	0	0	0	0	0	0	0	0
	Fokolani	515	98	0	1	0	0	0	1	0	0	0	0
	Kakuni	320	98	0	2	0	0	0	0	0	0	0	0
	Lungululu	30	100	0	0	0	0	0	0	0	0	0	0
	Makondola	350	100	0	0	0	0	0	0	0	0	0	0
	Mateyo	40	100	0	0	0	0	0	0	0	0	0	0
	Mlusika	30	100	0	0	0	0	0	0	0	0	0	0
	Mongo	30	100	0	0	0	0	0	0	0	0	0	0
	Mukuluwe	20	100	0	0	0	0	0	0	0	0	0	0
	Mulozi	10	100	0	0	0	0	0	0	0	0	0	0
	Musapheni	46	100	0	0	0	0	0	0	0	0	0	0
	Mwanasimba	10	100	0	0	0	0	0	0	0	0	0	0
	Mziba	35	100	0	0	0	0	0	0	0	0	0	0
	Tereka	10	100	0	0	0	0	0	0	0	0	0	0
	Tungwa	15	100	0	0	0	0	0	0	0	0	0	0
	Zeru	55	90	0	10	0	0	0	0	0	0	0	0
	Zoole	600	84	0	16	0	0	0	0	0	0	0	0
<b>Chifunda</b>	Chalowazyola	50	100	0	0	0	0	0	0	0	0	0	0
	Chuchi	100	100	0	0	0	0	0	0	0	0	0	0
	Game camp	120	50	10	0	10	10	0	0	0	10	10	0
	Gunda	44	100	0	0	0	0	0	0	0	0	0	0
	Jentu	52	100	0	0	0	0	0	0	0	0	0	0
	Kalimasenga	150	100	0	0	0	0	0	0	0	0	0	0
	Malunga	200	100	0	0	0	0	0	0	0	0	0	0
	Mulinda	8	100	0	0	0	0	0	0	0	0	0	0
	Mwazakabinga	150	100	0	0	0	0	0	0	0	0	0	0
	Ng'ma	32	100	0	0	0	0	0	0	0	0	0	0
	Selema	70	100	0	0	0	0	0	0	0	0	0	0
	Tema	49	100	0	0	0	0	0	0	0	0	0	0
Yambani	33	100	0	0	0	0	0	0	0	0	0	0	
<b>Average</b>		<b>230</b>	<b>96</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>		<b>17,249</b>	<b>7206</b>	<b>137</b>	<b>31</b>	<b>70</b>	<b>10</b>	<b>43</b>	<b>13</b>	<b>0</b>	<b>10</b>	<b>10</b>	<b>5</b>

## 5.5. Endnotes

- 
- <sup>1</sup> The Joshua Project reported 68,800 speakers of Senga however the Zambian census is considered to be more accurate and is likely to be more recent.
- <sup>2</sup> A language development project would include the promotion of an alphabet in the vernacular language, a basic orthography statement and the production of literacy materials such as primers for first and second language readers. The language community should select the topics and the media of materials that they find most helpful. Mother-tongue authorship would also be encouraged. Printed and audio materials produced in the vernacular language could include health books, folk tales, agricultural information or whatever may be helpful to the people as well as the translation of the Bible or Bible portions.
- <sup>3</sup> The online report for Nyika can be viewed at: <http://www-01.sil.org/silesr/abstract.asp?ref=2009-012>
- <sup>4</sup> Archaeology, Classics and Egyptology. University of Liverpool. 2015. <http://www.liv.ac.uk/sace/research/projects/luangwa>
- <sup>5</sup> Thirty-five Ngoni men crossed the Zambezi River on November 19, 1835. It is said they began crossing at about 14 hours. The exact date and time is known because as they were crossing an eclipse of the sun occurred.
- <sup>6</sup> Langworthy. 1972. p. 23.
- <sup>7</sup> Chondoka, Yizenge A., and Bota, Frackson Fwila. 2007. Pg. 176.
- <sup>8</sup> Mkunsha, Brown. Origins of the Kunda People. Unpublished manuscript. 2014. Page 4.
- <sup>9</sup> Chondoka, Yizenge A., and Bota, Frackson Fwila. 2007. Pg. 101.
- <sup>10</sup> Chondoka, Yizenge A., and Bota, Frackson Fwila. 2007. Pg. 181.
- <sup>11</sup> Ibid. Pg. 182. In rare circumstances when it is necessary or beyond the control of those involved a society can transfer power patrilineally in a matrilineal society. Although Chibeza did marry Chamanyavyonse's daughter and the transfer was matrilineal, Tumbuka's would maintain that it was done in a wrong way and at the wrong time. Transfers of chieftom normally only occur upon the death of chief and it would never had been transferred to a Senga as it had.
- <sup>12</sup> Academia.edu. 2015. [http://www.academia.edu/5077856/Why\\_did\\_slave\\_trading\\_intensify\\_in\\_nineteenth\\_century\\_east\\_Africa\\_and\\_wiht\\_what\\_consequences\\_for\\_the\\_regions\\_societies](http://www.academia.edu/5077856/Why_did_slave_trading_intensify_in_nineteenth_century_east_Africa_and_wiht_what_consequences_for_the_regions_societies)
- <sup>13</sup> J.W. Jack, Daybreak in Livingstonia, Edingurgh, 1901, p.18
- <sup>14</sup> David Livingstone to DR Candlish, 12 March 1862, NLS 7793; Livingstone, *Narrative*, pp. 125-26; E. A. Alpers, *the East African Slave Trade*, Nairobi, 1967. Pp. 19-20.
- <sup>15</sup> McCracken, J. 1977. *Politics and Christianity in Malawi 1875 - 1940. The Impact of the Livingstonia Mission in the Northern Province*. Cambridge: Cambridge University. Pg. 37-38
- <sup>16</sup> Overtoun to Laws, 19 August 1898, NLS 7901; *Aurora*, December 1898, p. 42; April 1899, p. 16; Leo Weinthal (ed.), *The Story of the Cape to Cairo Railway and River Route*, London, nd., pp. 11, 33-9.
- <sup>17</sup> Institution Education Diary, entry for 1903; Livingstonia Mission Report, 1904, pp. 5-9, 32; Diary of A. G. MacAlpine, entries for 17 July, 16 August 1904, 24-9 September 1905, MacAlpine Papers.
- <sup>18</sup> Livingstonia Mission Report, 1907, pp. 31-2.
- <sup>19</sup> Quoted in Fergus MacPherson, Kenneth Kaunda of Zambia, Lusaka, 1974, p. 32.
- <sup>20</sup> Wikipedia. 2015. [http://en.wikipedia.org/wiki/Chama\\_District](http://en.wikipedia.org/wiki/Chama_District)
- <sup>21</sup> Ibid. [http://en.wikipedia.org/wiki/Muchinga\\_Province](http://en.wikipedia.org/wiki/Muchinga_Province)
- <sup>22</sup> Zambia. MapStudio. <http://www.mapstudio.co.za>.
- <sup>23</sup> Later two other districts were added to Muchinga Province. In 2013, [Mafinga District](#) was created by splitting off [Isoka District](#).
- <sup>24</sup> Wikipedia. 2015. [http://en.wikipedia.org/wiki/Chama\\_District](http://en.wikipedia.org/wiki/Chama_District)

<sup>25</sup> Ibid. [http://en.wikipedia.org/wiki/Chama\\_District](http://en.wikipedia.org/wiki/Chama_District)

<sup>26</sup> Ibid. <http://www.citypopulation.de/php/zambia-admin.php>

<sup>27</sup> Nyanja is a trade language in Zambia and there are no tribal Nyanja chiefs or traditional ethnic systems whereby one could claim to be from a Nyanja ethnic origin. Nevertheless this is the data as collected by the Zambia Central Statistics Office.

<sup>28</sup> Index mundi.2015. Zambian Demographics Profile 2014.  
[http://www.indexmundi.com/zambia/demographics\\_profile.html](http://www.indexmundi.com/zambia/demographics_profile.html)

<sup>29</sup> Chondoka and Bota (2007) page 175.

<sup>30</sup> EGIDS is the Expanded Graded Intergenerational Disruption Scale which is an attempt to measure all of the world's languages in relation to their vitality and level of endangerment. A language can be evaluated in terms of the EGIDS by answering five key questions regarding the identity function, vehicularity, state of intergenerational language transmission, literacy acquisition status, and a societal profile of generational language use. (Lewis 2009).

<sup>31</sup> The same report reports that there are 391,883 ethnic Lala and 200,772 people use Lala as their primary language of communication.

<sup>32</sup> Dr. Ernst Wendland, Personal communication: Chewa and Nyanja are essentially the same language (or different dialects of the same)--known as Chichewa (the ethnic group name) in Malawi and as ciNyanja in Zambia, the "language of the lake" (Malawi/Nyasaland). During Central African Federation days, pre-1964, the term ciNyanja was used in both Malawi (Nyasaland) and Zambia (N. Rhodesia). The dialect of the language spoken in Zambia (E. Province and Lusaka) is of course different from that in Malawi (due to local language "interference" and mixing), and the orthographies are somewhat different perhaps to express national identities. The Nyanja language is spoken by a number of different ethnic groups.

<sup>33</sup> 2010 Census has the following breakdown:

	<b>Ethnicity</b>	<b>Predominant Language of Communication</b>
	<b>Chewa</b>	929,842
	<b>Nyanja</b>	50,761
	<b>Total</b>	980,603
		499,671
		1,643,686
		2,143,357

<sup>34</sup> Chondoka and Bota (2007) page 144.

<sup>35</sup> Ibid. page 146.

<sup>36</sup> 500 Kwacha is about 80 USD.

<sup>37</sup> For more details on sampling see Bergman, T. G. 1990, Wetherill, G. Barrie, 1995, and Hasselbring, Sue. 1996.

<sup>38</sup> Nurse, Derek pp.

<sup>39</sup> Individual questionnaire: question number 3.1a.

<sup>40</sup> Ibid. 3.1b

<sup>41</sup> Ibid. 3.7

<sup>42</sup> Ibid. 3.2a.

<sup>43</sup> Ibid. 3.4a.

<sup>44</sup> SIL Language Assessment. Language Vitality 2015. <http://www.sil.org/language-assessment/language-vitality>

<sup>45</sup> Individual questionnaire: question number 3.14a.

<sup>46</sup> Ibid. 3.15a.

<sup>47</sup> Ibid. 3.9.

<sup>48</sup> Ibid. 3.5a.

<sup>49</sup> Ibid. 3.6.

---

<sup>50</sup> Ibid. 3.15b.

<sup>51</sup> Ibid. 3.5a.

<sup>52</sup> Ibid. 3.5b.

<sup>53</sup> Bergman (2001) cites Grimes (1986) who suggested that when a group becomes sufficiently small, they are in danger of being absorbed by a larger population. There is a critical size, below which a language is less likely to maintain itself. This critical population size for Africa is 10,000 language speakers.

<sup>54</sup> Ravindranath. 2009. p.1

<sup>55</sup> Individual questionnaire: question number 1.4

<sup>56</sup> Ibid. 1.5a

<sup>57</sup> Ibid. 1.2d

<sup>58</sup> Ibid. 4.8.

<sup>59</sup> Individual questionnaire: question number 3.12a.

<sup>60</sup> Ibid. 1.2d. Fourteen out of 33 respondents that were married have a Senga spouse.

<sup>61</sup> Sawka. 2006. Individual questionnaire: question number 3.11b. 11 out of the 12 responses said Nyanja

<sup>62</sup> Individual questionnaire: question number 3.12a.

<sup>63</sup> Since more than one answer was given the percentages can total more than 100%. Individual questionnaire: question number 3.12b.

<sup>64</sup> Group questionnaire 4.8.

<sup>65</sup> Individual questionnaire: question number 1.5b

<sup>66</sup> Ibid. 3.16a

<sup>67</sup> Group questionnaire: question number 4.3, 4.4.

<sup>68</sup> Individual questionnaire: question number 3.16a, b, c, 3.17.

<sup>69</sup> Group questionnaire: question 4.1 & 4.2.

<sup>70</sup> Ibid. 4.8.

<sup>71</sup> Village leader questionnaire: question number 7.3.

<sup>72</sup> Group questionnaire: question number 4.9, 4.10a.

<sup>73</sup> Ibid. 6.1 to 6.2.

<sup>74</sup> Ibid. 2.6, 2.8.

<sup>75</sup> Sawka, August 2013.

<sup>76</sup> Sawka, November 2013

<sup>77</sup> Sawka, 2006.

<sup>78</sup> It is not always the case that what is considered to be the purest form of a language would have the highest lexical similarity with other varieties. In some languages, such as Kunda, in which there is an invasion of neighboring languages into the border varieties, what is considered the purest form of the language has the least similarity with other speech varieties. In the Kunda language the Nsefu variety is considered the purest form of the language but has the least similarity with all other varieties studied as it has shielded itself from the influence of other languages more than the other varieties did. (Sawka, November 2013. p. 34.)

<sup>79</sup> WORDSURV 6.0. 2000. pg. 32.

<sup>80</sup> Group questionnaire: question 2.10a