

INTRODUCTION TO THIS SPECIAL ISSUE: “MAKING NETWORKS FOR GLOCAL DEVELOPMENT”

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Background

This issue summarizes the research activities undertaken over the course of the first year of the SATREPS MNGD project (FY2019), undertaken by the Science and Technology Research Partnership for Sustainable Development. The title of this project is “Development and Operation Model of Plant-Derived Soil Additives for Road Disaster Reduction on Problematic Soil” (JPMJSA1807, <https://mngd.africa.kyoto-u.ac.jp/en/>). This project is to be implemented from FY2019 to FY2023. The research activities and results of this project will be announced through this ZAIRAICHI series of journals. The results from the project will be particularly titled as the ZAIRAICHI MNGD issue.

The abbreviation MNGD, read out as letters, sounds like the Amharic word *menigedi*. As this project investigates the structure and function of the problematic soils that are challenging for road maintenance, we are working to develop a method of constructing and maintaining the road from the village to the paved road by using human resources. (The details for this can be found in the paper written by Matsukuma, Fukubayashi, and Sawamura in this issue.)

Features of This Project as One of the SATREPS Programs

The major features of MNGD project can be summarized to the following four points.

1. Interdisciplinary research aiming at soil improvement:

As noted earlier, this project is an interdisciplinary study involving researchers of geotechnical engineering, ethnobotany, anthropology and African area studies. In this project, so-called problematic soil is considered as the research target.

The project team is to investigate several possible ways to improve the means of constructing and maintaining roads, to prevent villagers' living environment from disaster and to improve recovery process easier.

Professor Kimura, the project leader, has been working on the community road project to rehabilitate roads extending from villages to paved road, which has been in operation in Kenya since 1993. Its activities extend beyond Africa to Southeast Asia, Latin America, and other parts of the world. MNGD project is founded on these experiences and knowledge gained at community road construction sites around the world, with a focus on geotechnical research and supplemented by interdisciplinary research conducted by agronomists, anthropologists, and area study researchers.

2. Possibility of joint research with a newly established university as a counterpart:

In the 2000s, Ethiopia founded technology-oriented universities around the capital and in rural areas. The counterpart university for this project, Addis Ababa Science and Technology University (AASTU), is a technology-oriented university near the capital (under the jurisdiction of the Ministry of Science and Technology), and Jinka University (JKU) is one of the higher education institutions newly established in rural areas. JKU started as such in South Omo Zone in 2018.

Before the beginning of the project, Professor Kimura and other members formed academic exchanges by delivering a number of intensive lectures to the students and scholars at AASTU. Their experience obtained at that time became a trigger to this project. By working together in this project, we can go further to share much experience in laboratory management and fieldwork techniques.

3. South Omo Zone as a model site (Figure 1):

The South Omo Zone (SOZ) is the model site for this project. It is located 700 km from the capital, SOZ was chosen for this joint Japanese–Ethiopian project site because it has been witnessed such academic/development collaboration since the 1970s.

In the 2000s, Shigeta began practical work with the villagers, founded on his research results (Refer to the chapter by Kaneko & Shigeta in this issue). Although Jinka University itself is a new university, some of the current staff members have been collaborating with Japanese researchers for many years. This is one of the rationalities why we believe this project is suitable in this area



Figure 1. Project Site

for the development of new technologies and the subsequent delivery of those technologies to society.

4. Active academic exchange and the training of young researchers:

Before starting MNGD project, Addis Ababa Science and Technology University and Kyoto University had experienced academic exchanges, especially through the intensive lectures of Professor Kimura, and plan to develop the exchanges further. In addition to this, the project is going to send Ph.D. students from AASTU and JKU to Kyoto University using the project funding. We are also applying for the MEXT Scholarship program available for the SATREPS program only, intending to train more young Ethiopian researchers in Japan.

In addition, when Japanese researchers travel to Ethiopia, they deliver special lectures at AASTU. In February 2020, students from AASTU presented the research proposal for this project through an internet video conference system (Zoom). This system is often used to hold meetings with young researchers whenever necessary.

Looking Back on FY2019 and Overview of This Issue

It has been one year since we began to work on this project in earnest. The following briefly summarizes the state of academic exchange between Japan and Ethiopia and general involvement in this study in chronological order. The kick-off meeting was held in Ethiopia on 25th April, 2019, with Japanese researchers, Ethiopian researchers, and Ethiopian stakeholders all in one place for the first time (Photo 1). A MSc. student of engineering from Kyoto University conducted some soil experiments at AASTU from July to December, 2019. During that time from August to September, many Japanese researchers visited to give special lectures at AASTU (page 57–59 in this issue). An opportunity was provided to share the outline of the project with MSc. students and young lecturers from AASTU. In addition to this, preliminary research on plant materials that improve soil quality was performed, and experimental equipment was used for on relevant local materials and techniques (Photo 2). At JKU, we had several meetings for preparation of fieldwork and trial experiments (Photo 3 & 4). In October 2019, the Joint Coordination Committee had a meeting in Addis Ababa to review the progress of the work (Photo 5). After October 2019, three lecturers from Jinka University who wish to pursue doctoral study came to Kyoto for two months, and prepared Ph.D. research proposals related to MNGD joint research project. In November, three people from AASTU (Dr. Adane Abraham, Dr. Brook Abate and Dr. Mesay Daniel) and one from Ethiopian Roads Authority (ERA) (Mrs Hirut Yohannes) visited Japan for inspection and meetings.

Through these visits, MSc. and Ph.D. students and young staff from AASTU were informed of the chances to propose research proposals in relation to this project. When Japanese researchers visited Ethiopia in February 2020, a research meeting was held to allow for presentations (Photo 6).

The composition of this issue is described as follows. The second chapter by Matsukuma, a researcher and coordinator for the project provides a brief overview of the MNGD project. The next two chapters by Kaneko and Shigeta states the history of related activities in South Omo and give an account on the details of research activities of the third component of the project, respectively. Iritani examines the relationship between URRAP practices and our project. In the last chapter by Kaneko, Ikeda and Shigeta, the process of dissemination and visualization of project concepts and information is described in relation to the researcher's presentation activities in the year 2019.

It may be too early to say that among the MNGD project researchers, complete

mutual understanding for each issue has been completely achieved. We will continue to publish our ongoing process and results of this project through the series of ZAIRAICHI MNGD issue. We hope that this journal is going to serve as a means of sharing the documented process, outcomes of research and confirming the direction of future research by this international joint research team. We also expect that the research findings and experiences of this project are going to contribute to "better" lives for local people.