

**Working Paper on Social-Ecological Resilience Series
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of Gwembe Tonga in Southern Zambia**

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Vulnerability and Resilience of Social-Ecological Systems

RIHN Research Project E-04

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Abstract

Social capital including social network is an important component of human resilience, i.e. the social capacity to respond to change (Walker et al. 2006). But social capital changes over time and it is important to understand social networks as evolving rather than static. This requires some understanding of the history of present communities and how their networks relate to one another and to those living elsewhere.

In southern Zambia, 57,000 of Gwembe Tonga people were resettled involuntarily with the construction of Kariba Dam on the Zambezi River (Scudder, 2005). They refer to their previous residential area now covered by Lake Kariba as Matongo. To understand how social capital has been influenced by construction of Kariab Dam, this study looks (1) at the transitional history of several *cisi*, (2) and then analyzes the present range of marriage of their members.

Resettled people have continued to migrate as resettled area degraded. They have also continued to reconstruct or form new social networks to meet current contingencies. This is reflected in marriage alliance. Prior to resettlement, most marriages were within the neighborhood (*cisi*). Thereafter, resettled people began to intermarry with people in their new vicinities. Since then people continue to move to new areas and the range of potential marriage partners continue to change.

Key words: *cisi* (the neighborhood), Dam construction, Range of marriage, Resettlement, Establishment of village

要約

社会ネットワークをはじめとする社会関係資本は、人間のレジリアンスの重要な構成要素の1つであり、環境変動へ対応するための社会的基盤となる。しかし社会関係資本は時間経過とともに変容するため、社会ネットワークを静的なものとしてではなく、変化するものとの前提に立つことが理解のために重要である。そのためには、現在のコミュニティーの歴史を理解し、人々のネットワークが周囲といかに関与するか把握することが求められる。

ザンビア南部では、ザンベジ川沿いのカリバダム建設に伴い約6万のトンガ人が強制移住させられた。彼らの出身地は、現在カリバ湖に覆われる、マトンゴ地域である。本件研究の目的は、ダム建設による社会関係資本への影響を把握するため、(1)旧地縁集団(*cisi*)ごとの来歴、すなわち村の再定住プロセスを明らかにし、(2)現在の通婚圏を考察することである。

カリバダム建設は周辺地域の人々の生活に、直後のみならず、現在まで影響し続けている。特に、強制移住をさせられた人々は、生計環境の悪化によって、いまだに再移住を行う。彼らは、社会ネットワークを新たに構築し、再構築する。これは通婚圏に影響を及ぼす。ダム建設以前、人々は当時の地縁集団(*cisi*)内で配偶者を見つけ、結婚した。その後、移住を強制された人々は同一*cisi*の成員ではない、新たな隣人との婚姻を開始した。以降、人々は再移住を続け、通婚圏は更なる変化を続ける。

キーワード：旧地縁集団(*cisi*)、ダム建設、通婚圏、再定住、村設立

1. Introduction

Social capital which includes social networks is an important component of human resilience, the social capacity to respond to change (Walker et al. 2006). Family, community and organization influence the nature and extent of social network. Comprehending their history is important to understand social capital.

The Kariba Dam was built between 1956 and 1960 on the Zambezi River, southern Zambia. Gwembe networks changed after the construction of Kariba Dam in the residential area of Gwembe Tonga. The majority of residents (57,000 people) of Gwembe Valley were resettled involuntarily (Scudder 2005). They had to reform their lifestyles including livelihood systems in unfamiliar circumstance.

Colson (1960) reported that the Gwembe Tonga prior to resettlement was organized as neighborhood communities, *masi* (*cisi*, sing.) in Tonga. The neighborhood was a geographical unit. The *cisi*, which consisted of 300 to 2000 people, was the local unit which had leaders for local rituals regulating agricultural and some other activities. By comparison, headmen of villages, which had been created as smaller administrative unit during the first half of 20th century, did not have that kind of power. The frequency of intra-*cisi* marriage was high; both men and women therefore lived within their own *cisi*. As a result, the greater proportion of their kinsmen was concentrated within their *cisi*. By 1963, five years after resettlement, one of the four *cisi* studied had shifted to a preference for marriage within its new vicinage, even if with foreigners, but that *cisi* solidarity remained high in closely settled regions with other *cisi*, such as the Lusitu area. How has the construction of Kariba Dam affected the choice of marriage partner from post-resettlement to the present?

Resettled Tonga refer to the areas from which they were moved, many now under the waters of Lake Kariba as Matongo. We examine the impact of resettlement on social capital through choice of marriage partners and so the construction of affinal ties. First we give a brief history of each *cisi*

from Matongo period to the present, and secondly analyze the present range of choice of marriage partners.

2. Study outline

The study sites are located in Sinazongwe Area, Southern Province, Zambia. At three different sites; Malima and Nang'ombe Wards are located on the lower terrace just above Lake Kariba, Nkandabbwe Ward in the intermediate escarpment, Habunkululu Ward on the upper terrace. This study discusses mainly villages on the lower terrace because most of *masi* (plural form of *cisi*), whose transitional history is analyzed here, were resettled from their Matongo areas to the lower terrace above the present lakeside.

In Malima and Nang'ombe Wards, there are both new villages resettled at the period of the Dam construction, and old villages long settled in the area. Nkandabbwe and Habunkululu Wards were not designated resettlement area in 1958.

3. History of Gwembe Tonga villages in study area

Fig. 1 shows the village distribution and the establishment year, Table 1 indicates village name at study area. Establishment year is the year that villages were established as officially. Villages that already existed before 1955 are shown as circles, villages established between 1956 and 65 as triangles, from 1966 to 75 as square, from 1986 to 95 as stars, and after 1996 as x-marks. No villages were established from 1976 to 85.

Fig. 1 indicates only the villages which were recorded the geographic position of headman's or vice headman's house by Global Positioning System: Only some of villages in Nkandabbwe and Habunkululu Wards have been recorded. Historical information of surrounding villages also has been obtained in villages shown in Fig. 1: 34 of 71 villages belonging to Nkandabbwe Ward, and 19

of 30 villages to Habunkululu Ward.

Fig. 1 shows that many villages were established between 1956 and 65, after 1996. First peak of establishment was with Dam construction; second peak was with local politics of food aid.

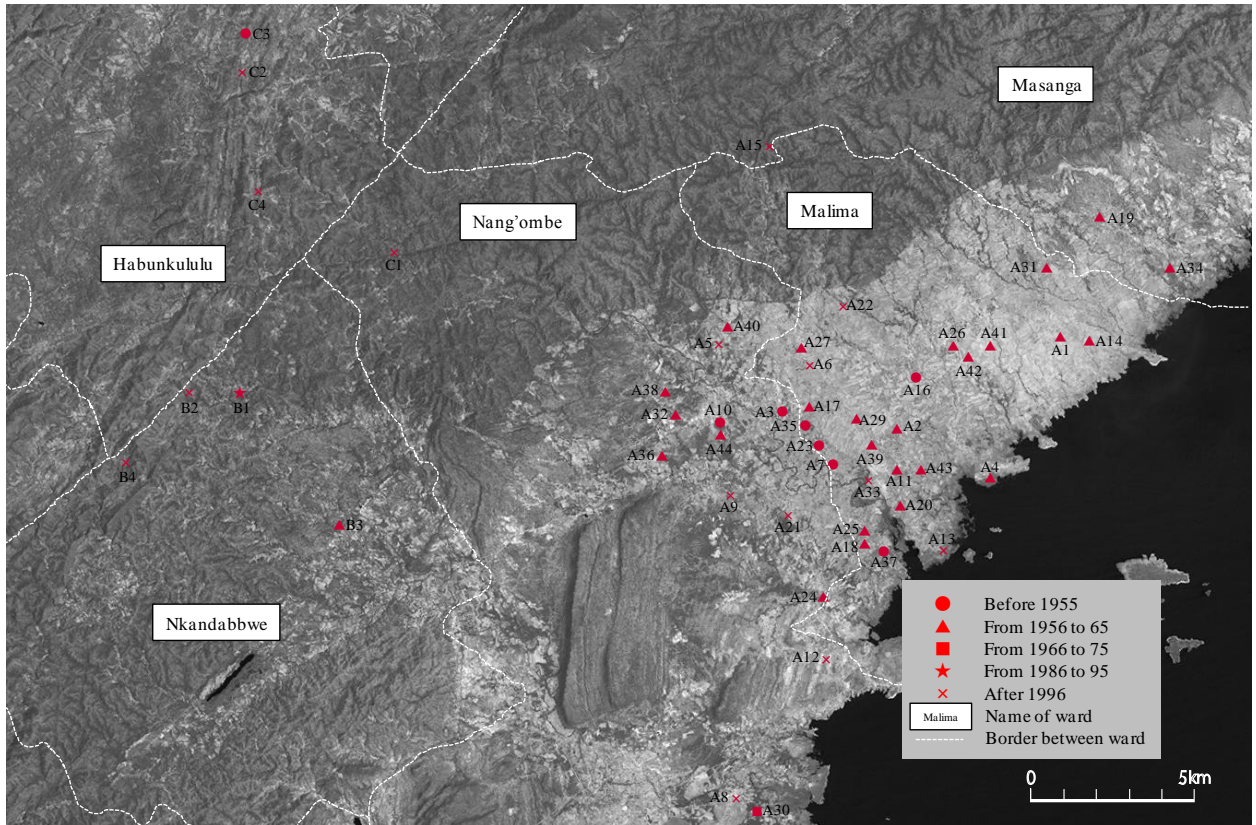


Fig. 1 Establishment of villages

*1 Table 1 shows the name of villages.

*2 Background image is the satellite image of Landsat-7/ETM recorded on Dec. 20th, 2001.

Table 1 List of Village Names

Village number	Village name	Village number	Village name	Village number	Village name
A1	Bbune	A19	Muvwali	A37	Sikaputa
A2	Chagobola	A20	Muzanbalika	A38	Simagwali
A3	Chande	A21	Nagombe	A39	Simwela
A4	Chilele	A22	Nchete	A40	Sinachilundu
A5	Chimkobo	A23	Siamēja	A41	Sinagainbi
A6	Chizu	A24	Siamufunde	A42	Sinalulongwe
A7	Kalangwa	A25	Siamunyembe	A43	Sinanjola
A8	Kahuli	A26	Siamutuna	A44	Tobonte
A9	Kasanse	A27	Siamvwem	B1	Chanzika
A10	Lusinga	A28	Sianchinda	B2	Kanego
A11	Makula	A29	Sianemba	B3	Mazyamuna
A12	Malede	A30	Siangwinda	B4	Siajanba
A13	Mambova	A31	Siankwazi	C1	Mubanga
A14	Manyonga	A32	Siansima A	C2	Mwemba
A15	Maunga	A33	Siansima B	C3	Siachaya
A16	Mukalanga	A34	Sianyuka	C4	Siamusana
A17	Munyati	A35	Siapoke		
A18	Mutwamasiku	A36	Siazwela		

3-1. History of villages in lower terrace

Malima and Nang’ombe Wards are located on the lower terrace along lakeside. The land was distant from Zambezi River before the Kariba construction. *Masi* exist in even resettled villages of Malima and Nang’ombe Wards. In Fig. 2, different legend symbols are used for each *cisi* in these wards in 2008. Buleya, the *cisi* shown as circle, had existed before the Dam was constructed.

The villages, resettled to Malima and Nangombe Ward immediately after Dam construction, are belonged to 5 *masi* that had existed in their old areas. They are Chilonga, Chilundu, Dangwe, Lulongwe and Njola (Fig. 2). Chilonga is shown as triangle, Chilundu as tetragon, Dangwe as star, Lulongwe as x-mark and Njola as double circle.

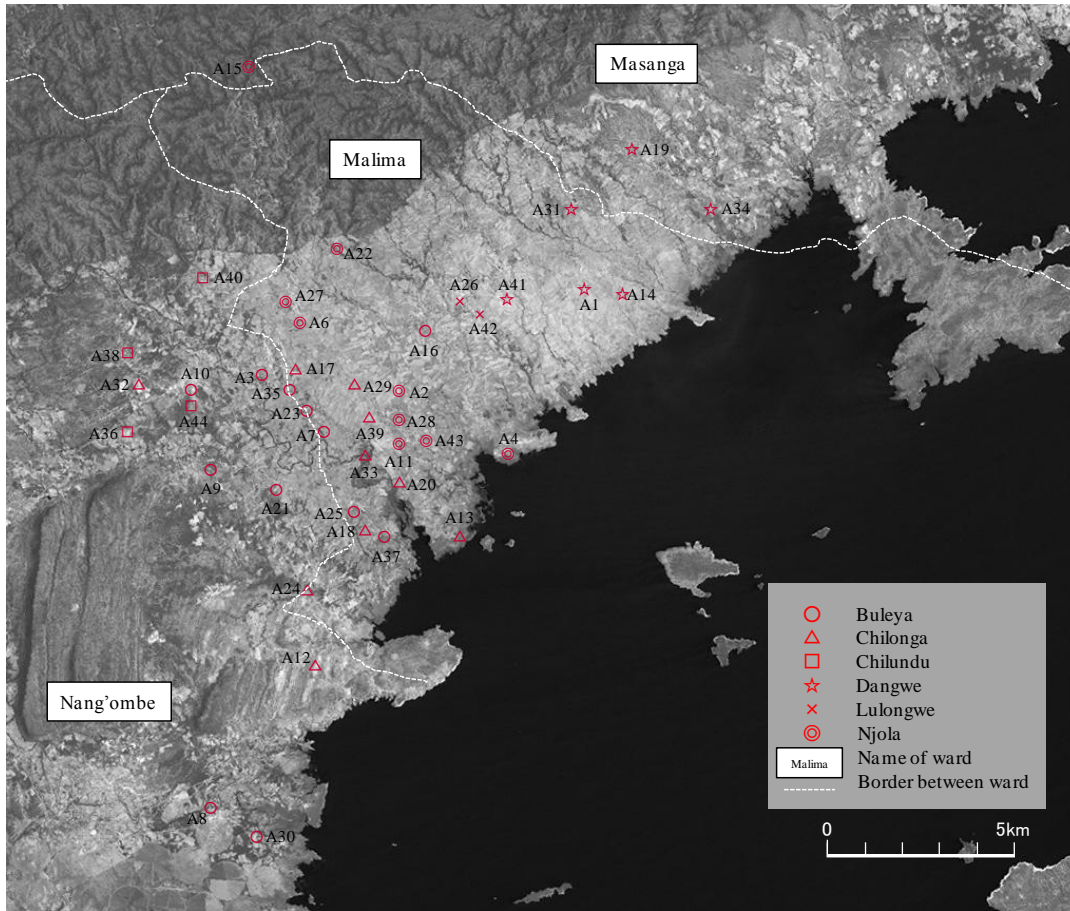


Fig. 2 Cisi of present villages

*1 Table 1 shows the name of villages.

*2 Background image is the satellite image of Landsat-7/ETM recorded on Dec. 20th, 2001.

3-2. History of villages in middle slope

There were no village in Nkandabbwe Ward located in the middle escarpment between the lower and upper terraces before the dam was constructed. People visited the area to hunt and gather forest products. When people resettled on the lower terrace began to face land shortages, they moved further inland to the middle escarpment.

The villages of Chibelele, Malabali, Mazyamuna and Muziyo resettled in Nkandabbwe Ward in the early 1960s. However, many people shifted to the land around Malabali satellite in Nkandabbwe Ward, around 1990s. They started to occupy land at present Chanzika in 1989, at present Kanego in 1990, at present Siajamba in 1989. They came from new villages on lower terrace along lakeside. Chanzika were established as village officially in 1995, Kanego in 2000.

3-3. History of villages in Upper terrace

Habunkululu Ward, located on the upper terrace, was occupied by villages such as Siachaya before the Dam construction. Thereafter it received immigrants from the lower terrace, who moved due to lack of land. At first they joined existing village, but might establish a new village if they came together as a large group or later formed their own village. Then 4 villages separated from Siachaya; Mubanga in 1998, Mwemba in 2001, Siamusana in 2004 and Kasonde in 2007.

3-4. Process of establishment and resettlement of villages

Fig. 3 summarizes the temporal process of establishment and resettlement of villages with reference to Dam construction.

Before the Dam construction, the villages were scattered along Zambezi River and on the lower terrace and upper terrace.

Those forced to move by the formation of Kariba Lake mostly shifted to lower terrace. Some

then shifted to middle escarpment where land was not under cultivation. Old and new villages were intermixed in lower terrace. Fig. 2 shows old villages of Buleya occupied fertile land along Nang’ombe River, while *masi* of resettled villages settled on previously uncultivated land.

Since then many people have shifted from the lower terrace to the middle escarpment and upper terrace, and new villages have been formed in recent years under their own headmen. On the lower terrace also, new villages have emerged. People gave two reasons for the recent establishment of new villages: for non-mainstream group to take the initiative in distribution of food aid and to multiply the number of recipient units of aid food as set amount of food aid is provided per village not per number of people. This fissioning of villages are also documented by Ito (2010).

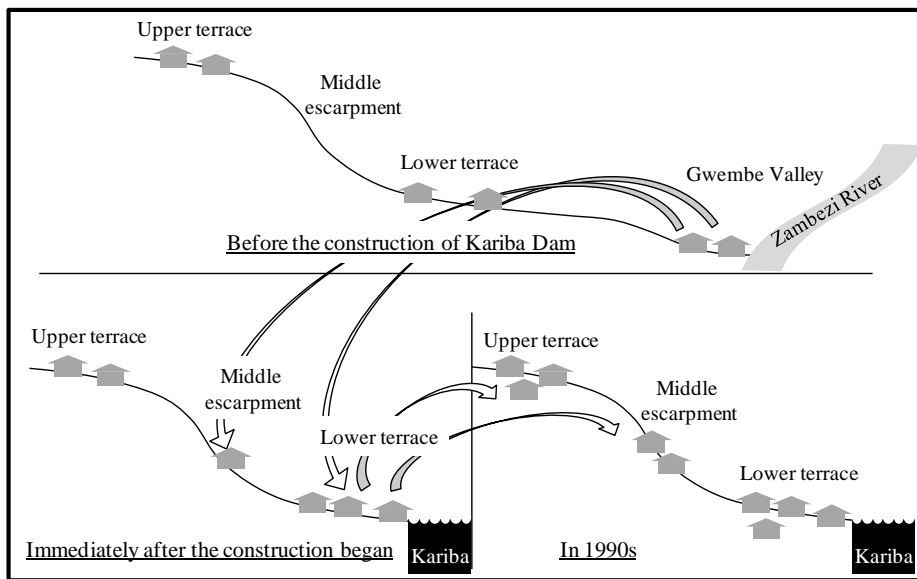


Fig. 3 Process of resettlement and establishment of villages

4. Range of marriage affected by Dam construction

This section investigates how people in study area marry and alter range of marriage ties. We first analyze present range of marriage on the lower terrace and in the middle escarpment villages and then consider changes in the range of marriage partner.

4-1. Range of marriage in lower terrace

We have analyzed birthplace of husband and wife in terms of proximity between residence and birthplace, and relationships with *cisi*. In Malima and Nang'ombe Ward on the lower terrace, we chose *Buleya* villages as villages settled before the construction of Kariba Dam, and *Chilonga* villages as villages resettled by the construction. *Buleya* villages chosen were Siameja, Nang'ombe and Chande; *Chilonga* villages chosen were Sianemba, Mambova and Siansima A.

Fig. 4 analyzes the degree of proximity between residence and birthplaces of couples. Fig. 4-1 compares whether both couples were born within the residential village or if one spouse came from elsewhere. Marriages are classified as taking place within the "Residential area" if the both spouse were born in villages in Malima or Nang'ombe Ward. "Other area" indicates that the birthplace of husband or/and wife is located in other areas. The percentages of "Residential area" are from 57% to 80%.

Fig. 4-2 details degree of proximity between residence and birthplace when birthplaces of both spouses are located in lower terrace. RNT means that the birthplace of husband or wife was located in a residential village, in the next village or two villages away; AV means that the birthplace was located at another village on the lower terrace. RNT marriages represented 52% to 84% of all marriages. It became evident that many marriages in the villages analyzed were between members of vicinal villages.

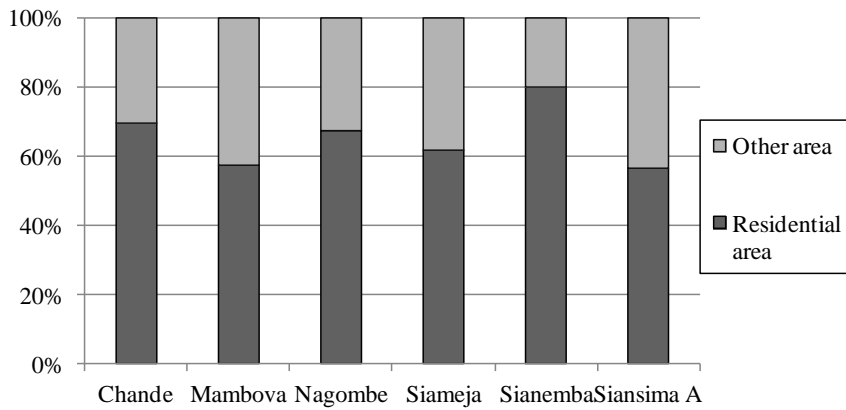


Fig. 4-1 Location of birth place

* Residential area means "both spouse were born in Malima or Nang'ombe Ward",
Other area means "one or both spouse was born in other area".

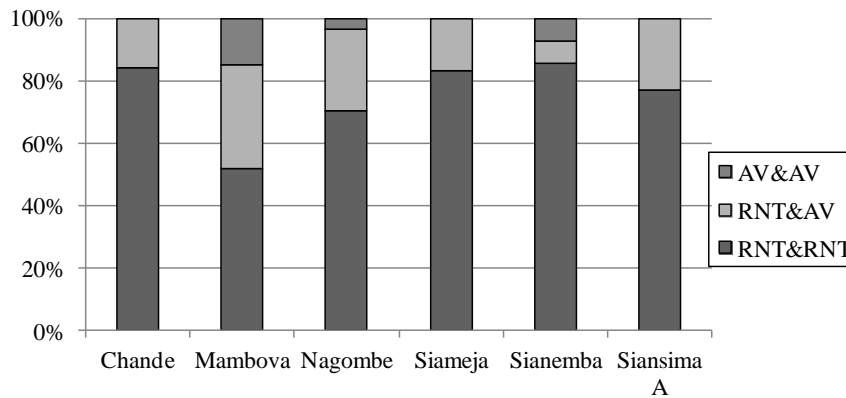


Fig. 4-2 Location of birth place in Malima and Nagombe Ward

* RNT means "husband or wife was born in a residential village, the next village or two villages away",
AV means "one was born at another village on the lower terrace".

Fig. 5 compares which *cisi* that husband and wife belonged to when both spouses were born on the lower terrace. B stands for *Buleya*, Co for *Chilonga*, Cu for *Chilundu*, D for *Dangwe*, N for *Njola*, and a combination of letters indicates which villages the couple came from. Fig. 5-1 indicates that couples born in *Buleya* represented 38% to 56% of married couples in the villages of *Buleya*. Fig. 5-2 indicates that couples from *Chilonga* represented 31% to 37% of married couples. It is apparent that couples who had resided in the same original *cisi* made up the highest percentage of couples in the sample villages.

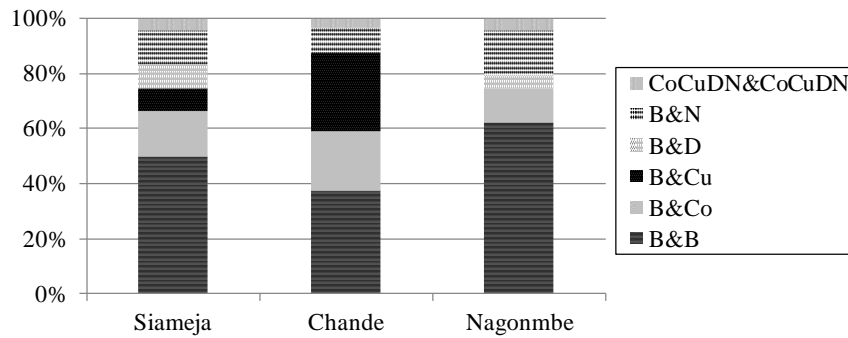


Fig. 5-1 Comparison of *cisi* of birth plases of couples living in *Buleya* villages

* B stands for *Buleya*, Co for *Chilonga*, Cu for *Chilundu*, D for *Dangwe*, N for *Njola*, a combination of letters indicates which villages the couple came from.

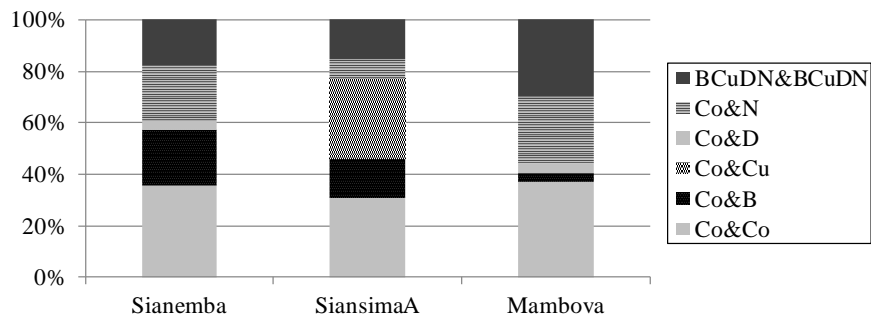


Fig. 5-2 Comparison of *cisi* of birth plases of couples living in *Chilonga* villages

* B stands for *Buleya*, Co for *Chilonga*, Cu for *Chilundu*, D for *Dangwe*, N for *Njola*, a combination of letters indicates which villages the couple came from.

4-2. Range of marriage in middle escarpment

Many people have continued to immigrate to the middle escarpment area in recent years, especially since 1990s in Nkandabbwe. We chose Kanego and Chanzika as new villages whose people started to resettle around 1990, to compare with Malabali as a comparatively old village where people started to settle shortly after the Dam construction.

Fig. 6-1 indicates the birth place of householder, Fig. 6-2 shows birth place of his spouse. In Fig. 6-1 and 6-2, LN means "born in new village of lower terrace", LO means "born in old village of lower terrace", M means "born in middle escarpment", U means "born in upper terrace", O means "born in other place".

These villages received immigrants from other villages and areas, especially from new villages on the lower terrace. Origin varied by villages. LN householders were more than 90% of all households in Kanego; by contrast M householders were 40% of the Malabali (Fig. 6-1). Not many people were born and grew up in comparatively old Malabali: 18 people were included in M; 5 of the 18 were born in Malabali and the rest were born in other villages in the middle escarpment.

Fig. 6-1 and 6-2 show that birthplaces of householder and spouse are different. But the significance of this is not completely sufficient to discuss how immigrants marry since these figures include couples who married before resettlement to the middle escarpment. To consider how migrant marry, Fig. 7 analyzes origin and residence before marriage of wives married with immigrants who had shifted from lower terrace to Kanego and Chanzika. LL means "born and lived in lower terrace", LM means "born in lower terrace and lived in middle", MM means "born and lived in middle escarpment", O means "born and lived in other area".

In Fig. 7, most of wives in Chanzika fall into the MM category. In Kanego, they fall into LL, LM and MM almost equally. Namely, immigrants meet their future spouses in the area of present residence in many cases, but future spouses may originally have been born in either the middle

escarpment or the lower terrace. And immigrant marries a woman, who is born and lives on the lower terrace, in not few cases.

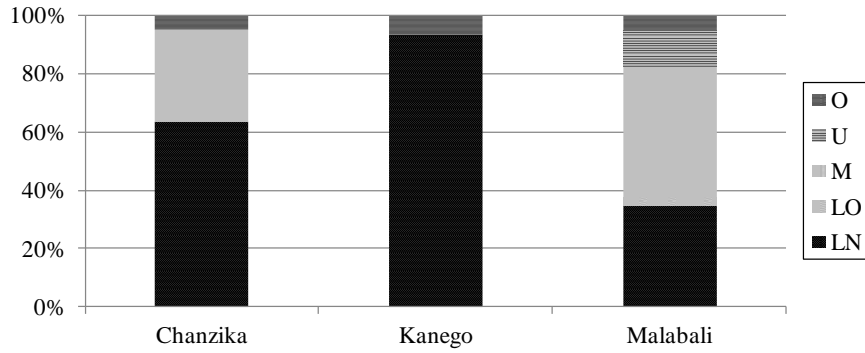


Fig. 6-1 Comparison about birth place of householder living in middle escarpment

* LN means "born in new village of lower terrace", LO means "born in old village of lower terrace", M means "born in middle escarpment", U means "born in upper terrace", O means "born in other place".

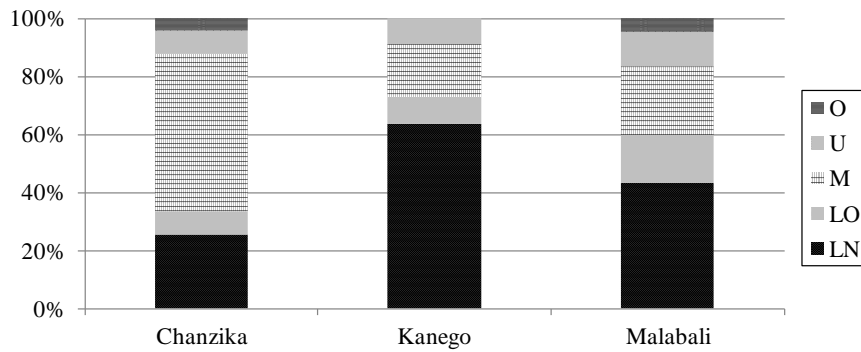


Fig. 6-2 Comparison about birth place of wife living in middle escarpment

* LN means "born in new village of lower terrace", LO means "born in old village of lower terrace", M means "born in middle escarpment", U means "born in upper terrace", O means "born in other place".

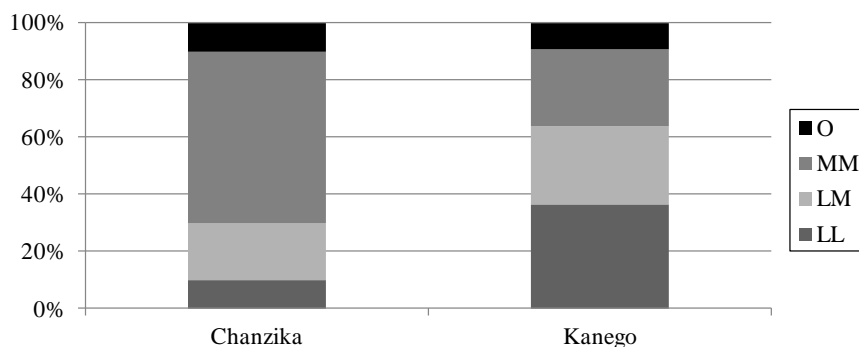


Fig. 7 Origin and residence of woman married with immigrant after shift to middle escarpment
 *LL means "born and lived in lower terrace", LM means "born in lower terrace and lived in middle",
 MM means "born and lived in middle escarpment", O means "born and lived in other area".

4-3. Present state and transition of marriage range

There are many couples where husband and wife were born within the same vicinity on the lower terrace villages. The highest number of marriages have taken place between couple whose husband and wife were born in the *cisi* of residence. The tendency is greatest in old villages.

The villages in the middle escarpment received immigrants from other villages and areas, especially from new villages on the lower terrace. Young villages of the middle escarpment have a stronger tendency for marrying out. In comparatively old villages, many residents were born in middle escarpment, but most of them are not from the residential village. Immigrants meet future spouses near their residence in many cases, but the origin of future spouses may be from either middle escarpment or lower terrace. But immigrants also marry women, who have been born and lived in lower terrace villages, thereby keeping connections with people of their birthplace after their shift.

5. Conclusion

Resettlement has continued since the time of Dam construction until the present, but different regions have different migration patterns. In lower terrace villages, residents of old villages occupied the fertile land along Nang'ombe River before the Dam construction. People of new villages resettled on uncultivated land and began to run short of land soon thereafter. As a result, many shifted from the lower terrace to the middle escarpment and upper terrace.

Encounter with marriage partners is frequently in the vicinity of residence both on the lower terrace and in the middle escarpment. However, many couples marry in own *cisi* on the lower terrace: Immigrants to the middle escarpment may marry with a partner from their original place. Since 1990, many people have migrated from new villages on the lower terrace to the middle escarpment. Marriage networks of old villages on the lower terrace are more tightly connected while immigrants to the middle escarpment construct distant range networks including vicinal people and both relatives emigrated from and remaining on the lower terrace (Fig. 8).

The construction of Kariba Dam has affected the life of peripheral people not only in its immediate aftermath but also until the present. Resettled people from Gwembe Valley continue to migrate again due to push factors, such as the degradation of their livelihood environments. Gwembe people largely married in their own *cisi* before the Dam construction. Resettled people started to marry with vicinal people in their places of resettlement. At the present day, new resettlement continues to expand the range of the potential population whom they can marry as people marry with vicinal people in new destination (Fig. 8). People may acquire the social capital with the expansion of marriage range.

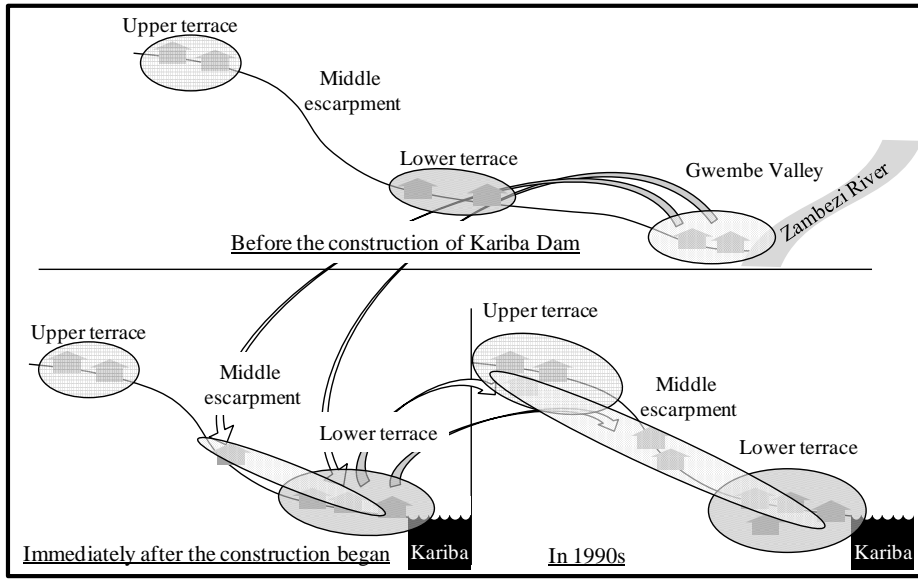


Fig. 8 Changing Process of range of marriage

Appendix 1. Detail process of establishment and separation of old villages on the lower terrace

Malima and Nang'ombe Wards became to be located on the lower terrace along lakeside after the Kariba construction. Buleya, the *cisi* shown as circle (Fig. 2), had existed before the Dam was constructed.

-Buleya-

Buleya *cisi* consists of the villages of Chande, Kalangwa, Kaluli, Kasanse, Lusinga, Mukalanga, Nang'ombe, Siameja, Siamunyembe, Siamusinka, Siangwinda, Sikaputa and Sinamalima. The traditional leader of Buleya lives in Chande village.

Villages of Buleya in the area before the Kariba construction include Chande, Kalangwa, Mukalanga, Nakasimba, Nampenga, Sabuleni, Siapoke and Sinamalima all by the 1940s. Nampenga and Sabuleni came to join Nakasimba after 1946. Because joined villagers feared that old people who had been treated with charms (*Mutandali*) had died in former village. Siapoke people joined Chande village. Siameja and Sikaputa separated from Kalangwa before the Dam construction.

Siamunyembe separated from Siameja around 1963. Nakasimba was renamed to Lusinga in 1963, after its union with Nampenga and Sabuleni. Siangwind separated from Lusinga in the latter half of 1960s.

In 2007, Kaluli which had moved to avoid risk of contamination by *Mutandali* in 1940s separated from Siangwinda, Kasanse also separated from Chande, and Nang'ombe separated from Siamja. In 2008, Siamusika separated from Sikaputa. This reflects the general fissioning of villages after 1991 in part due to policies of the World Food Program as documented by Ito in this volume.

Appendix 2. Detail process of establishment and separation of new villages on the lower terrace

The villages, resettled to Malima and Nangombe Ward immediately after Dam construction, are belonged to 5 *masi* that had existed in their old areas. They are Chilonga, Chilundu, Dangwe, Lulongwe and Njola (Fig. 2).

-Chilonga-

Chilonga *cisi* consists of the villages of Malede, Mambomva, Muntwa-masiku, Munyati, Muzambalika, Siamufunede, Sianemba, Siansima A, Siansima B, Sianungu and Simwela. Originally they lived along the Nakaleke valley and formed two *masi*: Buzya and Simaundu. Muzya consisted of Sianemba, Simuzuza and Sinamakoka. Simaundu consisted of Muntuwa-masiku, Munyati, Siamufunde, Siansima and Simaundu. The local leader of Muzya lived in Simuzuza, the local leader of Simaundu in Simaundu. In the early 1920s, when British colonial governor tried to punish villagers of Simuzuza for tax evasion, they joined Muzambalika village, which had earlier separated from Simuzuza. In the mid-1920s, villages in both Muzya and Simaundu *cisis* shifted to make use of agricultural dam, the Sindibona dam on the Sikalamba River. Simaundu was renamed Punza. Simwalu village separated from Muntwa-masiku village at that time. Their Traditional leader lived in Punza village. Since then, their *cisi* has been renamed Chilonga. The word “Chilonga” comes from “kulonga” in Tonga language, which means “to shift”.

After this, Simuwalu people joined another village when Muntuwa-masiku, Siansima and other villages were moved to the Lusitu area because of their headman’s misbehavior. For the same reason, Punza people joined Munyati. Some people joined Kalangwa, whose headman belonged to same clan “Munsanje” with the Punza immigrants.

Around 1945, people of Siamufunde, Sianemba and Siansima shifted to Chisika area along Nangombe River. Then most Siansima people shifted upstream around 1948-49. Those who remained behind at Chisika area founded Simwela village.

In 1957, when Kariba dam was being constructed, people of Muntwa-masiku, Munyati, Muzambalika, Siamufunede, Sianemba, Siansima, Simwela were forced to shift to the Buleya-Malima area.

Around 1990, Mambomva village separated from Muzambalika village. In 2001, Malede village separated from Muntwa-masiku village. In 2007, Sianungu village also separated from Muntwa-masiku village.

-Chilundu-

Chilundu *cisi* consists of the villages of Siazwela, Simagwali, Sinachilundu and Tobonte. All were founded before Kariba Dam was constructed and were resettled involuntarily in 1957. The

local leader lived in Chilundu.

-Dangwe-

Dangwe *cisi* consists of the villages of Bbune, Chinkumbe, Manyonga, Mumvwali, Siankwanzi, Sianyuka and Sinakaimbi. All these villages were founded before Kariba Dam was built and were resettled involuntarily in 1957. When they were resettled, they changed their village names: Bana-mwenzu to Bbune, Bana-munene to Chinkumbe, Bamulwelwe to Manyonga, Ngondankoyi to Mumvwali, Bakaluzi to Siankwanzi, Banasimutonyono to Sianyuka, Nzingwe to Sinakaimbi. The local leader lived in Sianyuka.

-Lulongwe-

Lulongwe *cisi* consists of the villages of Mwanaamwalu, Siamulemba, Siamutuna and Sinalulongwe. All these villages were founded before Kariba was constructed and resettled involuntarily in 1957. When they were resettled, they changed their village names: Chibangwa to Mwanaamwalu, Duunzi to Siamulemba, Bbwilili to Siamutuna, Malombe to Sinalulongwe. The local leader lived in Sinalulongwe.

-Njola-

Njola *cisi* consists of Bbолоzya, Bulimi, Chagobola, Chilele, Chizu, Maakula, Mabuwa, Maunga, Nchete, Siamvwemu, Sianchinda, Sikuteka and Sinanjola. Before the resettlement, the *cisi* contained only five villages: Chabuwa, Maakula, Siamvwemu, Sinangeye and Sinanjola. The traditional leader lived in Sinanjola.

In 1957, Chabwa joined Siamvwemu, and they were resettled in Nang'ombe Ward. Later six villages separated out from Siamvwemu village: Bbолоzya in 1991, Maunga in 2005, Sikuteka in 2006, Chizu, Mabuwa and Nchete in 2008.

Maakula resettled involuntarily in 1957. Sinangeye resettled in same year was renamed Chagobola. Bulimi and Sianchinda separated from Chagobola. Sinanjola was resettled in 1957, Chilele separated from it.

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