



Connecting people, agriculture and the environment through appropriate technologies

Tsukuba SDGs Partners

On July 8, 2020, AAI received “the Tsukuba SDGs¹ Partners Certificate” from Tsukuba City in the southern part of Ibaraki prefecture. Selected as a "SDGs Future City", it has organized "Tsukuba SDGs Partners" as a platform for exchange among citizens and companies working on the SDGs. It was a requirement for registration of Tsukuba SDGs Partners that "the organization is working, or is willing to work, on SDGs in Tsukuba City". AAI was already involved in activities aimed at the SDGs through technical cooperation in developing countries and training courses at JICA Tsukuba and, at that time, we were also exploring the possibility of activities related to agriculture and regional development in the city itself so we decided to register for the platform.



"SDGs Future Cities" are cities that aim to create and realize and combine the three values of ‘environment’, ‘society’, and ‘economy’. Municipalities that strategically work toward the achievement of SDGs in collaboration with local stakeholders that lead to regional revitalization are then designated

by the national government. After its designation in June 2018 the city formulated the "Tsukuba SDGs Future City Plan" in September of the same year. In the plan, "in consideration of approaches from three aspects - society, economy, and environment and the strengths and priorities of Tsukuba City," the following items were stipulated as the five pillars of future activities. 1. Child's future, 2. Inclusive society, 3. Value creation and inheritance, 4.

Infrastructure that is easy for everyone to use, 5. Circulation and Environmental protection. The first letters of each goal make CIVIC. The CIVIC plan did not include agriculture per se, but given that Tsukuba is a garden city where rural and urban environments coexist, it is likely that AAI can contribute to the work of CIVIC lending an agricultural and environmental perspective.

In the case of "Children's Future", AAI has experience of cooperating with JICA Tsukuba to provide a program for elementary and junior high school students at an event called "Chibikko Hakase (the Little scientists)" organized by the city for elementary and junior high school students every summer vacation. and we are well suited to carry out farming experience classes and international understanding courses on agriculture. Regarding "comprehensive society", the city has many foreign researchers, and the ratio of foreigners to residents is twice the national average, making Tsukuba a highly internationalized city. I think that it is possible to utilize our experience of rural development and carry out activities that connect foreigners living in the city with agricultural experiences. Regarding "value creation and inheritance" and "circulation and environmental conservation," we can make use of our experience in technological development and extension of agriculture in arid land or other climates, and our environment-related work. Regarding "universal infrastructure", although we have little experience, it may be possible to refer to our staff member's activities applying universal agriculture in Fukuroi City, Shizuoka Prefecture.

The platform is also providing opportunities for members to gather, such as the "SDGs Partners Course." We would like to interact with other partner companies and NGOs in Tsukuba City and create opportunities for Tsukuba City to be further involved in agriculture and the environment.

¹ The SDGs (Sustainable Development Goals) are 17 goals to be achieved worldwide by 2030, adopted by the United Nations in 2015.

Comparative analysis of agricultural extension situation in individual countries <Part 2>

Technical capabilities of Agricultural extension officers

This series was created to reflect discussions and experience sharing among AAI members. Today we focus on “the technical capabilities” of agricultural extension officers (AEOs). We first compared and discussed the circumstances of each country from the perspectives of AEO’s knowledge, practical skills, planning capacity, training opportunities, and so on. After the discussion, we found that many of the AEOs in the countries we worked with had the academic knowledge but lacked the practical knowledge and skills that were required in the field. Therefore, we have been trying to provide them with practical knowledge and skills in the projects and the technical training courses with which we were involved in. As a result, we often hear voices from the AEOs who received our training saying that they can now go to farmers’ fields with confidence. According to these facts, "technically capable AEOs " can generally be thought of as "AEOs with sufficient knowledge and skills to instruct farmers". However, AEOs face various problems in the farmers’ fields. In crop production alone, they have to take care of grains, vegetables, fruit trees and so on, and, additionally, each product involves water management, fertilization application, pests and disease control, post-harvest handling, and marketing. AEOs sometimes even have to consult on livestock management, too. However, it is not easy to acquire "sufficient knowledge and skills " in all these fields. Therefore, we went on to talk about "high performance AEOs" with whom we have worked and discuss what goes to make up the ideal model of an AEO based on our own experiences.

We have exchanged histories of a number of interesting cases and stories about AEOs in different counties and today we would like to introduce two particularly interesting examples. The first case is the " Capacity Development Project for Irrigation Scheme Management in River Nile State " carried out in Sudan. Although the project promoted farming guidance with irrigation facilities, it was difficult to visit farmers frequently due to the insufficient numbers of AEOs and the wide areas that each individual had to cover. To address this challenge, he projects decided to train irrigation inspectors who were involved in the operation of the irrigation facilities, and have them take on the role of assisting the AEOs. At this

time, what they were tasked with was not to provide technical advice to the farmers, but to pick up the problems from the farmers’ fields and inform the extension department of their



Water management inspector discussing with farmers (Sudan)

findings. Even though they were initially uncertain, as they accumulated experience on the ground, they became aware of the problems facing farmers and by collaborating with the extension department, they could work just like AEOs who support farmers. In the case of another project, this time in Uganda, at the beginning, when AEOs found a problem such as poor germination, they, along with the farmers, had decided that the seed quality was poor. However, after gaining field experience with the project staff, they learned to carefully observe whether the cause of the poor germination was due to seed quality or whether looking at sowing and nursery management was more appropriate.

In view of these cases, we considered that the technical skills required of AEOs need not be just specialized knowledge and skills, but also embrace comprehensive field skills such as observation, problem analysis, and communication skills to identify problems in the field. At the same time, in order that AEOs acquire such comprehensive field skills, it is extremely important for them to gain sufficient experience in the field. As they gain experience in different farms the AEOs will face various problems, and they will learn to notice other new problems. Even if they can’t solve a problem, if they can identify and analyze the issue properly, they can ask questions to appropriate specialists and may get a solution from them.

Through the discussion, we concluded field experiences are important to develop capacities of AEOs. This being the case, how can we increase the amount of field experience of each AEO? Can an AEO with a limited amount of experience still be an outstanding AEO? We will discuss these questions in the next issues.

Consideration on remote operation <Part 1>

Introduction

Due to the worldwide spread of the novel coronavirus infection (COVID-19), travel has been severely restricted in every country from around March 2020. What is happening now is a once in a 100 year global pandemic, and we, who are engaged in JICA's technical cooperation project, are now forced to operate remotely after our emergency return to Japan. We had been in the field in developing countries, talking politely and sincerely with the local people, and thinking about the development of their country/ region together, but this is no longer possible. We just hope that this current situation will be resolved as soon as possible, and we are spending our days waiting for our physical return to the field.



When the COVID-19 disaster struck, it suddenly became impossible to enter any project sites no matter where they were located. Everything happened all at once. Projects were suddenly interrupted. Remote control became the only option. This, actually, has happened many times in the past. To take one example, an emergency evacuation was unavoidable during the unrest caused by escalating anti-government protests in Syria in 2011. To take another example, local travel was suspended for a period of time due to a political coup d'etat in Sudan in 2019. Both events were sudden, caused by social and political changes in the countries of our work focus and precipitated emergency evacuation or suspension of travel. In terms of unforeseen situations like these, the COVID-19 disaster has many similarities. not least the interruption of activities which often results in a prolonged suspension of travel without any prospect of resuming the project due to an inability to read the subsequent trends. The only alternative to being on the ground is remote operation work and, in the case of Syria and Sudan, this is what happened at the end of the project activity period. Training of national staff (NS) and a trusting relationship between counterparts (CP) had been built by that time. Fortunately, in collaboration with NS and CP, it seems that



remotework was carried out smoothly.

On the other hand, remote project management is not limited to the above-mentioned forced



situations, but also includes the originally planned form of remote management. This sort of project is designed to strengthen the capacity of agricultural extension workers in the states of Khyber Pakhtunha (KP) and Balochistan, Pakistan, where it was difficult for Japanese experts to enter the project area for security reasons. This consideration made remote operation directed from the capital Islamabad part of the planning from the very start of project formulation. Because the project was, from the first, based on the assumption of remote implementation, rather than simply training at the training center, we actively incorporated ingenuity such as fieldwork and follow-up work at the site after the training, then prepared to put it out into the field. We systematically worked on a method that can be expected to have the maximum effect even in situations where Japanese experts cannot physically enter.



It is certain that restrictions and limitations will inevitably be added to remote project management in the future. And it might not be arguable to say whether non-remote management is required or not.

Remote operations come in many types. Some adaptations are forced by circumstance and some are originally part of the plan. In this AAI news series, we



would like to discuss the remote management of projects by comparing the experiences of our past projects and delving into the activities related to remote management to highlight various characteristics. And we would like to review and consolidate useful information for remote management of future projects.

AAI and Me – Shigeya Hasegawa <Part-2>

Kashima Oil era when I learned teamwork and small group activities

I chose a course in the mechanical department of technical high school because I thought that agriculture was hard work and not profitable. In 1972, I joined Kashima Oil Co., Ltd. (KOC), which was the core of Kashima Development's oil complex and was promoted under the slogans of both agriculture and industry. I engaged in the operation of heavy oil desulfurization equipment, and experienced busy but fulfilling days in which 4 teams of 12 to 13 people in 1 group established the operation of the equipment in 3 shifts. It was an invaluable experience that could only be experienced during the startup period.



Author during regular repair

However, around the 8th year after joining the company, when I thought that I could not get a real feeling of actually making anything by just operating the equipment, a new business development department for business diversification was established in the company. New business related to agriculture and vegetable cultivation was considered as one of the projects closely related to the location of the refinery. When I was investigating a production system that utilizes the sandy soil in the area between the Tone River and Kashima Nada, I met Sumitomo Electric Co., Ltd., which started the practical use of a vegetable cultivation system (sandponics) which is one form of hydroponics. I heard that a project aiming at precision agriculture development for the industrialization of agriculture would start. I raised my hand to be engaged in the project. Along with the use of domestic technology, a test farm "Kashima Abu Dhabi Farm (KAF)", was established in 1981 with the support of a JICA loan in the United Arab Emirates (UAE), an oil-producing country, to expand sandponics. The KAF project was concluded in 1989 and I returned to Japan. After that, I engaged in research on the commercialization of agriculture and 'greening' and retired in 1999.

In 2000, I became involved in training work for a vegetable cultivation course in JICA Tsukuba as an instructor at JICE, and I started this work at AAI from the following year. The main reason for this was that I met Mr. Onuma, the founder of AAI, in UAE during the KAF

project. I was able to jump into the training work which was rather an unexpected landing field! This was made possible because throughout the KOC era, I had accumulated experience on various greenhouse vegetable cultivation projects; knowledge that can be utilized for the operation and management in training.

Simply stated, KOC imports crude oil from oil-producing countries, processes the oil at refineries, and supplies various products. To achieve these regular repairs for safe operation are obligatory for refineries. Equipment is inspected, repaired, and operated through repeated tests to see if airtightness is maintained. A manual that defines the procedure is important to ensure that these operations are properly carried out. To create a work manual, I had had to spend enough time to experience and grasp the realities of a site, before conveying the appropriate methods to the workers, and using it as a material that could be employed for subsequent improvement. Such experience became the basis for my later work. In regular repairs, work is done by a team organized in terms of equipment and work type. From the experience of process management that accomplishes goals smoothly in a team with a partner company that organizes many external contractors and craftsmen, I learned to achieve the mission while aiming for a common understanding with the contributing members. Experience also taught me how to work in a team environment creating a workplace where reports, contacts, and consultations can be easily made within the team and team efficiency and spirit can be enhanced. I learned the importance of awareness and behavior to cooperate based on noticing weak points. From small group improvement activities conducted during night shifts, etc., where equipment operation is the main activity, I learned "QC circle activities" for high-quality and stable production, activities to find defects and proposing cost-effective improvement plans, the KJ method to grasp issues and how to improve operations through the PDCA cycle. These experiences were useful for management and improvement of training work at JICA Tsukuba, such as teaching methods to improve the skill acquisition of trainees by grasping the degree of cultivation skills they possess, and improvement of practical training work procedures. In addition, teaching experience in OJT was very useful in thinking about coaching skill acquisition of trainees with different skills and knowledge.