

## Participating in a symposium in Tunisia

I accepted the invitation to participate in “Valorization of Scientific Research Achievements in Water Sector” in Tunisia from March 17-18 in 2015 with an initial degree of hesitancy. I was new to Tunisia but the invitation came from a university professor with whom I was acquainted and it seemed that my experiences in Syria might be relevant and useful. This symposium was organized as part of the Industrial Study Cooperation Support project at the Borj Cedria Techno Park, aiming to link challenges in water sector and research achievements. Water in these lands is so important and the Japan link was obvious - The Borj Cedria Techno Park was built with a yen loan as part of the project.

The 2-day symposium started with official remarks by the Minister of Agriculture, the Japanese Counselor from the Embassy, Director of JICA Tunisia and other dignitaries. Then the symposium had 4 water related themes – water as a resource, drinking water, waste water, and water and irrigation. For each theme, research results and activity reports were presented by Tunisian counterparts as well as by Japanese participants. After presentations on each theme, there was an active discussion session by participants.

In my lecture I introduced our Development of Efficient Irrigation Techniques and Extension (DEITEX) project which we were involved with in Syria between 2005 and 2012, including the irrigation extension tools which we developed (See AAINews No. 79-84) and the situation of agriculture in Syria at that time. Both Tunisia and Syria use 80-90% of their water resources for irrigation, therefore water saving in the agricultural sector is a major issue. After my presentation there were questions from the audience regarding Syria and I sensed the high level of interest of the audience in neighboring countries.

In order to prepare for my lecture, I pulled out documents from the days I worked in Syria and contacted my former counterparts. They were all very happy to hear that I would be talking about DEITEX in Tunisia and I was pleased to feel that their friendship was still well and alive.

During the three-night stay in Tunisia, there was an incident. Some men barricaded themselves inside the museum in Tunis. In recent years so many people have died here and there and one tends to get numbed about tragedies. I pray for the return of peace in the Arab region as soon as possible. (Nakayama, April 2015)



Symposium venue



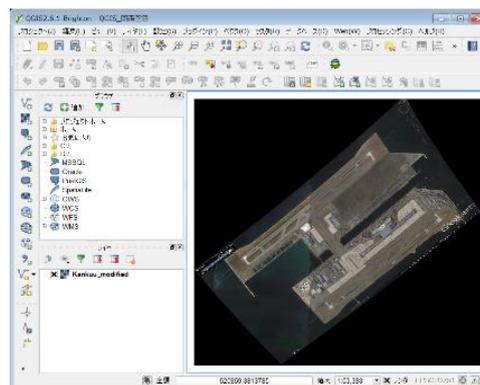
Presentation with the theme “irrigation”



Responding to questions from the audience

## QGIS Study Group Started

Geographical Information System (GIS) was formerly regarded as a specialized technology, however, one can see that now there is a high demand on GIS for daily use. AAINews introduced “You can do it! Remote Sensing Analysis” in its early editions (No. 1-6). In March we held the first study session on GIS operation using the free GIS software QGIS. It is not that AAI staff who are leading the course are expert in the software. Instead, the motto of the course is for every participant to offer his/her wisdom to enhance understanding collaboratively. The course is open for anybody. Two other companies are also participating via skype. We plan to hold it once a month. (Zaitsu, April 2015)



# Being a good “interface” <Part 5>

## Linking people and information

### Information medium and interface

In this edition, we would like to discuss “interface” as a “medium” to link people and information, using key words such as media, information and database.

Through implementation of projects, it is often required for a variety of information and to analyze, process, use and dispatch it. Media for such information include PR newsletters, brochures and databases.

### Public relations and interface

For project PR, newsletters are often produced. For newsletters, contents with news value is important, as well as quick and timely reporting.

On the other hand, brochures and booklets are produced and distributed aiming to provide information that is necessary for the target audience and the expectation is that users actually use them. To achieve this, we need to be creative, by, for example, adjusting levels of information in terms of complexity depending on users, and employing illustration so that people can understand what we are trying to communicate visually and intuitively.

For environmental education for mangrove conservation we developed a brochure to explain to children what to understand while planting seedlings and we created a bird list for bird watchers in mangrove forests. In this brochure we tried to make things appeal visually and intuitively, using illustration. The bird list contains photos of water fowl which we actually observed and photographed during our field work.

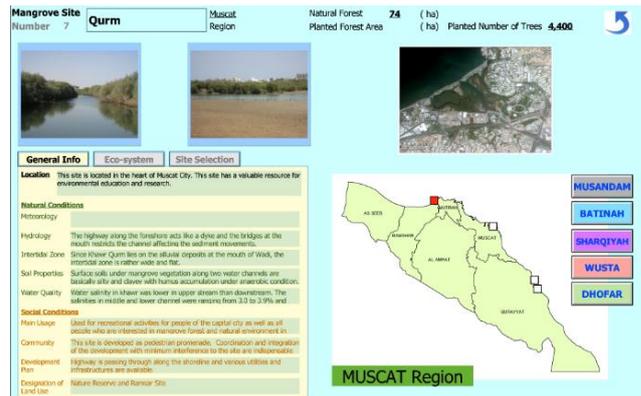


Using bird list with photo identification for bird watching

### Database and interface

Database, as the name explains, is a powerful foundation for data use. Among the data tools we have

been using in our international cooperation work are the UAE’s Plant and Seeds Encyclopedia, address list, and extension staff list. As tablets are becoming popular, we have also produced an iPad based site database for mangrove reforestation. What is important for using a database is how data should be processed and displayed. This “how to display” is the “interface” which can be used effectively combined with GIS and its map information.



In the mangrove reforestation site database on iPad, map information and satellite images are introduced. In addition, it provides general information on each site and fauna and flora occurring in the sites. Contents can be changed depending on knowledge needs of users. By adding and expanding information, a range of users from the interested general public to career forest rangers who need specialized knowledge can use the database.

### Consideration for others

Needless to say, in order to link people with information, it is important to know what we want to communicate. Communication results will vary greatly depending on contents of information and mode of communication (how to process and display data).

For this, in addition to the basic consideration to communicate to make others understand, if we could adapt contents and communication mode depending on the target audience and their knowledge level and demands, we can ensure that the communication will be much more effective.

We need to have consideration for people who will receive information. We need to be empathetic to know what they are looking for, avoiding falling into the trap of being self-centered, in order to reach out our target people effectively.

# A Memoir of Kassala, Sudan <Part 5>

## What damages sorghum fields

Sorghum fields are damaged by less rain, drought, disease and pests, and weeds. The sorghum growing area size in Sudan is vast, and the cultivation is rain-fed, extensive and low input. In terms of cost-effectiveness, there are limited measures to minimize damages. Still, farmers are devising a variety of coping methods including preventive measures.

In the drylands, because of drastic changes in rainfall patterns, less rain and drought cannot be avoided. Unlike irrigated farmlands where adjustments of water availability through water management, under the rain-fed agricultural regime that is totally dependent on natural rainfalls, once drought happens, there is really nothing one can do. When disaster strikes, the government and aid organizations provide emergency humanitarian support distributing seeds and other basic items. At the same time, as medium to long term measures, it is important to increase the overall resilience of the farming society. One of the techniques to stabilize sorghum production, compensating for low rainfalls is a water harvesting technique using construction of terraces which was introduced in this series part 3 in AAINews No. 87. However it takes time to establish a fundamental and comprehensive system, and requires a major shift in mind-set. As a result, countries tend to rely on practical material distribution support by outside organizations such as the United Nations and NGOs, when disasters such as severe storms and drought hit.

Disease and pests, like less rains and drought, are difficult for people to control. There are chronic disease and pests problems and some prevail in particular years. Once widespread, they will cause substantial damage. In order to protect crops, it is fundamental to find symptoms as early as possible, and take measures such as thoroughly eliminating plants that carry diseases and spraying pesticide. However while these methods are effective in intensive horticultural crops, for vast sorghum fields, they require huge cost and labor, and these text book principles do not apply in traditional sorghum fields. The government therefore has to ask external organizations for emergency help in order to stop expansion of damage, rather than watching and doing nothing. In particular what causes wide spread damage is the locust damage on crops, and large scale air spraying of chemicals is conducted by FAO.

So what about weeds. The three major weeds in sorghum fields are Sudangrass (*Sorghum Drummondii*), Mesquite (*Prosopis Juliflora*) and Striga (*Striga.spp.*). Farmers do not like them as each of them have troublesome characters. In particular, Sudangrass is a close relative of sorghum belonging to the same *poaceae* family. Until they grow to produce panicles, it is very difficult to tell if they are sorghum or Sudangrass. This makes it difficult to develop effective weeding methods. Mesquite was originally

introduced for afforestation for desertification prevention. Because of its strong ability for reproduction and seed dispersal, today it is regarded as an alien weed. Use of heavy machinery and “human-wave tactics” for mass weeding with a large number of farmers are used for countering spread of Mesquite. However these are very expensive and labor intensive operations. In addition, because of price hikes after the separation of South Sudan in July 2011 as well as an efflux of laborers to gold mines, securing cheap labor for agricultural work has become increasingly difficult.

As we have seen so far, because of the fact sorghum fields are very big, one cannot avoid saying that it is difficult for farmers to proactively and effectively develop counter measures for threats such as less rain, drought, disease and pests, and weeds. However, there is a little different development as far as the Striga weed is concerned.

Striga is a weed belonging to the *orobanchaceae* family and is parasitic to *poaceae*. It kills the host sorghum by sucking up nutrients which makes farmers very weary of the plant. As is the case for other weeds, for a long time there has been no effective counter measure devised. However one farmer devised a method and it has been spreading to other farmers. The method actually is well known locally and is called Sarwala farming. Sarwala farming involves destruction of plant communities with farming machinery when sorghum grows to a certain height and after Striga lodge themselves to the host and germinate. In other words, using a wide level disc harrow pulled by a tractor, Striga are mowed down along with their host sorghum. With this apparently rough yet simple work, Striga that are touched by machinery become largely exterminated. At the same time sorghum plants go down too. However after a while they can come up and regenerate to form the original community. It is a revolutionary method which takes advantage of the differences in regeneration ability between *poaceae* sorghum and *orobanchaceae* Striga. This Sarwala farming has spread rapidly among farmers as an appropriate technology. This is attracting a lot of attention as a good example of a farmer’s innovation based on traditional knowledge of farmers working on the land in a severe natural environment as opposed to a top-down extension effort launched by government research institutions.



Wide level disc harrow  
(disc plowing / seeding)



Parasitic Striga

## Reports on activities of ex-participants from Nepal <Part 1>

### Introduction

In December 2014, I visited Nepal as part of the JICA Tsukuba training program and visited ex-participants to find out their post-training activities. In this series, based on the results of the visits, we would like to report and examine how ex-participants have been applying knowledge and technologies which they gained in training programs in Japan and what influence the trainings may have had on them, as well as future challenges they face. Part one of this series will explain the background and overview of the survey.

Our company has in the past conducted a number of our own follow up surveys to understand the activities of ex-participants; in Botswana in 2005, in Malawi and Zambia in 2010 and in El Salvador and Nicaragua in 2012. In each of the surveys, we could witness the ambitious activities of ex-participants, and we could confirm the impact which results of training courses in Japan have on participants after returning to their countries. At the same time, we could understand issues ex-participants face. We are making efforts to use the results of the surveys to improve training programs. We reported these results in AAINews No. 70-72 in the series “Close friends from far countries-AAI’s training follow-up program”, and No. 81-84 “Reports on activities of ex-participants from Central America”.

Our visit this time was a little different from our own survey trips of the past as it was an integral part of the training course, “Vegetable cultivation technology and marketing method for small scale farmers”. We were to survey activities of ex-participants in their own countries and provide guidance on their activities. Then we were aiming to compile a set of recommendations for next year’s training programs based on the site visits.

As a result, the fact that ex-participants in Nepal were applying what they learned in Japan confirmed that cultivation techniques used in Japan can be applicable in Nepal. It also indicated that training courses in Japan improved specialist knowledge and skills of the participants, leading to enhanced capacity as extension staff. What was very interesting in this survey was that in addition to specialist knowledge and skills, the training courses in Japan also had an impact on their inner selves. We will report more in detail on this aspect in the following parts of the series.

Targets for this visit were 10 Nepali ex-participants who participated in JICA Tsukuba vegetable cultivation technique related courses between 2002 and 2013. All of them were extension staff working for the District

Agriculture Development Office (DADO). The reasons for selecting Nepal for this visit was that they had the largest number of participants in the vegetable cultivation technique related training courses that were organized in JICA Tsukuba. We could anticipate to be able to obtain suggestions for further improving training courses in an effective manner, because all the ex-participants continue to work for DADO.

Prior to the visit, we sent them a pre-visit questionnaire and collected preliminary information on examples of application of knowledge and technologies learned in Japan in their own work and notable points and tips for application, as well as challenges they may face. Based on the questionnaire results, we conducted individual interviews and a group discussion at JICA Nepal office.

The group discussion session aimed at sharing examples of application of what they learned in Japan and at discussing trends in techniques that are used in the country and critical points for application. We received positive feedback from the participants saying the session acted as an incentive for future work by sharing experiences with other ex-participants whom they usually have little chance to meet. It felt as if individual ex-participants could form one team as a result of the session.

### Postscript

I had an additional thing to look forward to in my Nepal visit this time. It was of course reunions with my old friends. I have fond memories of each of the participants with whom I spent 9 months together in Japan. Also I had a good conversation about their time in Japan with ex-participants whom I met for the first time. It was 4.5 months after my visit when I was starting to write this series and I received the news about Nepal’s devastating earthquake. I immediately confirmed the safety of the ex-participants and was relieved to learn that everybody was unharmed physically. However some of the ex-participants’ houses were totally destroyed necessitating them to live in a temporary shelter. I pray for Nepal’s full reconstruction as soon as possible

Ex-participants of JICA Tsukuba vegetable cultivation technique related courses (2002-2013)

	<b>Mr. Hari Prasad Gurung (VC2002)</b> No 2 of the High Value Agriculture Project. Wrote a master’s thesis on onion seed production.		<b>Mr. Sandesh Dhital (VC2011)</b> Added vegetable cultivation topic in farmer training. Conducting mulching trial on root beats production.
	<b>Mr. Deepak Poudel (VC2005)</b> Head of the extension center. Extended various cultivation techniques such as rain shelter tomato cultivation.		<b>Mr. Kiran Sigdel (VC2012)</b> In charge of cardamom seedlings production. Conducting an application trial of black colored mulch on cardamom.
	<b>Mr. Shrestha Sudhir (VC2010)</b> He was the head of farms at a seed production center for 3 ½ years. Introduced hybrid tomato seed production technology.		<b>Mr. Ajaya Adhikari (VC2012)</b> Working as extension staff. Invited as a lecturer for vegetable cultivation by other DAD offices or R&D stations.
	<b>Mr. Arun Kafle (VC2010)</b> He was extension staff, and the head of a seed production farm. Contributed technical articles to agricultural magazines.		<b>Mr. Bala Krishna Adhikari (VC2013)</b> Director of the extension center. Making use of rational thinking which he gained in the training in Japan in his current job.
	<b>Mr. Padam Bahadur Subedi (VC2011)</b> Taught vegetable cultivation to farmers as an extension staff. Currently working on his master’s degree at a university.		<b>Mr. Bishnu Bogati (VC2013)</b> Working as extension staff. Contributed branding potato and conducting fertilizer trial on onions.

Note: positions and activities in the table is as at December 2014