

## WaQuAC-NET Newsletter vol.29

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Q&A is skipped to next newsletter

*We express heartily our deep sympathy for the people damaged by huge earthquake in KUMAMOTO, Japan in April, 2016*

### Japanese Letter from Ms. Zainab

#### Report of the Kanagawa Overseas Technical Training Course

Ms. Zainab works for water supply company in Medan City, Northern Sumatra, Indonesia (see [Newsletter vol.23](#)). She took the seven months technical training in Japan. As she promised to write a report of the training at her farewell party (see [Newsletter vol.28](#), p15), she sent us a report written in Japanese. I was nice surprised to her effort and will. I expect that she works closely for friendship between Indonesia and Japan. Her original letter was written in Japanese. English translation is responsible for WaQuAC-NET. (by K. Yamamoto)



Ms. Zainab

My name is Siti Zainab Lubis. I am an Indonesian and a member of WaQuAC-NET. Last March, I returned to Indonesia from Japan. I could take the Kanagawa overseas technical training course for seven months in Japan, because Mr. Nakanosono recommended me.

The training was held from September 1, 2015 to March 12, 2016. I learned all of water management. Participant was only me in water supply course. At first, I thought training was difficult.

Every day, I got up at seven and went to the training center by bus and train. My training place was "Water Quality Control Center. Firstly, I studied basic theory for one month there. And then, I learned water management at head office of Public Enterprise Bureau, Kanagawa Prefecture Government and water treatment plants (WTP). WTPs were Samukawa WTP and Tanigahara WTP. At Tanigahara WTP, I learned different

system of sand filtration, slow sand filtration. It was so interesting. This system is not in Indonesia. So it was first time for me to learn slow sand filtration system. Samukawa WTP uses river water as raw water but Tanigahara WTP uses lake water. They are cases of different raw water and different treatment method. But, they use same chemicals, aluminum sulfate and sodium hypochlorite.

Filtration system in northern Sumatra in Indonesia is composed of sand and gravel only. In filters of Samukawa WTP and Tanigahara WTP, additionally perforated block type underdrain system is used under the gravel. Therefore, ability of filter in Kanagawa prefecture is better than in northern Sumatra WTP.



perforated block type underdrain system

I went to Nagasawa WTP in Kawasaki City and Arima WTP in Yokohama City with staffs of Public Enterprise Bureau. I felt very fun.

Now, we plan to use perforated block type Underdrain system in northern Sumatra.

Other day, I learned GLP at the Water Quality Control Center. GLP stands for Good Laboratory Practice in Japan. This process is more detail than ISO 17025 which my laboratory is certified. I also learned how to use many analytical instruments such as ICP-MS, HPLC, Solid Phase Micro Extraction and so on. I carried out microorganisms test too. I learned Bacteria, Aerobic Spore Forming Bacteria and etc. It was so hard but fun.

Furthermore, I went to observe dam maintenance, hydroelectric power plant and solar power plant with them. They were Tsukui Dam, Sagami Dam, Aikawa solar power plant and Shiroyama hydroelectric power plant.

I also participated in water supply international conference at Saitama for three days. All sessions used Japanese language. So it was so hard for me to understand but I had something interest. In the final day, presentations were given in English. I was so happy there.

Sometimes, I went to trip for enjoying Japanese life with my friends. I went to Yokohama, Tokyo and Kyoto. I thought everywhere was clean and safe. Japanese were so kind and I enjoyed my Japanese life. I say my thanks to WaQuAC-NET for giving a chance for me. I will apply knowledge which I learned in Japan to my company.

### Two Earthquakes in Kathmandu, Nepal and Otsuchi, Japan

**Noboru OZAKI**

(Sakai City Waterworks & Sewerage Bureau)

April 25, 2015, a huge earthquake attacked Nepal. When I heard it, my impression was "just as we thought". From 2006 to 2008, I worked in Kathmandu, Nepal. At that



Mr. OZAKI

time, people told about periodic earthquake. Japanese society implemented evacuation drills to prepare for a quake.

Narrow complicated streets and brick buildings are characteristics of Kathmandu old city. It is exotic but weak for the quake. The damages were "just as we thought".

In Nepal, there are no port, one airport which a large airplane can arrive, and few poor roads. This poor infrastructure will hinder the reconstruction. Also I suppose that poor capacity of government would be obstacle for the reconstruction. After the

earthquake, the government requested to stop the foreign aid because they could not handle it.



*Katmandu, before earthquake*



*After earthquake*

On the other hand, about 3,000 families have left “the temporary house” in Iwate, Japan which is one of the Most affected areas by the Great East Japan Earthquake in March 2011. It means 1/4 of families who lost their houses have found new houses for this 5 years. I do not know this situation is advancing or behind.

This essay is based on my experiences in two cities, Kathmandu and Otsuchi, Iwate.

### **“Protect by infrastructure”**

In 2007, an elevated tank was constructed in the rural part of Nepal by Japanese grant aid. Nepalese government officer saw it and said “Japanese facility is too much. We can make 3 tanks by same cost”.



**New tank by Japan grant**



**Existing tank in Nepal**

Partially I agree with him but I had to explain the importance of earthquake-proof. “One earthquake-proofed tank” or “3 ordinary tanks”, which is better for Nepal? Still I cannot say a clear idea.

A lot of seawalls are being constructed now in Iwate, Japan. They will be higher than the previous one destroyed by the TUNAMI. Great seawalls, some of them are more than 10m high, will separate the sea and town. The residents will get back their usual life in the protected town. Some area’s residents were made a different decision; they choose a same height seawall as before. The reason is “we cannot run away, unless we can see the sea and Tunami”. They made this decision as people living with the sea. I stand in awe of this decision but also understand the idea of the higher seawall. “We cannot run away from TUNAMI without watching the sea” and “we do not want to see the sea anymore”. I cannot say which is correct. Still I cannot have a clear idea for the level of hardware.

### **“Build Back Better”**

I suppose no one is against the idea of “Build Back Better”. But I would like to ask, “Better for whom?” I worked for reconstruction of Otsuchi, Iwate, where the downtown was completely washed away by the TUNAMI. “Getting a permanent house and leaving the temporary house” was people’s first prioritized wish, and still it is the fast priority.

After 2 years of the TUNAMI, an apartment building was constructed in Otsuchi. It provided permanent houses for 32 families. One man visited the town office and claimed. His claim was; “the building appearance is not suit for the town, it ruins the landscape.” He lives in Tokyo and the town is a study field for him. “Better for whom?”

The TUNAMI also washed away the railway. People hope the train is restored back to the town soon. As the condition of restoration, the railway company requested for the user increase plan presented. Otsuchi lost 1/10 of population by the TUNAMI. How the town increases the railway

users? It is "better" for the company, to cut down the loss making line.

After the earthquake in Nepal, someone said regarding the damage of water supply in Kathmandu. "Over 30% of the water supply facilities have damages. I do not know these damages were incurred by the earthquake or not. "I suppose the water supply facilities had nearly 30% damages since before the earthquake. Other resident also said "there are no electricity and no water even before the earthquake." I wish the water supply in Nepal be "build back better."

Earthquake snatches our ordinary life in a moment. But we can take back the ordinary life. It will take long time, so slowly but steadily we can take back.

QQQQQQQQQQQQQQQQQQQQQQQQQQQQQQ

### *Looking back on my JICA's days*

**Takehiko NAKAYAMA**  
(Yokohama Waterworks Bureau)

Nice to meet you. My name is NAKAYAMA from Yokohama Waterworks Bureau. Last month I was requested from Mrs. YAMAMOTO, "Could you tell us episodes during dispatched term to JICA? (Japan International Cooperation Agency)", so I posted to WaQuAc-Net first time.



*Mr. Nakayama*

I was the third person dispatched from YOKOHAMA, and now Mr. Tsuruga is struggling everyday as the fourth person.

I usually worked at JICA head Office in Tokyo except during frequent go-and-back overseas business trips and was in charge of Japanese loan assistance at Global Environment Department.

The loan assistance is official fund which is lent as Japanese Yen Loan to developing countries mainly which needs to construct water facilities from intake facilities to service connection pipes. My duties was to evaluate projects if it is reasonable or not in terms of technical, financial, management points.

I just expressed as if it seemed so easy! But it took almost one year to understand overview of ODA. This is because it needed to communicate in discussing and writing reports basically in English and I have not experienced this kind of job. Everything was different from that I learned ever. And my English proficiency was catastrophic (till now), which meant "I want to hide in if there would be a hole". Moreover, there were so many specific terms, for example "E/N, L/A", I had to start from studying the definition of these words. (If you know these abbreviations, I think you are considerable international people.)

Through such exciting days, overcoming the wall was the first step to work as a member of JICA, I felt, and my predecessor, Mr. Itaya and Mr. Asaoka, also said the same thing. Excuse me, now let me get down to the main point.

The topic at this time is about memories of countries visited by JICA's business trip. The countries that I went during one year of JICA dispatch were three countries: 3 times to Tunisia, 3 times to Vietnam, once to India. Among them, I would like to introduce Tunisia as a memorable location as the first work in JICA. The first visit of Tunisia in late April 2014 was a business trip for the seawater desalination facility improvement project by reverse osmosis (RO) membrane in Tunisia's second largest city Sfax whose population is around 500,000. In Yokohama, ceramic membrane filtration treatment with 100,000 m3/d capacity in the Kawai water purification plant has begun recently. But most of water utilities in Japan have hardly experienced RO membrane. They have mainly enough know-how in rapid filtration system. So from the beginning, I had to study "What is RO



membrane?" In addition, working language in discussions was French since Tunisia was a French colony. JICA staff supported me to understand discussion by accompanying a superior interpreter, but in the discussions, it seemed like flying four languages, French, English, Arabic and Japanese and I could just only stand as stunned. This was my precious experience which was able to see heated argument in international cooperation.

Talking back to Sfax, it is about 250 km away from the capital Tunis.



**Sfax Location Map**

In Tunisia, SONEDE (Société Nationale d'Exploitation et de Distribution des Eaux) operates to supply water as long distance as from Tunis to Sfax for 24-hour/7days. Since Sfax is located closely to the south dry desert climate, annual rainfall is as low as 200 mm (Tokyo 1800mm), nearby underground water sources are also not suitable for drinking due to high salinity. For this reason, the water source of Sfax has relied on water sent from the capital Tunis and Sbeitla region of the Midwest Tunisia. Moreover, in recent years, water demand in all-over country

has been increasing, and in the summer of 2012, it brought water shortage and grew the social problem. In other words, under the current water supply system, as long as not securing a new water source, it will be difficult to supply water stably in the future. Once water shortage occur, it would cause growing dissatisfaction of civil explosively and social confusion. It can be said they are facing as severe situation as on a tightrope. So it had grown necessity to construct seawater desalination facilities by RO membrane as a new water source.

Even considering such background, I was so surprised at the fact that they produce pure water at 250 km away, and supply without stopping 24 hours, and deeply impressed with their advanced management capacity. (Is there any water utility to manage such a vast range in Japan? No!) It is a very precious discovery to me.

I got to be convinced that they made tough claims one after other precisely because they have high skill and urgent serious issue. From then, even if the communication was not enough, I have changed mind-set and thought to try my best as the same waterworks-man, then I have got felt this project more important and interested. And especially at the third time business trip, there was no away feeling, and I felt like coming back to hometown rather than foreign country.

You think it is a matter of course, in order to understand deeply and everything, however, I realized that it was very important to go to the field or construction site.

I think you can get something important which cannot be understood even through reading reports or discussing if you would go to the site-area, town and see movement of people or flow of car-traffic diligently.

I think this point is also important key in yen-loan appraisal.

I want to also talk a little other than work. On weekdays, we basically went to SONEDE office at the top of the Montfleuri Hill and discussed with SONEDE staff. The photo at that time is here.



Though it may be difficult to see from this picture, the color of blue clear sky and the view of the Tunis Lake calmed me down in interval of tough negotiation.

And it was also my little pleasure of eating a takeout spaghetti with freshly baked bread brought at restaurant near hotel for lunch. The price was only 5.5 dinars! (about USD 3!). Needless to say, it was so delicious.

Looking back on my JICA's days in this writing, I truly feel that I could have opportunity of various experiences. At the same time, there are so many thing that I had not known and I felt strongly necessity to continue learning from now on.

Finally, I would like to thank from the bottom of my heart to every JICA staff for hospitable support.

There are also other stories about Vietnam and India, but I'm sorry not to write these memories due to space limitations.

※ L/A: Loan Agreement, E/N: Exchange of Note

### ★ **Dispatching WaQuAC-Net Expert To PPWSA & MWA for Algae Survey**

From May 17, 2016 to May 31, Mr. Sinichi SASAKI visited to Phnom Penh Water Supply Authority (PPWSA), Cambodia and Metropolitan Waterworks Authority (MWA), Thailand for cooperation of algae issues. Formerly, he had taught the creatures living in water at both authorities.

At PPWSA, he was reunited with former counterparts for the first time in a long time. This visit was planned by the request from Deputy Director General, Mr. Long Naro for algae problems in PPWSA. Mr. SASAKI surveyed in 3 WTPs and Kampot province. He also gave a lecture on basic biology in water to staffs of laboratory in PPWSA.

For MWA, since MWA and WaQuAC-NET signed MOU for technical cooperation in 2012, we have cooperated to MWA on algae issues, especially, surveying the trend of algae in water resources in Thailand.

This year, WaQuAC-NET cooperated to water Treatment process during algae bloom in Bangkhen WTP which is main WTP in MWA. And also, Mr. Sasaki cooperated to prepare the thesis which is written about the result of experiment of optimum dosing of chemicals for algae removals. It will be presented at JWWA Conference which will be held next November in Kyoto. In last day of MWA, seminar was held with governor and 50 MWA staffs. Mr. SASAKI presented the result of experiment and governor praised it.

As the result of visit to two countries;

For PPWSA: WaQuAC-NET will recommend to enhance the system for monitoring the algae continuously and capacity building for it. For MWA: We will cooperate for completion of thesis and support the submission procedures for JWWA Conference.

(by K. Yamamoto)

### **Schedule 1(Phnom Penh, Cambodia)**

**May 17** Tokyo to Phnom Penh

**May 18** Meeting with Director of Production and Distribution, Mr. Ma Noravin, Courtesy call to PPWSA Director General, H.E. Sim Sita. Visit Niroth new WTP and Sampling

**May 19** Visit Chroy Changva WTP and Sampling, Lecture on creatures of water supply to staffs in charge of water quality

**May 20** visit Kep bay and Kampot reservoir, Sampling and interview

**May 21** Visit Phum Prek WTP, Sampling and OJT for microscope examination

**May 22** OJT for microscope examination

**May 23** Phnom Penh to Bangkok

### **Schedule 2 (Bangkok, Thailand)**

**May 24** Courtesy call to Deputy Governor, Meeting for survey, Survey on filter clogging at Bangkhen WTP and Sampling

**May 25** OJT for jar test

**May 26** OJT for jar test and Microscope examination

**May 27** Sampling at upstream of Chao Phraya River and Ayutthaya

**May 28** Pretreatment of sample water

**May 29** Summarizing experiments, making PPT for presentation

**May 30** Presentation on result of experiment at seminar with governor and 50 staffs.

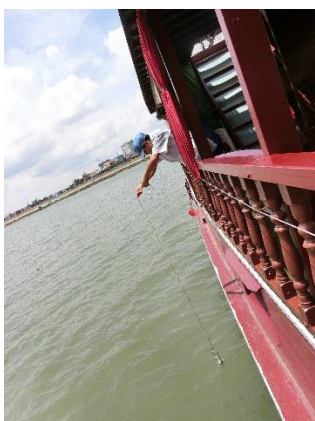
**May 31** Bangkok to Tokyo



Lecture to labo staffs of PPWSA



After the seminar, commemorative photo with MWA governor and staffs



Sampling near the intake point  
In Tonle Sap River, Phnom Penh



Experiment by Jar-test at MWA



## Symposium "Urban Water Management in Asia: Challenges and Opportunities" Report

*April/15/2016 at University of Tokyo*

*Mina YARIUCH (JICA Expert )*

I attended the symposium, and made a brief report on the contents as follows which was very impressed: (See details at the organizer's website:



*Ms. Yariuchi*

<http://www.jica.go.jp/english/news/announcements/2015/c8h0vm00009sdpjd-att/c8h0vm00009sdpng.pdf>)

### *I. "Urban water management in Phnom Penh: A remarkable transformation" by Prof. Asit K. Biswas, Lee Kuan Yew School of Public Policy National University of Singapore.*

A miracle performance improvement of Phnom Penh Water Supply Authority of Cambodia has been widely known, however, the contribution of Japan leading to there is rarely known.

I suggest JICA compile project stories of good practices around the world in English, then appeal your contributions to the world. Similarly, although the performance of water supply utilities in Japan such as Tokyo is excellent, I heard, it is difficult to access to information in English. I recommend to compile their achievement in English in a book "The Tokyo Water Story (\*)" as well.

For Japanese water-related companies, when they go and develop business abroad, it is necessary to utilize local human resources more, and to shift the business models from sticking only to Japanese technologies to adopting technologies which are applicable to the local situation particularly in developing countries

### *II. "Singapore Water Story" by Dr. Cecilia Tortajada, Lee Kuan Yew School of Public*

### *Policy National University of Singapore.*

As known widely, Singapore changed the water resource management policy from depending on imports of water from Malaysia, to ensuring independent water resource for the nation's sustainable development. In order to diversify water resources, 1) expansion and conservation of catchment, 2) reduction of the import quantity of water, 3) use of recycled water (NEWater), and 4) introduction of seawater desalination, have been planned and promoted. In parallel, to control the water demand, 1) pricing, 2) incentive, 3) education of people for rising their awareness, have been carried out.

### *III. "Urban Water Management in Japan" by Prof. Taikan Oki, Institute of Industrial Science, The University of Tokyo.*

As Tokyo had experienced that the water demand exceeded its supply capacity up to about 40 years ago, faced and responded the various issues such as water source pollution and land subsidence. From now, the issues will be shifting to put prioritization on facility maintenance more due to population decline, and responses to the environmental change including downpour caused by climate change.

SDGs (Sustainable Development Goals), adapted at the United Nations General Assembly in 2015, seem to aim at more ideal state than MDGs' aspiring. For setting concrete indicators of the goals, it would be important to consider "what the world to be?"

### *IV. Panel Discussion*

The above three lecturers joined to the discussion including questions from the audience.

*\*Note :Prof. Biswas, in co-author with Dr. Tortajada and his colleagues, has been published "The Singapore Water Story" on the reform of sustainable water resources management, which has been underway for the development of Singapore.*



## ♪♪♪ Event ♪♪♪

2016.3~2016.5

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### Farewell Party for Ms. YARIUCHI

#### *Finally, to Myanmar as long term expert*

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The farewell party for Ms. YARIUCHI was held in near Tokyo station on April 28. Even if she was very busy, she could join us. There were seven participants. She will leave on May 10 and work in Yangon city to improve waterworks management. Since Yangon city waterworks is supported both infrastructure and technical cooperation, it is expected to improve waterworks service very well within a few years. Yangon city will be expected economic growth rapidly. The population will be doubled on 2040 and it is expected to dynamize the economy.

On other side, water supply coverage is about 37 percent. It is needed to develop water supply facility while improving water quality and water leakage. We pray for her continued success on capacity building project in Yangon. I hope that she writes the project progress and situation of Yangon to WaQuAC-NET as soon as possible.



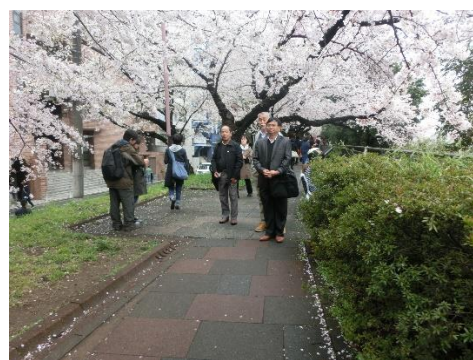
*Mr.SASAKI tried to hug Ms.YARIUCHI under the influence of alcohol. However, she refused the offer unfortunately. (by T. HORIE)*

## Welcome Party and HANAMI\*

From April 1 to 9, H.E. Ek Sonn Chan, Secretary of State, Ministry of Industry and Handicraft (MIH), visited Japan with 3 high officials for project tendering. At that time, it was just best season to see cherry blossoms in full bloom in Tokyo. He often came to Japan. But, it was first time for him to come this season, I think. We walked around Ichigaya bank, Yasukuni Shrine, Kitanomaru Park and Chidorigahuchi under the cherry blossoms on April 2, Sunday. There are very famous area for beautiful ones.



*HANAMI in front of Yasukuni Shrine*



*Under the full bloom at Ichigaya Bank*

- \* HANAMI means to enjoy seeing cherry blossoms and sometimes to have party with drink and food under the cherry blossoms. It is special event of Japanese who love cherry blossoms.

On April 7, welcome party for them was held in Shinjyuku. Guests were H.E. Ek Sonn Chan, Mr. Tan Soviddhya, Director of Potable Water Supply Department, MIH, Mr. Som Kunthea, Chief of Project Office and Mr. Bum Chankong, Director of Kampot Water supply. And participants of Japanese side were Mr. Nakanosono, Mr. Sasayama, Mr. Sasaki, Ms. Yariuchi and Yamamoto. We enjoyed to talk with drinking as usual and deepened our friendship.

(By K. YAMAMOTO)



Welcome Party at Shinjuku, Tokyo

### Introduction of new members

- Ms. Nguyen Thi Thu Trang (Vietnam)
- Ms. Vong Amra (Cambodia)
- Ms. Nov Nimol ( " )
- Ms. Kong Sopheak ( " )
- Mr. Tan Soviddhya ( " )
- Mr. Som Kunthea ( " )
- Mr. Bum Chankong ( " )
- Ms. Jantima Lerkwisa (Thailand)
- Ms. Chaweepan Suangkiattikun ( " )
- Ms. Charida Techarukpong ( " )
- Ms. Mint Norna ( " )
- Ms. Sutivit Watcharabusaracum ( " )
- Ms. Achara Sangkato ( " )
- Akiko SAKAMOTO (Japan)
- Hironobu NISHIO ( " )
- Shinta SEGAWA ( " )
- Yuki OSHIMA ( " )

*We welcome new members anytime  
Please contact us*

### **WaQuAC-NET Newsletter Vol. 29** **Issued on July 11, 2016**

#### **WaQuAC-NET Office**

E-mail: [waquac\\_net@yahoo.co.jp](mailto:waquac_net@yahoo.co.jp)

(Yariuchi, Yamamoto)

URL: <http://waquac.net/english/index.html>

#### **Next Activity**

July 24 : 8th Kyushu Meeting

September 10: Newsletter vol. 30  
in Japanese

September 16: 3rd Osaka Meeting

October 10 : Newsletter vol.30 in English

November 9 : Participating JWWA  
Coference