

ENDOGENOUS MOVEMENTS FOR WATER SUPPLY WORKS AND THEIR RELATIONSHIPS TO RURAL DEVELOPMENT ASSISTANCE: THE CASE OF THE MATENGO HIGHLANDS IN SOUTHERN TANZANIA

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ABSTRACT This paper 1) describes activities undertaken by the local residents in relation to the impacts from development assistance, and 2) examines how endogenous movements emerged. For these purposes, this paper uses data of water supply works in southern Tanzania. In response to the previously unfinished water supply construction initiated by the government, and against the backdrop of economic liberalization, villagers in the research area started their own water supply works. It became clear that villagers used to their advantage 1) cost sharing based on the activities of farmers' group called *kikundi*, and 2) the integration of water source maintenance and forestry for a stable water supply, based on experience gained through the preceding development programs and projects. This paper suggests that it is necessary for development practitioners to assess such relevant capacities and competencies gained by the local rural people during their experiences with various assistance projects/programs to understand how rural people can maintain their livelihoods and assume leadership of projects/programs that provide development assistance.

Key Words: Cost sharing; Coffee; Forestry; *Kikundi* (farmers' group); Popularly-led rural development.

INTRODUCTION

This paper uses the example of Kitanda Village in southern Tanzania to examine how multiple approaches to rural development assistance⁽¹⁾ have affected the spontaneous activities of local residents with regard to endogenous development.⁽²⁾

At present, the international development assistance model focuses on poverty reduction and emphasizes social development. Development practitioners are enthusiastic about conducting comprehensive efforts designed to assist multiple sectors of the target area. Providers of rural development assistance have placed greater emphasis on local participation in order to establish a popularly-led movement for sustainable rural development. This is, no doubt, a propitious departure from the previous models that sought modernization through technology transfer alone.

On the other hand, some studies have pointed out that the providers are too embedded in their own contexts to solve the problems pertinent to the target area and to grasp the effects of development in a broader context (e.g., Seppälä, 1998: 191; Cleaver, 1999; Hicky & Mohan, 2004). Discussions have focused primarily on "success" or "failure," defined only in terms of the frameworks of the donors. In other words, those who fund development assistance and research have tended

to focus only on direct results and to ignore events outside their own perspectives.⁽³⁾ As a result, assistance and studies have been unable to find people's proactive behavior, and therefore might fail to gain the clue to effective feedback. Therefore, the more recent approach tries to incorporate perspectives of the local people themselves to understand how they deal with, cooperate with, and/or refuse the assistance efforts. It incorporates consideration of actual experiences with earning a livelihood to facilitate local leadership of rural development efforts.

These recent studies on development assistance recognize the arena of rural development as a space where various actors interact and emphasize to clarify the dynamics that underlay the personal interactions and positive connections (e.g., Long & Long, 1992; Hicky & Mohan, 2004). The negative impacts are recognized as well, of leaving intact or enforcing the existing power structure, social stratification, and exclusion (Clever, 1999). Indeed, these studies have contributed to deepening the understanding of the dynamics characterizing the arena of development assistance and people's proactive behavior but have tended to incorporate short-term viewpoint and focus on events related to a single episode of development assistance. It has been commonly accepted that assistance efforts tend to take place in series and one more form for every targeted country. Indeed, some areas experience several types of assistance efforts, and the local historical experience with the assistance efforts can influence the direction of future efforts, at times even producing a synergistic effect (Hirschman, 1967; Long & van der Ploeg, 1989). Therefore, it is important to understand the process underlying current people's efforts in terms of the complex effects of the history of rural development assistance. Such a perspective contributes to avoiding "quick and dirty" evaluations of development assistance, and also offers opportunities to recognize the ingenuity and leadership skills demonstrated in the efforts of local residents.

The geographic focus of this study is Kitanda village of Mbinga District in southern Tanzania. Mbinga District is famous for coffee production. For this reason, the government of Tanzania has conducted several development projects and program,⁽⁴⁾ including those that promote forestry, farmer group activities, microfinancial services, and to stimulate the rural economy and encourage environmental conservation based on the indigenous land-use system. Through the experiences of these development projects and programs, the villagers began constructing water lines in 2000, which have since expanded to cover almost the entire village of Kitanda.

The purpose of this paper is to 1) describe the activities being undertaken by the local residents, with consideration to the impacts from previous development assistance, and 2) examine how endogenous movement emerged in the case of Kitanda Village, with regard to water supply works.

The next section presents an outline of the research area. Then, I will discuss changes in the trends characterizing development assistance in Tanzania and particularly in the Mbinga District. After that, I will clarify the history of efforts to gain water supply, and analyze the recent movements in this domain.

RESEARCH AREA

I. The Matengo

The research area of this study is Mbinga District in southern Tanzania (Fig. 1), with a population of approximately 400,000 (Tanzania NBS, 2004). Its main ethnic group, the Matengo, live in the highlands comprising the largest geographic portion of the district. The Matengo are distinguished by their unique indigenous farming system, *ngolo*,⁽⁵⁾ as well as their cultivation of coffee, a practice introduced in the early 20th century.

Slopes in the steep mountainous areas are susceptible to soil erosion during the rainy season due to heavy precipitation. The Matengo have adopted the *ngolo* cultivation system to control water so as to minimize erosion and ensure stable food production (Itani, 1998). In addition to crops from the *ngolo*, nearly all households cultivate coffee gardens at present. This district accounts for about 20% of the domestic coffee production of Tanzania.

Most of the Matengo manage a coffee garden around their houses. Coffee is a biennial crop and requires the use of agricultural inputs such as chemical fertilizers and agrochemicals for a stable harvest. Thus, coffee growers need capital

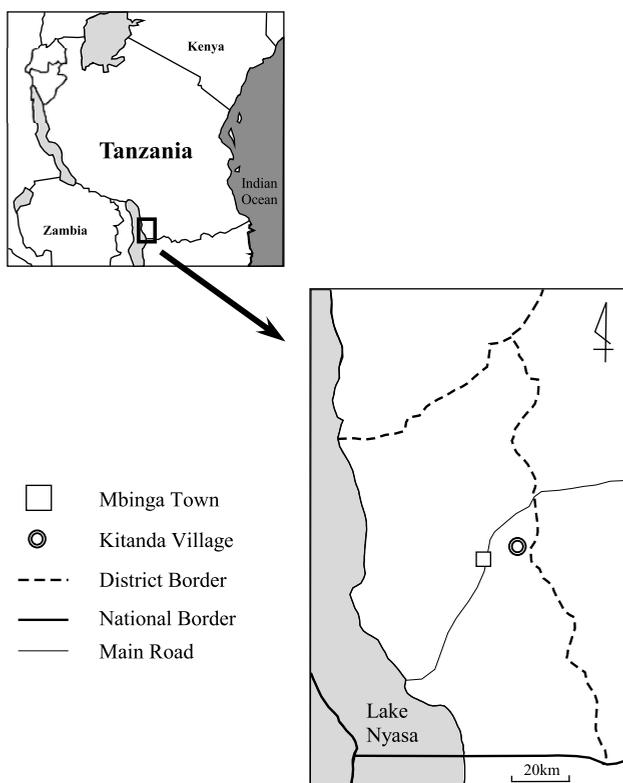


Fig. 1. Research area.

to invest in such products every year. Managed well, coffee production yields high economic returns and generally enables growers to afford a brick house with iron roof.

The Matengo society includes a concept of land holding and land use known as *ntambo*. *Ntambo* refers to land that is managed primarily by one clan. Each *ntambo* is usually divided into habitats, called *musi*, for multiple households in the same clan (JICA, 1998; Kato, 2001). Members of the Matengo community build houses in the comparatively flat area in the middle of the slope of a *ntambo*, and cultivate a small garden of leafy vegetables and pumpkins located around the house. The outer area of the home garden consists of a coffee garden with bananas for shading. *Ngolo* cultivation is practiced in fields on the slope during the rainy season, and the valley bottoms are cultivated during the dry season. People fetch water from a natural spring on the edge of the valley bottom. The forest atop the mountain and the fallow on the upper slopes are used for gathering firewood and for livestock foraging. Some households have dug a furrow along the contour of the water source to access water for all purposes except drinking.

Kitanda Village, Utili Ward,⁽⁶⁾ was the focus of this research. The population of the village was 2,358 and consisted of 507 households, according to the 2003 census. Kitanda Village is comprised of seven sub-villages: Lami A, Lami B, Nsenga A, Nsenga B, Muungano, Machimbo, and Kiblang'oma (Fig. 2). Kitanda Village was established in the 1960s when people migrated from the mountainous area where the Matengo society originated. The village of Kitanda was officially registered with the government in 1976 with the passage of the Villagization Act of the "Ujamaa policy".⁽⁷⁾ At that time, all households were gathered at the center of the village (Lami A) as per the act. In time, villagization was largely abandoned due to poor management, and the villagers returned to their original places of residence two years after passage of this act.

One agricultural extension worker who is under the control of District Extension Officer of District Agriculture and Livestock Development Office residing in

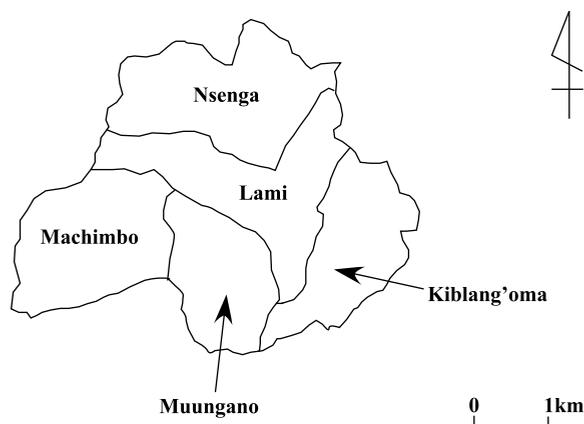


Fig. 2. Kitanda Village and its sub-villages.

This figure does not show the boundaries of Lami A and Lami B and of Nsenga A and Nsenga B due to lack of data.

Kitanda Village oversaw six villages of the Utili Ward. Extension workers are responsible for supporting the activities pertaining to the development projects/programs in the ward/village level, as well as day-to-day consultations on agricultural techniques and livestock management.

II. Changes in the Rural Economy

Although a peripheral area of Tanzania, the Matengo Highland has achieved comparative economic stability due to the cultivation of coffee.

The Mbinga Cooperative Union (MBICU) was the main body of local coffee industry in this district. MBICU was composed of 54 primary societies, currently the Agricultural Marketing Cooperatives (AMCOs) whose main works were to purchase and gather coffee in assigned zones within the district (Mhando, 2005). Coffee gathered in the district was transported to the auctions sponsored by the Tanzania Coffee Board in the Kilimanjaro Region in northern Tanzania. The MBICU supported the coffee cultivators by lending and transporting agricultural supplements. In addition, the MBICU sometimes advanced money to individuals experiencing emergencies.

In 1986, the government of Tanzania introduced the Structural Adjustment Program (SAP), which led to a gradual liberalization of the economy. As a result, coffee distribution was liberalized in 1993, and private coffee buyers (PCBs) entered the coffee industry in Tanzania. PCBs used cash to purchase coffee ad hoc, while the MBICU paid in installments. When the world coffee prices rose in 1994 due to a poor harvest in Brazil, PCBs came and paid large sums of money for one time. Many farmers became attracted to the payment method of the PCBs, and chose them over the MBICU as their main agents for the sale of coffee. The MBICU could not survive under this competition, and declared bankruptcy in 1996.

Although the PCBs provided cash, they did not provide agricultural inputs as the MBICU did, and the coffee farmers were forced to procure these by themselves. In addition, government cuts in the subsidies for agricultural inputs caused sudden increases in the prices of these items. At the same time, coffee prices fell gradually until around 2000 due to global overproduction. Thus, coffee farmers faced difficulties in managing, growing, and producing coffee.

The Tanzanian government took measures to counteract the trend, and approved legislation that permitted the cooperatives and primary societies to sell coffee at auctions. In this environment, some primary societies assumed control over their own activities, including supplying agricultural inputs and transporting coffee to auction to reduce related costs. Another major change involved a new emphasis on the quality of the coffee beans. With guidance from the Tanzanian Coffee Research Institute (TaCRI, Mbinga Branch), coffee farmers reconsidered their methods of processing coffee beans, and started producing high-quality coffee that would attract higher prices per kg (Mhando, 2005).

RURAL DEVELOPMENT PROJECTS/PROGRAMS IN THE MBINGA DISTRICT

In this section, in order to make clear the relationship between water supply works initiated by the local people and the preceding rural development assistance, I will 1) review the transition in the principle of rural development assistance along with the major changes in the development method, then 2) describe the project/program activities conducted in Mbinga District with regard to such transitions, and 3) show the impact of the SCSR project which had a great influence on the water supply efforts.

I. Changes in the Principle of Rural Development Assistance in Tanzania

A major change occurred with the government's introduction of SAP. For the first time, people were required to show how they have tried on their own before they applied for external supports. The transition of the principles of international development trend, from "top-down" to "bottom-up" had an effect in this change.

1. *Independence to the Introduction of the SAP*

The first president of Tanzania, J.K. Nyerere (1922–1999), promoted nation building by basing African socialism on the Tanzanian notion of *ujamaa*. In 1967, the Arusha Declaration was promulgated to serve as the main pillar of Nyerere's African socialism, and the government promoted villagization.

The government aimed to develop the rural economy by vitalizing traditional cooperation, and by introducing mechanized agricultural production through villagization. The government also aspired to provide easier access to public services and to such facilities as farmers' training centers for rural residents by establishing experimental demonstration plots in each village. Despite of these efforts, villagization did not work as expected with regard to agricultural development (MAC, 1997). The SAP in 1986 was introduced to mitigate the negative economic impacts of villagization, the Tanzanian-Ugandan war, and the drought. At this point, the government essentially abandoned socialism.

The rural development policy promoted by Nyerere respected the conditions of those who resided in rural areas. He was prescient in that services, including dispensaries, elementary schools, and water lines were deemed basic human needs, as recognized by the developing countries during the 1970s (Ikeno, 2003). Rural people gained access to these services in the absence of personal effort, since this policy proceeded in a top-down style in which rural residents were not able to assert what they really needed (Yoshida, 1997).

After the introduction of the SAP, many international development agencies began to exert substantial influence on government policy. Indeed, all development policies and rural development projects/programs came under the strong influence of international development agencies.

2. *The SAP to the Poverty Reduction Strategy*

Soon after the introduction of SAP, the Tanzania government started the National

Agricultural and Livestock Extension Rehabilitation Project (NALERP) in 1989 supported by the World Bank. NALERP aimed to overcome the stagnation of the domestic economy by adopting an extension method known as Training & Visit (T&V). T&V, developed by the World Bank, was the major extension method used in developing countries during the 1970s and 1980s. Implemented by staff members with expertise in the field, its unidirectional approach did not enhance the ability of farmers to solve problems on their own (Rutatora & Mattee, 2001; Belay & Degnet, 2004). Faced with this situation, another method came into being that drew on the local people's opinion through promoting the organization of farmers' groups for the effective extension of rural development services and the people's capacity building. In Tanzania, such farmers' groups known as *kikundi* became the government's target for delivering development services. Therefore, people who needed support must first become a "target group" by organizing a *kikundi*.

In the mean time, the microfinancial plan developed by the Gramin Bank in Bangladesh came to be known as an effective method to poverty reduction and rural development. The International Fund for Agricultural Development (IFAD) started the Southern Highlands Extension and Rural Finance Service Project (SHERFSP) in Tanzania. This project covered 12 districts in four southern regions, including the Mbinga District. Banks in Tanzania, especially those in rural areas, were not experienced in microfinancial services, and the IFAD began to support small-scale farmers by coordinating training and group organization called Savings and Credit Cooperatives (SACCOs). SACCOs provided loans to only members according to the amount of their shares. To acquire a loan from the SACCOs, people at least had to deposit shares, but the members could usually receive loans equivalent to two to three times the value of their shares. The IFAD aimed to vitalize the microfinancial service through the spread of SACCOs.

In addition, the national government started to promote *kikundi* organizations in relation to microfinance around 2000. The government advertized through various media such as posters and radio. For example, a poster distributed to villages declaring that, "Organization of *kikundi* or cooperatives makes it easier to obtain microfinancing from banks or the government" and radio also was used for promotion. Thus, the organization of *kikundi* came to be strongly combined with microfinancial services.

During the late 1990s, at the international level, evidence of the negative impact of the SAP emerged, leading to criticism of this program in many developing countries. As a result, the United Nations and other relevant institutions changed the direction of their development strategies by establishing the Millennium Development Goals for poverty reduction and emphasizing social development and popular participation. For case of Tanzania, the effect of this change was apparent in the introduction of such as *kikundi* and SACCOs. Development assistance after SAP, especially in the context of poverty reduction strategy, differed drastically from those before, in that the rural people were required to initiate efforts at procuring assistance, rather than just wait for such assistance to be simply granted.

II. Rural Development Projects/Programs in the Mbinga District

This change in principle became also apparent in the rural development projects/programs in Mbinga District. The bottom-up way of thinking came to Mbinga District in the middle of the 1990s, and some projects/programs required people to participate proactively. Although these efforts actually contributed to making people rethink the development activities in various ways and the effectiveness of *kikundi* organization as a vehicle for gaining support, people gained neither appropriate support nor advice because these projects/programs were, to be exact, not in bottom-up manner.

In the Mbinga district, there were multiple assistance efforts, such as the Agroforestry Project developed by the EC (currently the EU), SHERFSP and the Farmers' Field School project (FFS) sponsored by IFAD, the Program for Recovery of Soil Fertility based on the agroforestry method developed by the Agricultural Research Institute-Uyole (ARI-Uyole), and the Sustainable Agriculture Program sponsored by the NGO, CARITAS. Kitanda Village was included in all these rural development projects and programs (See Fig. 3 and Table 1). SHERFSP

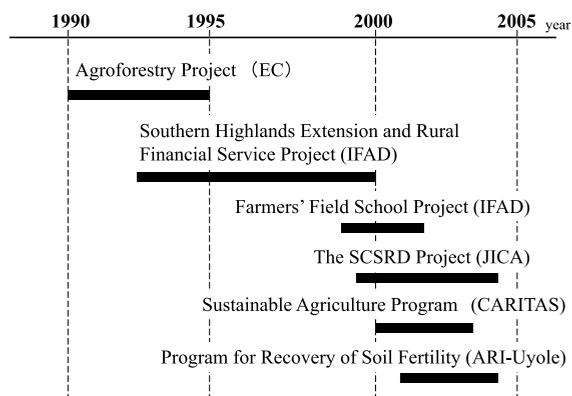


Fig. 3. Rural development projects/programs conducted in the Mbinga district. () indicates the donors.

Table 1. Activities and target units of extension of the projects/programs.

Name of project/program	Activities	Unit of extension
Agroforestry Project	Forestry, improved oven, milking cow	Individual
Southern Highlands Extension and Rural Financial Service Project	Microfinance	Cooperative
Farmers' Field School Project	Modern agriculture, microfinance	<i>kikundi</i>
Sustainable Agriculture Program	Manure use, milking cow	<i>kikundi</i>
The SCSR Project	Forestry, improved oven, new grasses, beekeeping, improved dry-season cultivation	(<i>kikundi</i>)
Program for Recovery of Soil Fertility	Forestry	<i>kikundi</i>

and following projects/programs more or less emphasized participation, and adopted either the *kikundi* approach or dissemination of microfinance services through the SACCOs.

In then EC's Agroforestry Project, people obtained seedlings and forestry related services free of charge. However, the SHERFSP and following projects/programs required people to bear a cost. Called cost sharing, the method is often used as the one component of participation. Cost sharing distributes the costs involved in managing certain activities and the purchase of certain goods among the government and/or development donors, and the local people. Government and/or development donors have adopted this approach to promote popular ownership of the activities, tools, or goods and to avoid dependence on assistance to attain the sustainability of the activities. For example, the FFS promoted modern agriculture using hybrid maize seeds, agrochemicals and fertilizers. These agricultural inputs were provided to *kikundi* on loan, and they had to pay back the loans either with the harvest or cash gained from the sale of the harvest.

Although the projects/programs after the Agroforestry Project promoted participation, there was a problem in the procedure: 1) *kikundi* was organized in a top down manner, 2) the contents of the activities were predetermined without preliminary local survey or feasibility research to ascertain the people's opinion.

The FFS project sent out the district extension officers, who enlisted men and women from each sub-village as the membership. The Sustainable Agriculture Program and the Recovery of Soil Fertility Program also operated in this manner. The *kikundi* organized under the FFS were unable to manage activities by themselves after the finishing to pay back the loan, the *kikundi* organized under the Sustainable Agriculture Program applied for goats to milk, but these were simply not forthcoming, and the *kikundi* organized by the Program for the Recovery of Soil Fertility focused only on experimental activities and not on extension efforts. As a result, these *kikundi* activities did not encourage villagers to follow in organizing the *kikundi*.

On the other hand, the Department of Culture of the District Council provided microfinancial assistance for the development of youth *kikundi*, and the Department of Community, Gender, and Children started to offer loans to women's *kikundi*. About 100 *kikundi* received loans from these departments as of 2004.

The Matengo society had historically employed two reciprocal systems (*ngokela* and *sama*) mainly for agricultural works. The *kikundi* approach was quite different from both of these. The reciprocal systems were organized only when necessary, but *kikundi* activities included regular meetings and scheduled sessions to learn something new such as agricultural technology. *Kikundi* organization had a chairman, accountant, and secretary as well as rules stipulating consequences for such behaviors as lateness and absence without notice. In addition, each *kikundi* is usually formally registered with the village and district councils. Extension workers must report *kikundi* activities to the related district departments, such as the Agriculture and Livestock Development Office, on a monthly basis.

People came to understand the significance of organizing a *kikundi* as a vehicle to gain external support, and some tried to approach the task in a positive manner. But once organized, *kikundi* ran into problems, and could not secure appropriate

and timely advice or external support. Actually, two *kikundi* were spontaneously organized by the local people following the FFS project for external support, but could not gain the support or advice because of the poor communication between government officers or extension workers. *Kikundi* activity did not expand in or around villages.

III. The Impact of the SCSR Project (2002–2004) in Kitanda Village for Making *Kikundi* the Major Vehicle to Approach Development Services

In 2002, the Center for Sustainable Rural Development (SCSRD) of Sokoine University of Agriculture started a participatory rural development project, (the SCSR Project) in cooperation with JICA.⁽⁸⁾ This project conducted activities in Kitanda village until 2004 and was directly instrumental in the increased vitality and number of *kikundi* in and around the village (SCSRD, 2004). The expansion of water supply works in the village was substantially related to the vitalization of *kikundi* activities.

The SCSR Project aimed to both invigorate the rural economy and achieve environmental recovery based on a deeper understanding of the area, obtained through in-depth field research. The SCSR identified activities directed at nurturing and managing water sources, diversifying economic activities, enhancing food security, and reducing costs. These goals were interrelated and supplemented each other within the system of indigenous land management, *ntambo*. Recommended activities included beekeeping, forestry, introducing new varieties of grass, and improving the oven. Activities in Kitanda village were first introduced into the Muungano sub-village, because of the typical *ntambo* landscape of this area. The project staff first contacted the village chairman at that time living in Muungano Sub-village, and asked him to invite potentially interested residents to a meeting for an explanation of the SCSR effort. After the meeting, the meeting participants agreed to cooperate with the project, and the SCSR staff left the decision-making for the activities up to them. In response to this, participants spontaneously organized a *kikundi*. The *kikundi* was subsequently named Ujamaa by the members (SCSRD, 2004).⁽⁹⁾ Ujamaa membership is comprised of the residents in Muungano Sub-village.

Unlike previous projects and programs conducted in this village, the SCSR Project was the first that respected local popular opinion, even with regard to adjusting the direction of proposed activities. Members of Ujamaa appreciated the SCSR attitude, and took up fish farming in addition to the recommended activities. The introduction of fish farming constituted an important turning point in this project. The local residents enjoyed fish as a side dish, but it was expensive due to transportation, and they had long wanted to have their own supply. Nine individuals had attempted to raise some indigenous species, but their lack of appropriate knowledge prevented effective management. Through repeated interactions with the project staff, members of the Ujamaa began to consider creating a fishpond for fingerlings at the bottom of the valley. Although the SCSR wanted to avoid the pitfalls of the traditional approach to development where goods and knowledge were simply provided free of charge, they also saw the significance

of the relationships among managing a fishpond, nurturing water sources, vitalizing economic activities, enhancing food security, and reducing various expenses. The SCSRD finally agreed to provide Tilapia fingerlings (*Oreochromis sp.*) by cost sharing. The staff aimed to encourage the Ujamaa members to have ownership in their activities. The growth rate of tilapia was high, and the population grew successfully. Indeed, tilapia propagation vitalized the activities of the Ujamaa *kikundi*.

Fish farming provided substantial benefits in a short period of time, and soon affected the villagers living near the members of the Ujamaa *kikundi*. Some even attempted to join the Ujamaa *kikundi*, but the organization denied new memberships due to concerns about losing control of *kikundi* activities with a much increased membership. Instead of simply refusing to accept new members, Ujamaa members suggested that the newcomers organize a new *kikundi*, and promised to advise this new organization. As a result, many villagers organized *kikundi* in several sub-villages, and initiated fish farming and activities recommended by the SCSRD. Some *kikundi* incorporated other activities such as reciprocal labor exchanges. Each new *kikundi* was organized primarily by one or two clan members. Ujamaa *kikundi* was asked to consult on management issues, technical support, and so on.

Because Ujamaa was comprised of individuals with relationships to the village chairman at that time, many members held official positions in the Village Council, such as Village Council member. In addition, four *kikundi* organized after Ujamaa included members with experience in *kikundi* activities gained through previous rural development projects/programs. At this time, this situation impresses that people who commit *kikundi* activity are limited to those who are active to anything new or who are in influential position. However, *kikundi* formed after these four did not necessarily have members with official positions nor prior *kikundi* experience. This means many “ordinal” villagers became committed to *kikundi* activities. Even after the termination of the SCSRD Project, the number of *kikundi* was more than 20, and *kikundi* activities expanded both within and outside of the village.

This invigoration of *kikundi* activities rested on several factors: 1) government policies and rural development projects/programs had promoted microfinance in combination with *kikundi* organization, 2) many households needed money to invest in agricultural inputs for coffee production, and 3) the people were highly motivated to diversify their economic activities faced with the stagnation of the rural economy (Mhando & Itani, 2007). The activities of the SCSRD Project demonstrated that the villagers were able to manage and perform necessary economic activities by themselves in the context of a rural development project/program. Villagers who organized the *kikundi* under the SCSRD Project accomplished their plans and actively pursued their goals.

However, the vitalization of *kikundi* activities also brought conflicts within many *kikundi* and Ujamaa was asked to resolve conflicts and problems. As the number of *kikundi* organizations increased, Ujamaa often got tied up in such work. The members considered reducing labor about the work and thought about to start exchange among *kikundi*. Because exchange activity had a role to stimulate each

other, exchange useful information, and consult problems, it became popular among *kikundi* at the closing stage of SCSR project. After the termination of the SCSR Project, the villagers even spontaneously organized a *kikundi* union, uniting all the *kikundi* in and around the village in order to regulate relationships among *kikundi* and establish an effective base for approaching external supports.

DEVELOPMENT OF WATER SUPPLY WORKS IN KITANDA VILLAGE

This chapter explains the efforts to expand water supply works in Kitanda Village. The progress can be divided into two stages. First, the villagers spontaneously started the efforts in the Kiblang'oma sub-village in 2000. These sub-villagers adopted a cost sharing method and successfully gained external support. However, their work was slow-moving until the Ujamaa *kikundi* started their water supply works in 2004. In the second stage; efforts steadily expanded, attributable to the activities of the *kikundi* organizations, eventually covering almost the entire village.

I. First Stage: Emerging Movement in Kiblang'oma Sub-village

The Tanzanian government initiated the water supply works in the Mbinga district during the socialism period. In 1982, only 12% of the 108 villages in the Mbinga district had water taps (Schmied, 1989). The diocese of the Roman Catholic Church also promoted the construction of a water line, especially around the Mbinga town. A European engineer commissioned by the diocese planned and executed the construction.

The history of water supply works in Kitanda Village dates to 1987. In that year, the European engineer of the diocese visited the village, and was expected to start the water supply project, but the plan was halted before a survey was even conducted. A decade later in 1997, the Danish International Development Agency (DANIDA) started a water supply project in the district and established water lines in the villages around the Mbinga town. The plan also included Kitanda Village, and an engineer from the district water department came to the village and conducted a survey. However, the plan was again halted without explanation. Although the government had built water supplies in various areas in the district, Kitanda Village had not received the benefits of these efforts.

In this environment, several residents in the Kibalang'oma sub-village started their water supply works on their own in 2000, three years after DANIDA came to the village. This effort was proposed by a man in his 50s, known as a *mtu wa nafasi* (man of means), who operated a milling machine and had a car. He had traveled widely outside of the district in his youth, and came to understand both the importance of and the methods for establishing the water lines. Although one of his legs had been amputated due to some disease, he competently managed his properties for many years and continued to be an influential person in the village. Six neighboring households with no kinship ties agreed to his proposal, and they started to build a small-scale water line.

The reasons behind the water supply effort were explained in terms of the following factors: 1) Sewage had seeped into the periphery and main body of the springs at the valley bottom due to the increased number of people and livestock in the area. The initiator of the water works speculated that the dirty water had been causing numerous and repeated cases of such diseases as typhoid, especially during the rainy season. 2) Much water was needed to process coffee beans. After the harvest, water is needed to remove the pulp of the coffee cherry with hand-powered machines. Without careful performance of this work, coffee fermentation suffered, reducing the quality of coffee beans. The initiator explained that using small quantities of water for the processing would result in poor quality. This opinion has been considered to reflect the conscious management of quality associated with changes in the marketing system after economic liberalization.

As pointed out above, some but not all villagers used water from the furrows for purposes other than drinking. Households without access to the water furrows were obliged to make frequent trips to fetch water from the springs at the valley bottom. The water lines would reduce such labor. Indeed, the villagers longed for the water lines to process coffee as well as to reduce the labor involved in fetching water for general use, which had long been a chore for the women. Especially during the rainy season, women in charge of the *ngolo* cultivation become very exhausted, because of intensive labor. Therefore, it is extra heavy work for them to fetch water in that condition. What is more, some women hurt themselves, because they slipped and fell on the muddy soil during the rainy season or the plastic bucket used for fetching water breaks up. Meanwhile, news about the water lines in the Mbinga town and other villages were brought in by the traveling villagers and created a strong local demand for the construction of water lines.

When the six households constructed a water line for their houses, the surrounding 27 households benefited from the water supply. Subsequently, many sub-villagers were stimulated to see with their own eyes the completed lines and wanted them as well. The original six households consulted with the chairman of the sub-village to attempt to make the water line work as sub-village-wide project. As a result, they founded the Kiblang'oma Water Committee and collected funds from each of the households in the sub-village. This was enough funding to initiate the project, but was not enough to complete it. The committee decided to submit a petition to the district government, and requested funding. As it was clear that the foundation for this project had already been established with the sub-villagers' own funds, the District Executive Director, who visited the sub-village could personally confirm this progress. He admired their effort and promised Tshs. 1,000,000 in assistance.⁽¹⁰⁾ The water supply works subsequently proceeded without major difficulty, and the former vice president visited Kiblang'oma to ceremonially lay the cornerstone.

As many households in the sub-village participated in the water supply works, 29 water taps were soon established. At present, tap water is available to nearly all the sub-village households. Kiblang'oma is characterized by relatively fertile soil, and many sub-villagers have been proactive in trying out new economic activities. It was this sub-village that spread a new variety of taro throughout the village (Kurosaki, 2007). The progressive spirit and motivation for development of

this population have been considered evident even in the water supply works. However, these sub-village-wide efforts for a water supply did not expand to other sub-villages during this period of time. It was only after 2004, when the SCSR Project terminated, that the water supply efforts expanded to cover the entire Kitanda Village. The *kikundi* served an important function during this second stage.

II. Second Stage: Expansion of Movement of Water Supply Efforts After 2004

Many *kikundi* had been organized under the SCSR Project, but not all were able to continue their activities as I have shown above. In 2004, during the last phase of the project, many trivial problems stymied even the Ujamaa *kikundi*. However, the Ujamaa members took pride in being the forerunners of the *kikundi* movement, and spreading fish farming both in and outside of the village.

For example, when the Ujamaa *kikundi* began fish farming, many people from both within and outside of the village visited the Ujamaa fishpond to purchase fingerlings. Because Ujamaa members did not mind responding in detail to questions about how to manage the fishponds and raise tilapia, and because they thoughtfully framed their answers in terms of the needs of the individual visitors, the members came to be known as *mtaalamu* (specialists) in fish farming. Subsequently, many people visited Ujamaa *kikundi* not only to learn about fish farming, but also to learn about *kikundi* activity in general. One example, in March 2003, members of a *kikundi* organized in another village visited the Ujamaa *kikundi*. Ujamaa members explained their activities, and the visitors participated and were trained in making seedlings for forestry activities (SCSR, 2004).

At the same time, the Ujamaa *kikundi* also had opportunities to publicly present its achievements. In April 27, 2003, *kikundi* from nine villages, including Kitanda Village, presented their activities in a poster format at a workshop organized by the SCSR in collaborate with District Council held in Mbinga Town. During this workshop, Ujamaa created a sensation by demonstrating its progress in fish farming. Ujamaa also took a leading role at another workshop held by the SCSR in 2004 to commemorate the end of their project. Its position as pioneer was reinforced through these events and later symbolized by the term, *mama kikundi*, when the people refer to the Ujamaa *kikundi*.

After the SCSR project ended, the subsequent Ujamaa meetings addressed how to initiate and conduct activities worthy of its status as a pioneer. Following many meetings, the members decided to establish water lines for member households. Needless to say, the desire to reduce the hard labor involved in fetching water figured large in this decision.

In order to provide Ujamaa members with access to water, water lines had to be placed through the land of other villagers because the members lived dispersed throughout the Muungano sub-village. However, securing permission to pass the water lines through non-member land was not easy.⁽¹¹⁾ In addition, members were anxious about their ability to manage this project only with their own funds. Therefore, in the context of the leader of Ujamaa was serving as chairperson of the Muungano sub-village, the members submitted a proposal for a sub-village-wide water supply works to the sub-village assembly. Because the sub-villagers

had been discouraged by previous water supply works associated with the government/DANIDA, they promptly agreed to this plan and decided that each household would provide Tshs. 40,000 for construction, even in installments. In August 2004, the Muungano sub-village submitted documents to the water department of the district council, requesting technical support. Through this process, they established a cooperative relationship with the department, and an engineer from the water department soon started a feasibility study.

1. *Cost Sharing as an Approach to Development*

As noted above, government development policies, including villagization, adopted a top-down approach during the period of socialism. However, these approaches fell out of favor, especially after the SAP, affected by the international donor thinking. Tanzania then introduced a participatory method that included cost sharing as one key aspects in the process. In addition, the government and development donors have recently targeted specific groups and organizations for assistance. These groups or organizations became eligible only after they initiated activities to achieve some progress on their own.

As seen above, as a result, the water supply works in the Kiblang'oma sub-village followed this cost sharing procedure reflecting the new assistance model. This case exemplified for villagers the success of popularly-led activities based on cost sharing. In addition, Ujamaa had already experienced cost sharing in obtaining fingerlings during the SCSRD Project. One Ujamaa member remarked, "Recently, we have been unable to gain assistance without showing our *nguvu* (effort)," and another individual noted, "If we only sleep (live without doing anything), sponsors must run away. The government often advertises to show effort, not only words." These comments imply that people have recognized the change in the development assistance principle, and have adapted positively to such a change to garner external support.

The Ujamaa *kikundi* and the Muungano sub-village council received external support for water supply works by following this new procedure. When they started their construction, a volunteer of the Japan Overseas Cooperation Volunteers (JOCV) under JICA was living in Kitanda Village supporting *kikundi* activities.⁽¹²⁾ Ujamaa approached her about the possibility of funding. Ujamaa and the Muungano sub-village had already dug furrows by then to bury the water pipes, and collected sand to construct the intake mechanism, thereby demonstrating their abilities. The volunteer responded to Ujamaa's request by applying for the "Small Heart Project" to the JICA Tanzania Office.⁽¹³⁾ After negotiations between the volunteer and the office, the proposal was approved, with 300,000 yen (equivalent to about Tshs. 3,000,000) provided by the Kagoshima Rotary Club and the Japan Foundation. The original application was for the water supply for the Muungano sub-village, but JICA suggested providing water taps to nearby public facilities, such as the dispensary, church, elementary school, and secondary school in the Lami A sub-village as a condition for the funding. As a result, the single sub-village water committee was reorganized as the Muungano-Lami Water Supply Committee. Water supply work initiated by Ujamaa expanded to cover two sub-villages.

However, the funding provided from Small Heart Project was apparently insufficient to finish the project, exhausted in buying the water pipes, not even reaching the secondary school, the nearest targeted facility. Purchasing additional water pipes and cement became difficult, but the people continued to collect money and dug furrows, as this could continue without much money.

Their gallant efforts came to be noticed by the District Council, and the committee received extra funding of Tshs. 5,800,000. Needless to say, several

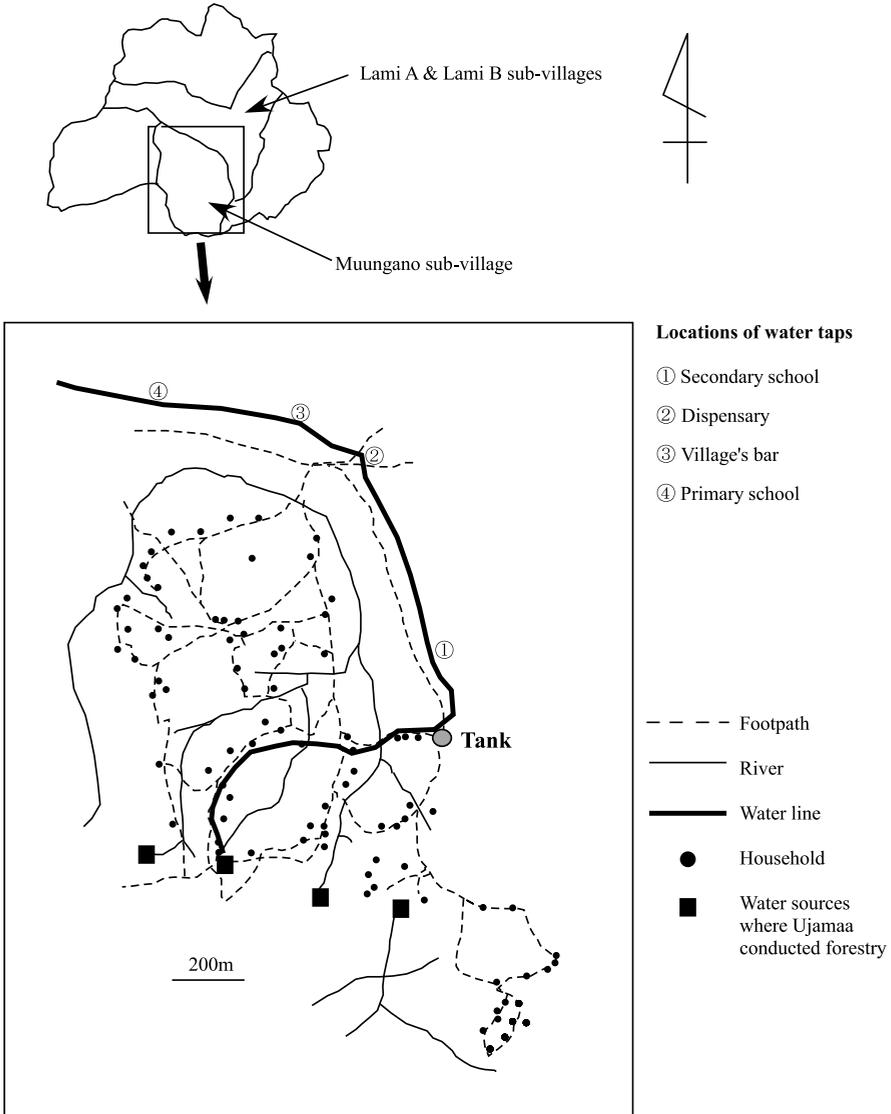


Fig. 4. Map of the water line.
Source: Drawn with Global Positioning System (GPS).
In this figure, water taps for individual households are not shown.

Table 2. Locations of water taps.

	Facility/Name	Type of Use
1	Secondary school	Public
2	Dispensary	Public
3	Village's bar	Public
4	Primary school	Public
5	D.H.	Individual
6	J.K.	Individual
7	A.K.	Individual
8	A.K. (2)	Individual
9	M.K.	Individual
10	B.N.	Individual
11	C.M.	Individual
12	F.K.	Individual
13	N.D.	Individual
14	Y.L.	Individual

A.K. has two water taps.

Source: Interview with Muungano-Lami Water Committee.

problems emerged in the course of construction. These included work delays caused by the inappropriate responses of officers of the water department, hostility between the water committee and the village executive officer in relation to budget management, and disturbances among the villagers who did not favor the project (or using money for this purpose). Construction of the water lines was interrupted on many occasions by these events. However, the devotion of the members of the water committee and the strong desire of villagers, especially women, to complete the water lines enabled the completion of one water tank and the placement of several water taps during the dry season of 2006 (Fig. 4, Table 2). Water taps were completed at the aforementioned public facilities, and households paid extra money for the individual use at these taps.⁽¹⁴⁾ Currently, the water committee is continuing its efforts to establish an additional water line in the Muungano sub-village. According to the report submitted to District Council in January 2007, the money collected from the villagers had reached Tshs. 2,415,150.

2. *Forestry Integral to the Water Supply Works*

The maintenance of a certain quantity of water is indispensable for sustaining the water supply to the water lines. Therefore, forestry management mindful of the water sources and mountaintops constitutes an important supplemental task with regard to water supply works. These efforts were recommended to the villagers during the SCSR Project, and the Ujamaa *kikundi* followed up on these suggestions, focused on mostly the environmental conservation. Indeed, although

Table 3. Agenda of the Muungano sub-village meeting.

Agenda	
1	Opening
2	Checking the records of last assembly
3	Water supply works
4	Forestry within sub-village
5	Agriculture
6	Cassava cultivation
7	Environmental conservation
8	Donation for salary of guard
9	Soap making project
10	Closing

Source: Record of the Muungano Sub-village Assembly held on February 14, 2005.

Bold letters for emphasis.

members of Ujamaa acknowledged the importance of forestry for water sources, during the SCSR D Project they were not very interested in forestry. The members recognized the role of forestry in nurturing fruits and coffee seedlings for sale. However, when Ujamaa decided to develop their own water supply, they reinforced the importance of forestry they conducted and underscored its advantages to strengthen the motivation for starting the water supply works.

Environmental conservation has been emphasized in Tanzania since before independence. There had been several projects and programs related to forestry, such as the Agroforestry project and the Program for Recovery of Soil Fertility, implemented in Kitanda Village. Experience gained by the villagers through these projects/programs as well as through the SCSR D project can be thought to have contributed to the Ujamaa members' idea of integrating forestry with water resource management and the water supply works. The Muungano sub-village meeting held in February 2005 clarified the relationship between the forestry agenda and the water supply works agenda, illustrating this thinking. Sub-villagers discussed mountaintop forestry and the acquisition of seedlings in relation to water supply works (Table 3).

In the mean time, the Mwamko⁽¹⁵⁾ *kikundi* initiated its own water supply works in Nsenga A Sub-village. Mwamko was organized based on two intermarried clans during the initial stage of the SCSR D Project, and it had maintained its activities without any serious hindrance. Their activities included cultivating the crops of *kikundi* and brewing local beer, in addition to fish farming and other activities recommended by the SCSR D. This *kikundi* also became inspired by the challenge presented by Kiblang'oma and Ujamaa successfully working for their water supply, and decided to start their own works. The Mwamko *kikundi* initially discussed the plan internally, and then asked the Nsenga A Sub-village Assembly to treat it as a sub-village project. This idea was approved, and Mwamko's mem-

bers took the initiative of organizing the Nsenga Water Committee. This committee decided to use the five water sources in the sub-village, and asked the sub-villagers to donate Tshs. 7,500 per adult. An elderly member of the Mwamko provided Tshs. 100,000 to support the project as well as to encourage other sub-villagers. During the SCSR Project, the man talked about how the current situation differed from that under socialism. He recognized that information became available and opportunities were plentiful for conducting activities that they really wanted. His positive ideas contributed to the initiation of the water supply works, even after the termination of the SCSR Project. The secretary of the Mwamko *kikundi*, who managed a small shop and was serving as chairman of the Nsenga Water Committee, contributed Tshs. 100,000 to use as initial capital.

As did the Kiblang'oma sub-village and Ujamaa *kikundi* water works, the members of Mwamko *kikundi* first began to measure the water sources with guidance from officers of the district water department. According to the committee's report in 2007, a total of Tshs. 1,178,000 was collected. Water taps were set in four places, and clean water became available from pipes at five locations although water taps had not yet been installed. Many sub-villagers were able to obtain water from these taps and locations.

This case also underscores the role played by forestry with regard to main water source after the commencement of this water supply project. Mwamko members took the initiative to collect about 200 naturally growing seedlings of indigenous species, including *mziu* (*Syzigium guineense*), *mnyenda* (*Bridellia micrantha*), and *mtele wa mbamba* (*Tabernaemontana ventricosa*), and planted them around the main water source in February 2007. In addition, they selected one of the water sources from among those worked by Mwamko members.⁽¹⁶⁾ The chairman of the Mwamko *kikundi* had participated in the activities of the Program for Recovery of Soil Fertility sponsored by ARI-Uyole and during the SCSR Project, this man promoted the care of many species introduced by ARI-Uyole, including *Sesbania* and *Cajanus cajan* in addition to those recommended by the SCSR Project. Several species observed in the Mwamko *kikundi*'s nursery for forestry. Mwamko's activities in the service of nurturing trees at the water sources apparently reflected their experiences gained during the past several development projects/programs.

The Nsenga B sub-village subsequently expressed the desire to join the water supply efforts, and the Nsenga Water Committee decided to expand the water line to the Nsenga B sub-village. However, the construction of a water tank could not begin because of the cost. The next step in providing water supply works in Nsenga involves searching for external support to complete the project.

The Lami B sub-village joined the Lami-Muongano Water Committee in this environment, and even the Machimbo sub-village became committed to starting their water supply works according to their own plan. Water supply works initiated by one *kikundi* after the termination of the SCSR Project ultimately covered the entire Kitunda Village. Figure 5 summarizes all the processes related to water supply works in the village.

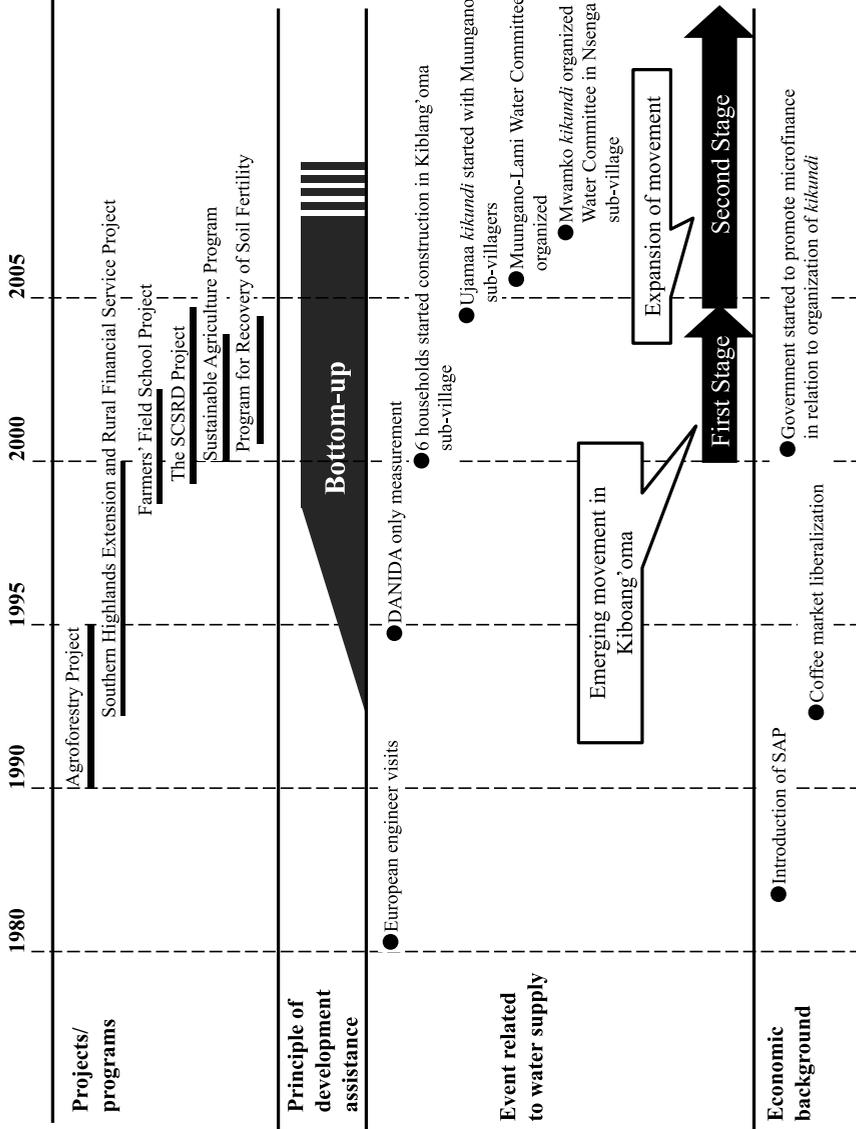


Fig. 5. The history of water supply works in Kitanda village.

SUMMARY AND DISCUSSION

The villagers' efforts for the water supply in Kitanda Village ultimately derived from a changed economic condition and from people's experience gained from the previous development assistance episodes. Water supply to the village emerged as a major concern as water lines were established in various parts of the district. On the other hand, coffee cultivators became conscious of enhancing bean quality in the trend toward economic liberalization. Quality coffee bean processing required a larger quantity of clean water.

A critical change in the international principle of development assistance emerged in the 1990s and greatly influenced the local people's water supply efforts. During the period of socialism under the Ujamaa policy, people were granted external support without showing any effort. In contrast, cost sharing and popular initiative later became mandatory for garnering external support. The construction efforts for water initiated by Kiblang'oma sub-village were the first to gain external support by adhering to the cost sharing approach in all of the Kitanda village, setting the first stage for the endogenous water supply works. Sub-villagers advanced their water supply efforts with their own funds, and the district government finally recognized this and provided assistance in funding and technology. However, water supply efforts did not expand to other sub-villages immediately.

The water supply efforts expanded only after 2004, when the SCSR Project terminated, because *kikundi* served as a contact point for starting this new works. Ujamaa initially planned to start the water supply works as a *kikundi* project. They later expanded the efforts to a project of the entire sub-village in order to increase its feasibility. Following the example of Kiblang'oma sub-village, Ujamaa first collected funds from the sub-villagers and then proceeded with the works. They subsequently succeeded in garnering support from Small Heart Project of JICA as well as the District Council. Because JICA (Tanzania Office) required the project to cover the nearby public facilities, the Muungano and Lami A sub-villages became associated with this project. This development stimulated the other sub-villages. The Mwamko *kikundi* followed Ujamaa's approach, and started a water supply project in the Nsenga A sub-village, later encompassing the Nsenga B sub-village, setting the second stage for the village-wide expansion of water supply efforts. In addition, forestry efforts conducted under the auspices of SCSR development projects were reevaluated and incorporated into water supply works by the villagers in the form of nurturing trees at the water sources. Multiple factors, many resulting from the previous experience with development assistance, have affected the villagers' water supply efforts in Kitanda village since the example set by Kiblang'oma sub-village expanded to Ujamaa *kikundi* and Mwamko *kikundi*. Important elements such as cost sharing (mainly via the development policy and project/programs after the SHERFSP), organizing *kikundi* (the FFS, the Program for the Recovery of Soil Fertility, the Sustainable Agriculture Program, and the SCSR project), and forestry techniques (the Program for the Recovery of Soil Fertility and the SCSR project) were accumulated in the villager's positive experience. As a result, nearly the entire village was covered with

water supply movements, and the general standard of living was improved.

However, why these *kikundi* tried to proceed with the water works despite the heavy work involved is not clear. In the case of Ujamaa *kikundi*, they contributed to spreading activity in the village by checking on the activities of other groups. In this way, they took pride in gaining the trust of the villagers and consequently continued to take the initiative in *kikundi* activities. This experience affected the onset of the water supply work. After the end of the SCSRD project, the activity of the Ujamaa had fallen into a rut, but the expectations of the other *kikundi* that the Ujamaa would lead *kikundi* activities motivated this new activity. In addition, they acquired negotiating skills in the process of gaining external support and developed self-confidence. Although the water supply work developed into public work throughout the sub-villages, the members of Ujamaa continuously played a central role and contributed to complete the tank and water line for the public facilities. Currently, the water work is being expanded and the members of the Ujamaa are extending water lines to their houses. In this case, the community-promoted public work in the wake of *kikundi* activity represents a popularly-led development in rural society.

Each development projects/programs can be evaluated according to its own framework. However, consideration of water works initiated spontaneously by villagers must address the “unintended effects” or “side effects” of development projects/programs (broadly defined as “impact” in the evaluation method of development assistance) as well as its impact on the everyday life of the residents, whether they are positive or negative. Ignoring these unintended effects/side effects renders any examination of development efforts inappropriate. In such cases, differences between passive acceptance of assistance and proactive behavior in the service of development are neglected, and development practitioners continue to focus on improving only the methods. Such a disregard is disadvantageous for both the local residents and development practitioners. Therefore, it is crucial that development projects/programs not be evaluated only in terms of their own frameworks.

Tsurumi (1977; 1996) suggested that “endogenous development” in the process of seeking rural development differs from the European models of modernization. She emphasizes two elements as the core component of this thinking: 1) interactions between people who have inhabited the area for at least two generations and those who have a history of roaming (i.e., external actors from other societies), and 2) the creative work that results from such interactions. Actually, most of the above described emergence of water supply works can be attributed to the villagers’ proactive behavior, even if the interactions between external actors and sometimes support from them at an appropriate time were crucial. It is important for development practitioners to respect and attend to the experiences and abilities that the local people have accumulated through preceding development assistance, and to support the creation of popularly-led movement for endogenous rural development.

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NOTES

- (1) In this paper, “development assistance” includes: policy (national)>program (local sectors)>project (all others).
- (2) The author participated in the Japan Overseas Cooperation Volunteers (JOCV) program of JICA from July 2001 to July 2003. I was a member of the Mbinga District Council and worked with the Agriculture and Livestock Development Office and the Participatory Rural Development Project sponsored by Sokoine University of Agriculture and JICA (the SCSRD project). This paper is based on the record of my activities during the project and on fieldwork conducted intermittently over a period of 18 months following the termination of my JOCV work.
- (3) Theoretically, development donors and related studies elaborate the evaluation method, but in practice, because of restriction of strict budget cycle of finance management and accountability, evaluation works do not catch up with the theories (Oakley et al. 1998: 38).
- (4) These programs included village level activities and may be distinguished from programs such as Structural Adjustment Program (sector level) to be mentioned later.
- (5) In this paper, Swahili terms are italicized, Matengo terms are italicized and underlined, and scientific names appear in bold type. Unique nouns such as *kikundi* names are referred in normal style whether they contain Swahili or Matengo terms.
- (6) The categories of provinces in rural Tanzania are as follows (except for Zanzibar): Region (*Mkoa*)>District (*Wilaya*)>Division (*Tarafa*)>Ward (*Kata*)>Village (*Kijiji*)>Sub-village/Street (*Kitongoji/Mtaa*).
- (7) The Tanzania government centralized scattered households into “villages,” called villagization, in order to establish an effective capital- and labor-intensive extension system and avoid social stratification (Yoshida, 1997). *Ujamaa* means “family-like bond.”
- (8) The project started in 1999, but many activities in Kitanda Village began in 2002.
- (9) To avoid confusion between the Ujamaa policy and the Ujamaa *kikundi*, I always refer to the policy as Ujamaa policy in this paper.
- (10) During the research period, 1US\$ was equivalent to about 1,000 Tanzanian shillings. A Tanzanian shilling will be referred to as Tshs.
- (11) The Matengo society does not have any common land managed by the community. Even though all Tanzanian land is officially held by the state, each parcel of land is also under the tenure of an individual, and villagers engage in land transactions at village level.
- (12) This volunteer assumed my JOCV duties.
- (13) The “Small Heart Project” is a volunteer program managed by JICA that supports JOCV members. JOCV members sometimes encounter small problems that are pertinent but unrelated to their original missions. If the problems can be solved with a nominal amount of money, volunteers can apply to JICA who will solicit funds from the private sector. The limit for one project is 300,000 yen. <http://www.sojocv.or.jp/heart/index.html> (accessed December 11, 2007, in Japanese).
- (14) The Water Committee installed a water tap free of charge for a household with a disabled person.

- (15) *Mwamko* means “awakening.”
- (16) This case used seedlings grown by the villagers. Seeds for those seedlings were provided by the SCSR D.

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