

**Co-learning between Japan and South Asia  
through Jimotogaku Community Mapping Method**

**Takayoshi Kusago, PhD**

*Faculty of Sociology  
Kansai University  
Osaka, Japan  
tkusago@kansai-u.ac.jp*

## 1. Introduction

Development experts have pointed out that we have to rethink conventional model of social and economic development. There may be various reasons for this, but one is that economic growth does not necessarily assure the increase in people's well-being, as shown by Richard Easterlin in his seminal study on the economics of happiness (Easterlin, 1974). Such a paradoxical situation is particularly noticeable in developed countries including Japan. We could suspect behind this paradox like adopted industrialization strategy to achieve high economic growth has produced some side effects – pollution, resource depletion, mood disorder and depression, and so on (Kusago, 2007).

Another reason why we have to pay more attention to rethinking the conventional development model is related to growing concern over the worldwide environmental destruction, natural disasters related to climate change. In 2011, the Great East Japan Earthquake occurred on 11 March 2011 and shocked both Japan and the world with its scale and seriousness of the adverse impacts of the natural and human-made disaster on human communities and living environment. In 2015, for example, there was a heavy flooding in southeastern Africa in January. In Vanuatu, there was a huge cyclone named "Pam." In Nepal, a large earthquake hard hit its capital city Kathmandu. Then heat waves from India to Pakistan, floods in Pakistan and forest fires occurred in Canada in July; earthquake in Chile and flooding in Japan in September. In November, forest fires in Australia and landslides in Myanmar occurred. These describe the tendency of recent years with increasing cases of natural calamities, which challenges us, human beings, to mitigate its negative effects and stay resilient to deal with hardships and reconstruct our society.

Adverse effects of conventional development model and natural catastrophe put us to agree on sustainable development goals (SDGs) under the initiative of the United Nations (UN). SDGs consists of seventeen goals including economic well-being, education, and health, gender, and disability, a wide range of environmental issues. Among the seventeen goals, the goal number 11 targets sustainable cities and communities. If we pursue sustainable development set by SDGs, we need to find a concrete approach and action which leads us to attain societal development envisioned by SDGs at the community level.

In South Asia, India has achieved high economic growth, which accelerated urbanization across the country. India's growth becomes a driving factor for people in other South Asian countries to migrate out of rural communities to urban centers. It might cause population issues in urban centers like urban slums, and people tend to perceive living conditions in rural communities less important than those in urban centers. We have witnessed the similar transition in Japan and other highly developed nations; it could widen gaps in economic well-being and create a skewed population composition between urban centers and rural communities. To achieve SDGs in South Asia, the conventional growth approach needs to be adjusted, and a practical method for sustainable livelihoods in rural communities needs to be sought and applied.

In this paper, we will first introduce a sustainable livelihood approach as a reliable community-based development model in line with SDGs. We will explain collaborative action research as an effective practical method to realize sustainable livelihood at the community level. Second, we will explain the background, concept, and process of the method through a case of Minamata. Then, we will introduce a pilot project applying the *Jimotogaku* community mapping method in a village in Bhutan to discover local assets and wisdom on sustainable livelihoods. Finally, we will discuss potential in that the *Jimotogaku* method could be effective to assist changes in people's mindset on sustainable community development both in Japan and in South Asia.

## 2. Importance of People's Well-being and Sustainable Livelihoods Approach

SDGs has its overarching goal to realize a sustainable society and a healthy planet. SDGs aims at eradication of poverty, hunger zero, health, and welfare for all people, quality education for all, economic growth and job satisfaction, the creation of a sustainable, livable city, reduction of inequality among people and country, clean water, sea environmental protection and combating climate change. All of the UN member countries have to design a local program to attain the goals by 2030. To achieve SDGs, people's action, as well as a well-designed local program, is needed to pursue high on overall people's well-being and sustainable community livelihood.

The importance of people's well-being for community development needs to be explained. A local

community is a place where people make a living on a daily basis. Community development certainly includes the economic welfare of the people. For a long time, economic measures have been used to assess and evaluate people's living conditions following a utilitarian approach advocated by Bentham (Bentham, 1988). In conventional economic thought, to maximize the economic aspect of well-being, a national government gives a high priority to expansion of economic production and sets a target on economic growth rates (GDP). However, after the 1970s, some economists (Easterlin, 1974) even started questioning if the economic aspect could indicate the real level of people's well-being correctly. Various researches on happiness and well-being (Kahneman, Diener, & Schwarz, 1999; Frey & Stutzer, 2001; Graham, 2009) began to receive more attention in the search for the key elements to happiness in a community. In 1990, the United Nations Development Programme published its first human development report (United Nations Development Programme 1990) with a Human Development Index (HDI), which covers three essential elements of people's well-being: the economic aspect, knowledge and education, and health aspects. Recently, OECD launched the Global Project on Measuring the Progress of Societies, which covers multi-dimensional aspects of individual well-being. Also, we have known country-based initiatives like Bhutan's Gross National Happiness (GNH)<sup>1</sup> and the Canadian Index of Wellbeing (CIW)<sup>2</sup> as pioneering efforts in this direction. In concerned over people's well-being, more attention should be paid to changes in the level of well-being in a community setting. Thus, by utilizing existing scientific knowledge on well-being such as the key determinants of well-being, both the level of people's well-being and their community conditions can be viewed in a multi-dimensional manner, which plays a key in the pursuit of sustainable community development on the ground.

To realize a sustainable, healthy community, Chambers and Conway (Chambers and Conway, 1991) has proposed an alternative local development approach make the community sustainable. They call it as a sustainable livelihoods approach and characterize it as "The objective of sustainable livelihoods for all provides a focus for anticipating the 21st century and points to priorities for policy and research. For the policy-making purpose, implications include personal environmental balance sheets for the better off, and for the poorer, policies and actions to enhance capabilities, improve equity, and increase social sustainability." (Chambers and Conway, 1991, p.1) We need to concretize the sustainable livelihoods approach so that it could be applicable in the real world. On this regard, Ashley and Carney (Ashely and Carney, 1999) put together six principles of sustainable livelihoods approach as follows:

- People-centred: sustainable poverty elimination will be achieved only if external support focuses on what matters to people, understands the differences between groups of people and works with them in a way that is congruent with their current livelihood strategies, social environment and ability to adapt.
- Responsive and participatory: poor people themselves must be key actors in identifying and addressing livelihood priorities. Outsiders need processes that enable them to listen and respond to the poor.
- Multi-level: poverty elimination is an enormous challenge that will be overcome only by working at several levels, ensuring that micro-level activity informs the development of policy and an effective enabling environment and that macro-level structures and processes support people to build upon their strengths.
- Conducted in partnership: with both the public and the private sector.
- Sustainable: there are four key dimensions to sustainability – economic, institutional, social and environmental sustainability. All are important – a balance must be found between them.
- Dynamic: external support must recognize the dynamic nature of livelihood strategies, respond flexibly to changes in people's situation, and develop longer-term commitments. (Ashely and Conway, 1999, p.7)

In a nutshell, these are the six principles of practical research methods to create a community where sustainable living can be realized sustainably along with the endogenous action of community members. The six principles can be summarized into four keywords: ownership, autonomy, collaboration, and sustainability.

Then, we could raise some questions. Can we find out a good practice that leads to sustainable

<sup>1</sup> Information on GNH can be found in <http://www.grossnationalhappiness.com/> (accessed on 28 August 2018).

<sup>2</sup> Information on CIW can be found in <https://uwaterloo.ca/canadian-index-wellbeing/> (accessed on 28 August 2018).

community development following the six principles? Would not it be possible to initiate such a practice by a collaboration of community stakeholders and experts? Collaborative action research could be a promising research method, which promotes community development through the collaboration of stakeholders by forming home-grown ideas and endogenous efforts.

### **3. Collaborative Action Research for Endogenous Community Development**

Social science research has to deal with serious issues like poverty, community revitalization, the school bully, conflict resolution in this age of globalization. We have seen similar problems and challenges across nations and regions. However, solutions to tackle these problems are not always the same; rather, it requires an understanding of uniqueness and characteristics of society, mainly because all of these are rooted deep in the complexity of social and economic system influenced by a different set of local factors. Theoretical work does help to explain the main reasons and impacts of the issues; however, it cannot provide timely response and action aiming at solving such issues. Action research could play an active role in finding remedy or solution.

Action research has been developed to improve the quality of human-related services such as community activities, social welfare, healthcare, and education (Herr and Anderson, 2005). For instance, it aims at improvement of teaching in collaboration with students and effective provision of health services meeting needs of patients. However, action research could vary from problem to problem, and it needs to be modified and invented case by case. We call a type of action research as collaborative action research if researchers and actors (stakeholders) work together to solve a particular social problem.

For the decades of action research, practical knowledge for action has been accumulated to improve one's action. Over the recent decades, the most advanced form of collaborative action research has been adopted for community development programs in developing countries. One particular form of collaborative action research is participatory learning and action (PLA). PLA was advocated as an alternative approach involving with the stakeholders against the conventional experts-driven approach. PLA is now widely accepted by practitioners on community development, which assist local people to identify key issues in community development and find its remedy by themselves (Kumar, 2002). Collaborative action research is considered as a powerful research tool for community development. Collaborative action research emphasized the importance of initiatives taken by the people concerned (stakeholders), over the relevant issue.

In the case of community development, local people can influence the direction of community development. Community-based action research emphasizes the importance of initiatives taken by the local people. Concrete community-based action research methods illustrate how local people can be mainstreamed into the process of community development. A set of core principles and characteristics of community-based action research are summarized by Minkler and Wallerstein (Minkler and Wallerstein, 2008), who are pioneers in community-based participatory research, as follows:

- It is participatory
- It is cooperative, engaging community members and researchers in a joint process in which both contribute equally
- It is a co-learning process
- It involves systems development and local community capacity building
- It is an empowering process through which participants can increase control over their lives
- It achieves a balance between research and action (Minkler and Wallerstein, 2008, p. 9)

In the case of community development, local people should become a change agent of their community, which is in line with the endogenous development theory proposed by Kazuko Tsurumi (Tsurumi, 1996), a Japanese sociologist. To understand the importance of endogenous development for community development, we can learn from the recovery process of the city of Minamata from an industrial pollution city to a leading environmental model city through the invention of neighborhood study method – the *Jimotogaku* method. (Yoshimoto, 2008)

### **4. Creation of Jimotogaku Method (Neighbourhood Study Method) in Minamata**

Japan has been successful in its economic development after the Meiji Restoration. Minamata-city

(Minamata hereafter) is a small city, with a population size of 27,697, located in Kumamoto prefecture, on the western side of Kyushu Island. It has fishing communities and mountain communities. This section details Minamata's case in its modernization path over the last century.

#### 4.1 National industrialization strategy and Minamata Disease breakout

The development of Minamata started as a part of the aforementioned national modernization strategy. In 1908, Nippon Chisso Hiryo Corporation built its factory in Minamata. This company was a frontrunner in the chemical industry in Japan. When the factory was established, people in Minamata had high expectations and hopes for the modernization of the local economy and the economic well-being of its citizens. With this factory, Minamata was one of the first towns in Kyushu to have electricity supplied. In 1932, the Chisso Corporation began producing acetaldehyde compound acetic acid in its facilities, and in 1941, it started the first production of vinyl chloride in Japan. The city's population grew in size as the company expanded. After World War II, this factory recovered its production capacity and led to the reconstruction of national economic development. However, this economic success changed with the official discovery of Minamata Disease in 1956. The number of people who suffered severe damage to their brains and nervous systems rose in the fishing communities of Minamata. Many died of the acute symptoms of Minamata Disease, and others had to suffer health problems throughout their lives. At first, the cause of the disease was unknown, but the cause was suspected to be some kind of epidemic; soon, however, the disease was found to be non-infectious. Until the cause was proven, the patients were confined to isolation wards in hospitals and, in some severe cases; patients were transferred to insane asylums. Medical investigation revealed that the cause of the disease was ultimately identified as mercury metal in the effluents from the Chisso factory into Minamata Bay. The mercury turned into organic mercury while it was in the ocean and reacted chemically (and adversely) with oxygen in the air. Through the food chain, before the disease hit human beings, the fish of Minamata Bay began to float on the surface and cats began acting strangely. The number of patients increased; however, these patients were forced to go through very difficult lives both physically and mentally. Since it took more than ten years for the central government to recognize officially that the industrial pollution was caused by Chisso, these patients had been left behind without support from the company and the government for many years. People with Minamata Disease were often discriminated against, even by their relatives and friends within the community, and this contributed to the victim's worsening mental states. This was partly because the presence of the Chisso Corporation in Minamata was highly significant economically in the local community, and many residents, who heavily relied on Chisso to maintain their economic livelihoods were afraid of economic loss because of the Minamata Disease cases. Therefore, those who suffered from the disease were often not supported medically or socially, economically, or mentally. Thus, some people, who were aware of their bad physical conditions, did not reveal their problems to avoid ostracism. For those who suffered and identified themselves as having Minamata Disease, their livelihoods decreased, and they faced severe discrimination by their fellow community people. Some patients and their family members were both verbally and physically abused by those who were once good friends in the same neighborhood.

Although the discovery of the Minamata Disease was made in 1956, the wastewater discharge did not stop immediately. Rather, the Chisso Corporation changed the location of its effluent outlet to continue to discharge the mercury after it was used as a catalyst for the carbide chemical process in the plant. The production of the acetaldehyde compound continued in 1968 when the government officially recognized the cause as the effluents of the Chisso plant. The government did not acknowledge the cause before 1968 because the Chisso Corporation opened its new factory in Chiba-prefecture with new production technology based on petroleum, not on carbide. The old technology was no longer needed for the company, and the official acceptance of Minamata Disease did not hurt the national industrial development, which depended on the Minamata factory's products. This inaction of the government toward the Minamata Disease patients incurred enormous costs for people in Minamata and increased the coverage area of the Minamata Disease by the change of the effluents in another location.

In 1969, the Minamata patients filed the first lawsuit against Chisso Corporation, and they won the case in 1973. In the 1970s, a series of lawsuits were started, and the conflicts between the patient

groups and the Chisso Corporation became extremely tense. Divisions among the patients also arose between those who were compensated and those who not. The community's overall cohesion and social integration were severely hampered with the spread of Minamata Disease. Even within the same families where some family members worked for the Chisso factory while other members suffered the symptoms of the Disease, conflicts became rampant and serious. There were many people did not join the lawsuits as victims of the disease to avoid charges that would accrue to Chisso, which provided their families stable income through the jobs. Within communities, divisions also occurred between local agricultural producers and the Minamata Disease patients because the producers' claimed that the loss of their sales was due to the negative image toward Minamata products in general.

With central and prefecture governments ignorant toward the Minamata Disease sufferers in the 1950s and 1960s, these social divisions became severe and pervasive. Besides the worsening livelihood of the disease patients, people in Minamata had a social stigma from the entire Japanese society. For example, passengers on trains that went through Minamata pulled shut the windows once the trains entered Minamata. City. Marriages were also broken off sometimes because a person came from Minamata. Thus, Minamata people tended not to reveal where they came from. They mentioned only which prefecture they came from. Minamata Disease had a profoundly negative effect on people's livelihood and communities in Minamata.

#### 4.2 Keys for Community Restoration through People-Driven Initiatives and Public-Private Partnerships in Minamata

For more than forty years of struggle over Minamata Disease between the people affected by the disease and the Chisso Corporation, and between the affected and their neighbors, social divisions became apparent and pervasive in Minamata city, which deteriorated people's well-being both physically and mentally.

In 1990, when the central government's dredging and reclaim land operation of the seabed was contaminated by the organic mercury in Minamata Bay, a citizen's group was formed to think of the future of the Minamata community. This group, called *Yorokai Minamata*, started their community survey to identify local resources ranging from natural environments, traditions, culture, local products, and style of local livelihood, for example. This group produced local resource maps, and they came to understand how rich the local resources in Minamata's communities were in the mountainside and along the sea, and they concluded that Minamata should be revived as a model environmental city (Yoshimoto, 2008). This citizen's initiative received momentum from the public sector when Mr. Masazumi Yoshii, who was a member of the Minamata City Council for many years, was elected as Mayor in 1994. Mr. Yoshii changed the local government's attitude and action toward the Minamata Disease sufferers by bringing in a bottom-up approach to public administration, which was well explained in the speech he delivered.

On the 1st of May 1994, Mr. Yoshii delivered a historic speech at the memorial ceremony of the Minamata Disease suffers. His speech offered a formal apology from the Minamata City government toward the Minamata Disease patients for its lack of support of them in the last forty years and declared the vision of a new Minamata, called the "Moyainaoshi Movement" to be created with a spirit of mutual helpfulness characterized by collaborative action among the victims of the disease, people without the disease, and the local government, to rebuild social ties of the Minamata communities. After 1994, Minamata moved forward to mend its social divisions within the communities and to advance people-driven community development. Mr. Yoshii took action to establish communication with the groups of the Minamata Disease patients – who were separated into several groups and did not get along well with each other because of the gap in the severity of the disease's symptoms. Mr. Yoshii also negotiated for the central government and the prefectural government to finalize the compensation for all of the Minamata Disease patients. He managed to orchestrate a universal solution for the Minamata Disease patients without regard to the level of their symptoms. In addition to the leadership by Mr. Yoshii, since 1994, the government and the local people have also taken action toward well-being and sustainable development for the people of Minamata. Likewise, the relationship between the local people and nature itself has also changed.

*Key 1: Local leadership and a Vision for a Model Environmental City*

In 1992, the Minamata City office declared that they would construct a model environmental city by changing its development path from fast-paced development and high productivity to an environmentally friendly path that also showed respect for the ecosystems of the area. This declaration was later given real substance within the city's programs, people's actions, and the local creativity that was on hand.

Setting a clear goal for the Minamata community through a local people-government partnership increased the number of people who were aware of a change from divisiveness and conflict in the community to collaboration. After all, the city of Minamata has chartered its revitalization as shown in Figure 1.

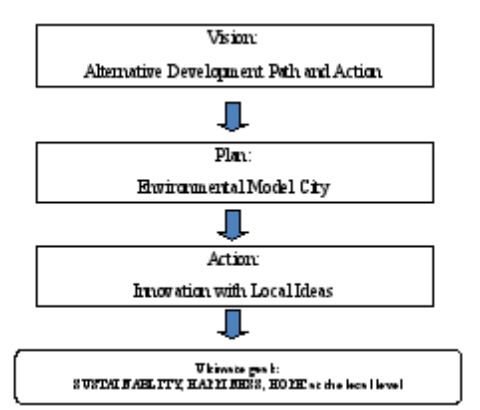


Figure 1. Minamata's endogenous development path

*Key 2: Government Policy: Environmental Meister*

Minamata City designed the Environmental Meister Program based on Germany's Meister System and implemented it in 1998. This program offers certification to those producers or artisans who use environmentally sensitive production techniques and methods. The idea is to promote the making of products that are safe, cause no concerns, and are both environments- and health- conscious. Certification has been granted to the producers of pesticide-free rice, tea, mandarin oranges, vegetables, and other products like sardines without preservatives through teachers (Meisters). Twenty-nine people are certified and active as environmental Meisters in the city. To be qualified as a Meister, six criteria are necessary:

- (1) Have produced certain products, which are safe for the environment and health, for at least five years,
- (2) Experience is making products that are safe for the environment and health, by using natural materials and avoiding chemical substances, etc.
- (3) Have certain knowledge, experience, and techniques related to making products that are safe for the environment and health,
- (4) Involve in activities related to regional environmental problems and environmental conservation,
- (5) Have certain knowledge related to environmental problems and environmental conservation
- (6) Have certain knowledge of the problems attributed to environmental pollution including Minamata Disease.

This Meister program has changed people's perception about organic farmers, who were formerly branded as out of the ordinary. With certification, the sales of local organic products have increased, and confidence in the products among local farmers has gone up. The city government has designed this Meister program to promote the city's vision to be a model environmental city. Currently, other cities and towns in Japan have also adopted this program.

*Key 3: Citizen's actions for a new development path: Women's waste reduction groups*

The new direction taken after 1994 by the Minamata City office influenced residents to engage in rebuilding their community through their own grassroots actions. In 1993, Minamata City started its ambitious garbage-sorting program by sorting garbage into twenty different types of garbage. However, under the new garbage-sorting program and collection scheme, the total quantity of the garbage collected gradually stagnated. In 1997, a women's group was formed to solve this problem, and this group contributed to the reduction of garbage in Minamata. The group members analyzed

the cause of the garbage problem and found out that the Styrofoam trays used by stores under fruits and other products caused a serious garbage problem. They surveyed carefully the use of the trays and vinyl bags at retail shops in the city, and with these survey findings, the group negotiated with major retail shops to abolish the trays. Also, the women's groups started distributing cloth shopping bags to all of the city residents to reduce the use of vinyl shopping bags given by the retail shops. Furthermore, the women introduced the eco-shop, which has promoted conservation of resources, reduction in the volume of waste, recycling, the sale of eco-friendly commodities, and the conservation of energy. This people's initiative contributed to making Minamata an environmental model city in Japan.

*Key 4: Jimotogaku, neighborhood study method, and the practice of Jimotogaku*

Minamata has both fishing communities and mountain communities. While people in fishing communities have suffered both economically and socially from Minamata Disease for longer than fifty years, people in the mountain communities have not suffered much from the disease. However, mountain communities have faced other problems incurred by modernization strategy. This strategy has caused urbanization of the society mainly because the number of jobs in modern sectors is overwhelmingly generated in urban or semi-urban areas. Thus, those who seek jobs, especially those who are young, tend to move to big cities like Tokyo, Osaka, or Fukuoka. Mountain communities in Minamata have faced this issue, and the number of residents has declined for years. The residents in those communities have long accepted the demise of their communities as the "fate" of rural communities in the course of modern development.

Mr. Yoshimoto, a former city officer in Minamata, questioned himself over the demise of livelihood in the once-beautiful communities such as in Minamata. Also, he was aware that mountain communities could be revitalized if the city of Minamata could be regarded as vital through Moyainaoshi. Mr. Yoshimoto saw Minamata city as an eco-system centering at the Minamata River flowing from the mountain communities to the fishing area.

Mr. Yoshimoto implemented his idea to stimulate the local people's mindset regarding the resources they possess in their local communities. He brought visitors from mostly Minamata to the mountain communities and asked the local people to guide them. Those who visited the communities enjoyed their visits to the rural communities and were impressed with the beautiful landscape and uniqueness of the communities' charming local way of life. The visitors praised rural living and asked local people about their communities and lifestyles. The local people who guided the visitors were surprised to learn that those visitors from urban areas had "positive impressions" about their local communities and became interested in local resources, traditions, and the culture of their village communities. Previously, the local people had felt old-fashioned and had little confidence or pride. However, after they started guiding visitors from outside, they gradually understood that they had not been left behind, thus realizing their potential to develop their communities with local resources and local ideas to attract visitors.

One rural community, *Kagumeishi*, started the first living-village Museum of Kagumeishi as a community business. This museum is at the core of the vision of Jimotogaku because it is built on the idea of learning from local communities. Jimotogaku has empowered local women as well. One women's group was formed voluntarily by those women who had worked on the local guidebook for visitors, and this group started a food-catering business by applying a philosophy of local production for local consumption. Also, when teachers learned of the attachment of the local people toward their folk stories, local music, and dance, the local primary school wrote a script for a school play about the history of the community. To practice the script, the elderly locals taught primary school students how to sing local songs and dance. The Jimotogaku method has catalyzed for residents to be aware of their valuable resources and to start thinking of the use of their resources to improve their well-being. Kagumeishi (an area in the mountains) received the highest award in 2005 from the central government for having the best practices to revive its local community. Currently, there are four communities applying the Jimotogaku method in Minamata, and this method has been spreading in rural communities across Japan (Yoshimoto, 2008).



## 5. Experimental Pilot on the Jimotogaku Community Mapping Program in Bhutan

### 5.1 Background

Bhutan has experienced both positive and negative impacts of modernization following the principle of GNH. Royal Government of Bhutan has made tangible progress in broadening the base of life infrastructure across the country, strengthening individual's capacity through education, and so on. On the contrary, issues like generating employment opportunities for the youth are serious, and rural-urban migration for finding a job in the industrial and service sector is on the increase. This migration, in particular among the youth, could hamper social and economic development through GNH in rural-based communities. GNH do promote and sustain the viability of a community with a high level of societal well-being, which is a necessary condition for local people to increase individual-level of well-being and happiness.

With growth-based modernization strategy, Japan has been facing a challenge in societal progress with economic development and environmental conservation (Kusago, 2007). For the last two decades, she has been struggling with low birth rate and aging problems to maintain proper function of a community in rural areas. The number of rural communities, with more than fifty percentage points of the total population of a community is above sixty-five years old, has increased and will increase. This might demise of rural communities where the local way of life is characterised as the farming-base economy, social relationships based on mutual assistance, and local wisdom built through generations. To find a practical method to revitalize such a community where local people, especially the youth, are leaving, the Jimotogaku method (neighborhood study method) could be an effective tool. It consists of interactions among insiders (local people) and outsiders (visitors) to generate community resource maps and information cards through a quick community walk. It allows local people to re-evaluate local resources and identify a new way to develop own community. In Japan, the Jimotogaku method has become popular to change the perception of local people on its local community and take action to develop their community instead of waiting for being demise under the name of modernization. This scenario could be the case for a developing country like Bhutan, gearing up its modernization.

### 4.2 Jimotogaku community mapping pilot program in Bhutan

#### *a. Purpose*

Bhutan as a young democratic nation has faced concerns over rural-urban gaps in the process of development. Bhutan Centre for Media and Democracy (BCMD), a non-profit organization<sup>3</sup>, has started programs targeting the youth to be a responsible citizen needed for a successful democracy. One of the activities BCMD has designed and implemented is a community mapping program for the youth to be an active citizen. It was conducted for the youth to look into issues or problems in an urban community like community safety issue, garbage problem, and so on. However, the program was not sufficient enough to interact with local stakeholders facing those local issues through the mapping activities. BCMD searched for a way to solve the limitation.

The Jimotogaku community mapping method has a unique feature as a collaborative action research method in that it creates a friendly interaction between visitors (the youth joining the mapping program) and local stakeholders (local people in the community where the community mapping program is conducted). This two-way interaction brings about the positive outcome on mindset change of both visitors and stakeholders. For visitors, working on the community mapping with local people changes their perceptions on the community because the mapping exercise gives them to find out rich local resources in the form of people, nature, local way of life. On the other hand, for local stakeholders, the community mapping exercise helps them to re-discover what their community has and its potential through the eyes of the visitors.

Thus, piloting a new community mapping programme by blending established BCMD's community mapping program and Jimotogaku method and its experiment was conducted in a village in Bhutan.

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<sup>3</sup>Information on BCMD can be found in <http://bcmd.bt/> (accessed on 28 August 2018).

*b. Key activities of the Jimotogaku community mapping pilot program*

Key activities of the Jimotogaku community mapping program consisted of the following components:

- Generating local resource (for local people, local culture, a way of life, life style (dress, food, housing, temple, health, education, etc.) to assist local people to be active on identification and use of valuable local resources.
- The youth participants in the community mapping program work as a team:
  - Do a community walk guided by a local person
  - Local people interviews using questionnaires during the walk
  - Filling local resource information cards during the walk
  - After the walk, the youth teamwork on the team-based community mapping based on what they have learned and discovered through the community walk.
  - The youth teams make presentations on the community maps, resource cards, interview sheets which they create in the feedback session with the local people.
  - The local people and the youth dialogue on the community and the maps and cards are given to the local people by the youth teams.

*c. Pilot Programme in Kuzhugchen village*

(1) Profile of Kuzhugchen Village

Kuzhugchen village is under Kawang gewog (block). The village as of December 2010 has 99 eligible voters. The village sits opposite to Chhandagang village. It is connected by well-furbished farm road and has a middle, secondary school, and a basic health unit. Kuzhugchen is one of the beautiful villages in Thimphu district with a good water source, peaceful environment, and fertile land. Their main cash crop is a potato. The villagers grow rice grain, maize and chili as well. It is located at approximately 45 minutes drive from the city of Thimphu.

(2) Pilot Method in a Nut Shell

The Jimotogaku method pilot community mapping at Kuzhugchen engaged eight youth comprising of youth from the community and outside.

The two-day program began with a briefing to the participants at Kuzhugchen Middle Secondary School. During the briefing, participants have explained the process of mapping, ways to approach the local people and given the required resources like interview sheet, resource card, stationeries, and camera.

At the end of the briefing, the participants were divided into two groups of four members each. Along with the group, one pre-identified local guide each were assigned. The local guides were assigned to assist the participants through the mapping process.

On the afternoon on day one, along with the local guides, the participants took a community walk. Both teams went into a separate segment of the community. While walking around, they explored the communities' resources like plants, cash crops, houses, people, and the environment. With the help of the local guides, the participants were able to understand the strengths of the community and were able to identify valuable resources that the villagers themselves did not notice.

The community walks ended in 90 minutes. In the evening, all pictures taken by the participants were developed and kept ready for use for the next day.

On the second day, using the pictures and information gathered, maps were developed for the route taken during the walk. Interview sheets were filled up using pictures, and resource cards were also made.

The maps were made to present the findings of the group and were later presented to the local guides and a few local people. After the presentation, feedbacks were received from the local people, and the guides and later all maps, resource cards and interview sheets were handed over to the local guides for future reference.

A pre-workshop survey, post-workshop survey and a program evaluation were done to assess the effectiveness of the project.

### (3) Participants

Kuzhugchen Middle Secondary School allowed one of their classrooms used for the briefing and presentation sessions. The total number of eight students from primary to college students) participated in the pilot program and two local people joined as a local guide.

### (4) Schedule

[Day 1]

Time	Particulars
1	9.45am Participants gather at Clock Tower square
2	10.00am Drive to Kuzhugchen School
3	11.00am Briefing with participants
4	12.30pm Lunch with local guides and team members
5	01.30pm Community walk with local guides
6	3.30pm Move back to Thimphu town
7	4.30pm Develop the pictures (only programme coordinators)

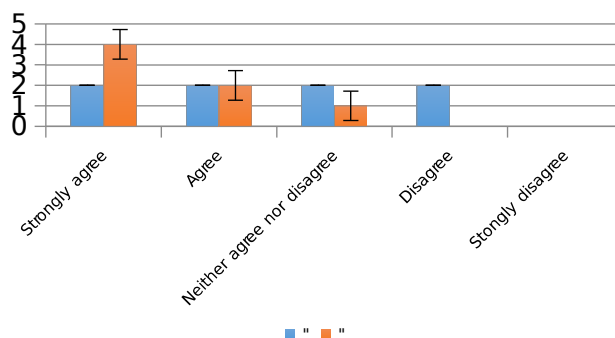
[Day 2]

Time	Particulars
1	9.20am Meet at the media lab
2	9.30am Work on producing interviews, resource cards and community maps
3	12.30pm Lunch
4	1.00pm Leave for Kuzhugchen for final presentation
5	2.00pm Present the findings to villagers and give feedbacks and receive feedback from villagers
6	3.00pm Collect survey and evaluation from the participants
7	3.30pm Return to Thimphu town

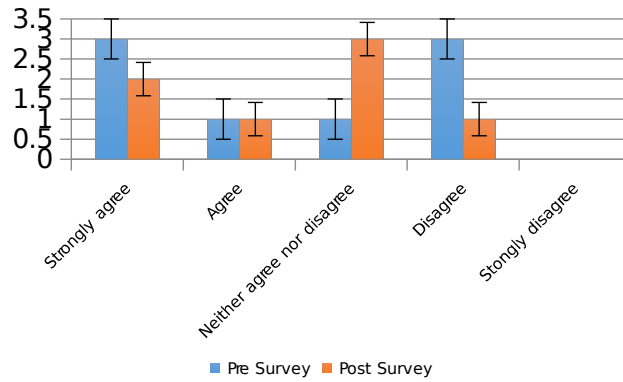
### (5) Impacts of the pilot program

The pilot program was an experiment of the youth perception on the community in Bhutan. We conducted pre- and post-pilot surveys with the youth participants and the results show some changes shown as herewith.

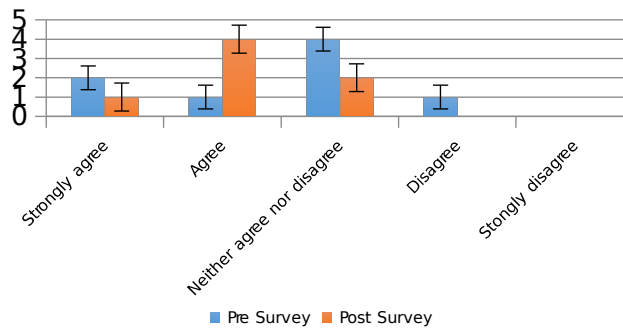
➤ *I am familiar with own local community (regular activities and local people)*



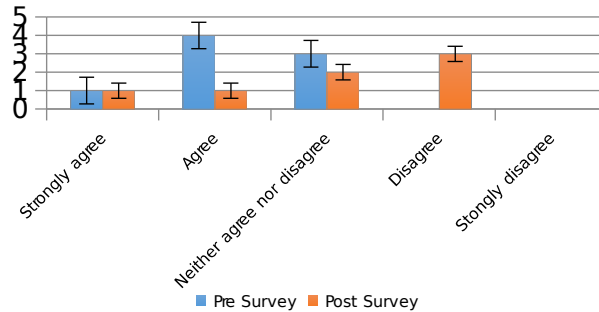
➤ *Rural areas will gradually disappear because they have limited resources for modernization*



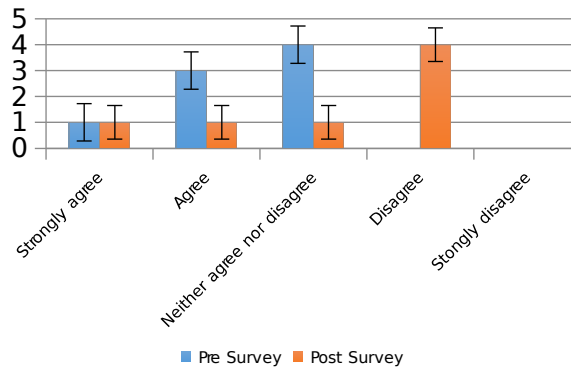
➤ *Nothing can be done to stop migration rural to urban areas in Bhutan*



➤ *There is very little for youth to contribute to rural development*



➤ *The government should do more for urban development than for rural development to improve well-being of the Bhutanese*



➤ *How do you imagine a rural village before and after the community mapping workshop?*

<b>&lt;Pre-workshop&gt;</b>	<b>&lt;Post-workshop&gt;</b>
Two - three-story house with no proper sanitation. Agriculture with friendly people	Peaceful and beautiful. Rich culture and stories yet to be discovered.
Peaceful and isolated. Grand parents working on farms. Cattles and farms filled with crops. No means of modernization and proper facilities	Lots of fun, imagination, and stories
Well developed. Connected with TV/internet/road	Few buildings, many huts surrounded by vegetable gardens. Less facility and fewer opportunities
A place with basic needs and happy people	A rural village is full of wonders, clean environment with a supportive community
A community with a system and few young people	Many things/people to discover
Clean and filled with a healthy environment. With less but cooperative people	Self-sufficient, resourceful with happy and welcoming people
Rough roads, people working in the farm. No pollution and less population	
Huts, paddy fields, students concentrating on studies, conserved and less opportunity	

➤ *What are the three most important ideas you have learned?*

- Community mapping procedures
- The power of community mapping
- Rural is better than urban
- Noticing the unnoticed
- The importance of knowing our community
- 5WH (what, where, who, why, when and how)
- Cooperation
- History and stories of the community
- The way to live
- Bottom-up approach
- Being open minded
- Being proactive
- Chili cultivation
- Medicinal plants

➤ *How has the workshop influenced you?*

- Has given me the insight to look at the positive aspects of life.
- Learning about by own community
- Spending weekend holiday wisely
- Helped in boosting by confidence
- The need to go back to my village and explore more
- The need to observe the things around you while walking

- Encouragement to discover new things

➤ *Discussion from local guides*

One of the local guides started the discussion by explaining how the twin chorten was used in the past and its significance. The chorten was used as a passage route for people traveling between Thimphu and Punakha districts. The other guide led to another discussion on how the presence of frog eggs is an indicator of seasonal change. He explained that the villagers know by the presence of frogs and its tadpoles the timings of harvest and cultivation. The two guides also expressed that, although they are aware of what's in and around their village; they never realized the importance of spreading their knowledge and relishing the things that they have. They both agreed on how much they can learn from the youths and what the youth can learn from them.

It is highly important that positive changes in participants' mindsets on the village and villagers' way of living before and after the Jimotogaku community mapping pilot program have been captured. Also, it is notable that local guides started looking at their village from a different angle. Although the pilot program was done for two days and the limited number of participants, the mapping method could be a useful tool for local people to be active to make the community viable and sustainable as shown in different types of communities in Japan.

## **6. The Jimotogaku Community Mapping and Potential of Collaborative Action Research Method for Co-creating Sustainable Community in South Asia**

This paper has paid serious attention to development issues and sustainability in the context of SDGs. We have reviewed fundamental changes occurring at the international, national, and community levels, elaborating theoretical discussions on economic growth model and comprehensive well-being model.

We have highlighted the sustainable livelihood approach as an effective tool to transform the core of development from economic growth to people's well-being. We have emphasized the endogenous development approach as a key to implementing the sustainable livelihood approach. One challenge we have faced is how to find a way to work with autonomous initiatives of local people toward sustainable community development. Then, we have introduced collaborative action research as an effective tool to co-create a sustainable community.

Collaborative action research is not top-down but a bottom-up approach, which makes stakeholders as the core members of conducting action research. It means that those who do design and implement action research are not limited to professional researchers. The role of professional researchers is not governing but collaborating actively in designing and implementing research activities through dialogue with stakeholders.

In the context of sustainable development at the community level, conventional growth-centered development approach tends to look rural communities down as old-fashioned compared to urban communities. With a growing negative perception among local people in such a rural community about their community, Jimotogaku can be a powerful mind-set change tool from the negative view (have nothing in the community) to the positive one (have something good and unique in the community). It could even create a chance for local people to be more creative in designing the community by interacting with those who come from outside of their village.

We have explained a pilot workshop case for the Jimotogaku method in a village in Bhutan, by integrating it into an existing community mapping program in Bhutan. The participants, both students and local guides found the Jimotogaku method helpful to discover local resources and wisdom from the villagers.

The Jimotogaku method, an action research tool, has some potential to empower stakeholders by discovering local resources regarding its social, economic, cultural, political and environmental aspects. The method can be viewed as a practical research tool which not only expands knowledge but also encourages local people to learn and cultivate a locally grown sustainable way of life.

We also need to look at potential and challenge of collaborative action research in the future in Japan and South Asia. As for the potential, it could change the conventional way of research collaboration from experts-driven to stakeholders-centered. As a result, we could empower both

collaborating researchers and practitioners/stakeholders. Researchers could widen and deepen understanding of a social issue from multiple angles, which enhance linkage between theory and practice. Stakeholders become equipped with alternative ways to examine the issues they face, recognize strength and weakness, identify local resources, and so on. In other words, the collaborative action research could assist continuously evolving communities and institutions to make our society better.

If we challenge and overcome such obstacles, collaborative action research could help us to lead people-initiated sustainable community development through co-learning and co-creation.

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