



Special Issue - protection of water supply from a disaster

<A week of technical exchange with Thai members>

In March, 2011, Japan was hit by an unprecedented big earthquake and tsunami. And then many water supply facilities in the northeastern Japan were damaged seriously. At that time, staff of waterworks bureaus suffered working very hard for emergency water supply and rehabilitation of damaged pipes. And also many waterworks bureaus and companies in other areas sent the staff immediately in order to cooperate to them.

In October of same year, an unprecedented heavy flood occurred in central Thailand. Staff of waterworks authority made a desperate effort for minimizing the damage of water supply. At that time, responding the request of the authority, many citizens gathered in the water treatment plants for protecting water treatment facilities and supplying emergency water. WaQuAC-NET focused these two big disasters as special issues in the newsletter no.11, no. 12, no.13.

This time, we invited two WaQuAC-NET members from MWA (Metropolitan Waterworks Authority), Thailand. Two guests made presentation of Thai flood situation and their countermeasures. We visited Sendai City WWB* which suffered by East Japan Great Earthquake. We exchanged information and experiences with staff of Sendai City WWB. We shared what they thought, how they worked against disasters for protecting people's life and what were lessons- learned from two disasters. We visited a stricken area, Ishinomaki City too.

These activities have become a precious experience of WaQuAC-NET thanks to the cooperation of many people.

1. Schedule:

2 April Mon.	06:00 Arrive at Haneda Airport Meeting and welcome party
3 April Tues.	Petit-Seminar in JWWA. Mini talking (canceled by storm)
4 April Wed.	Observation of stricken area, Ishinomaki City. Party in Sendai
5 April Thurs.	Visit Sendai City WWB for Discussion and observation.
6 April (Fri.)	Free time. Farewell party.
7 April (Sat.)	11:00JL717 Depart from Narita

2. Invited members:

Ms. Sivilai Kitpitak (Director of Environment Division, Water Resources and Environment Department)

Ms. Nisapas Wongpat (Director of Water Quality Development, Water Quality Department)

3. Conclusion :

- 1) Well preparation by guests which helped the listeners to understand
- 2) Good experience of technical exchange with Sendai City WWB.
- 3) All programs were carried out smoothly as schedule except cancellation of mini talk due to the heavy storm. There were people who cannot participate because of beginning of Japanese fiscal year.

(Ms. Keiko Yamamoto, WaQuAC-NET Office)

*WWB: Waterworks Bureau

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★ **Participating in WaQuAC-NET activity** ★
from Thailand



1) **The Four Seasons Trip in Japan**
 Ms. Nisapas Wongpat (MWA Thailand)

April is the hottest month of Thailand. That's why I'm quite happy for WaQuAC invitation. Moreover the most attractive thing was it might become the first time for two of us (me and Sivilai-san) to witness **sakura blossom**. So it's waquac ("exciting" in Japanese) to me.

The step of preparation for VISA and presentation for water quality management during Bangkok WTP* flood crisis went on very well because we had already prepared the power point presentation focused for many foreign visitors who wanted to know what had happened with Bangkok water supply. We had a hundred of pictures and ton of laboratory data. The thing we did was only group them in each slide to make it suit for 20 minutes presentation. We started from the flood situation around Bangkok WTP, the steps applied to control the quality of water and emphasized on how social network help us as that time.

When we had an informal meeting with WaQuAC-NET staffs discussing about the presentation that would be held on 3 April at JWVA, I relaxed with the topic and all sequences. Maybe it's because of "hot matcha" latte (green tea with

milk) in that coffee shop and the party "Meeting with old friends " were waiting for us at the sushi restaurant nearby.

Meeting with old friends who long time no see, made me feel like I was still the young girl stand with the young staff from Japan. The atmosphere was warm and comfortable with friendship relation (and "oishi desu yo" with the biggest sushi topping I'd ever had). At that time, I didn't expect for any undesirable on the next day. I turned on the television until late midnight but didn't notice about the weather forecast.

Tuesday morning, Yamamoto san and Sasaki san took me to have a Sakura lunch and informed us about the storm. But for me there was just a pitter patter rain, while walking around the emperor castle, I noticed no problem just enjoy took a picture with variation of sakura. When we returned to JWVA, I was just informed that some were absent because of government announcement. But I saw no sign of storm yet. During my presentation, I noticed a kind of gossip, murmur and the audience went out one

by one and we had to make the presentation shorter than we had expected. Anyway still thank to the event that let me had a good chance to share our experience about



Thinking Nisapas !

the volunteer recruitment with Indonesian master degree student in Japan. Finally we finished the program earlier and canceled another presentation with WaQuAC-NET members. Then we were informed that return to the hotel was not easy, still I felt it's just a windy and simple rain compared to Thailand. The rain was not so heavy but the wind was so strong. Luckily I gained weight a lot in Japan so the wind could blow only the umbrella but not my 60 kilograms body. So I was quite surprised again

that in the morning I'd met a bright sunshine day seemed like no storm last night at all. Then I was surprised again with snowing along the way to Sendai. The season changes in 24 hours of Japan. It seems like the violin concertos by Antonio Vivaldi, "The Four Seasons, *Le quattro stagioni*".

Until we reached at the destroyed site in Ishinomaki, I could make a concept conclusion that the flood crisis in Bangkok is just a tiny. Compared to Ishinomaki, all tragics were came by nature which had much more power than any mankind could resist, while flood case of Bangkok is just a problem of human management. It shouldn't happen anymore if every water sector in Thailand can handle it properly.

After discussion with the Sendai City WWB staffs, there was one spot that Sendai people emphasized "a people network is very important". We agree 100% with this sentence and we thank for your suggestion that we came to the right way of thinking .

Sendai presentation helped us a lot to prepare stepwise face with any disaster effect to our water treatment plant. We, MWA has a plan to apply Water Safety Plan to each step of work. And I hope this plan can go alive to the real activity. If the bad situation come back again anytime, we can work with it properly step by step same as Japanese way.

Thank you very much to WaQuAC-NET, JWWA and Sendai City WWB and last but not least my dear old friends for providing this chance for us.

This is one small step for me and I will make it to become a giant leap for my organization.

KOB KHUN KHA ("Thank you" in Thai)

*WTP: Water Treatment Plant

2) *Every visit to Japan reminds me of NWTTI* Project*

Ms. Sivilai Kitpitak (MWA, Thailand)

I was asked by Yamamoto san to write something about my visit to Japan during the first week of April this year. In fact, this was my forth trip to this modern and beautiful country. Moreover, every visit, I had got more impression that has reminded me of NWTTI Project which was the most successful waterworks project in Thailand under the JICA and was terminated in 1999.

This time, I and Ms. Nisapas were invited as the WaQuAC_NET 'guests to present and share ideas with the members about how we overcame the flood crisis in Thailand last year. The WaQuAC-NET group meeting was well prepared and scheduled in the evening of April 3 at Yotsuya. Unfortunately, it was suddenly canceled because of the heavy storm. At that time, we just finished our presentation at JWWA office and we had never known that it was very strong wind and rain outside. But we could notice that the audience gradually moved out during the discussion session and finally, only we the WaQuAC-NET and JWWA staffs were left behind. According to the bad weather and the government warning announcement, so, everybody had to hurry go back home. The situation was getting worse because some of the railway lines were stopped. Anyway, we could arrive at the hotel safely. When I think back what I have learnt from that situation, I come up with the words ***"We try hard first and if there is a problem, we try our best to solve it."***

The following days, we visited Sendai coastal areas, Ishinomaki, where were heavily hit by the March 11 quake and tsunami.



At the Shinkansen

We also visited Sendai City WWB, after sharing the experiences with the staff who worked hard during the mega quake last year, very surprised that we could sum up the same attitude that “The human networks is very important during the crisis.”

The last impression before leaving Japan was Cherry Blossom. Luckily, we were able to walk along the Ueno Park surrounded by first blooming of the season this year. It was just we could

recharge out battery after our tight schedule. We were happy the mission was over. By the way, I and Ms. Nisapas, on behalf of MWA, wish to thank you very much to all our friends from different organizations from Tokyo, Sendai City and Yokohama City WWBs, JWVA and WaQuAC-NET, especially, Yamamoto san, Sasayama san and Sasaki san. **“Mina san, Arigato”. (Thank you everyone!)**

**Technical Exchange and Observation
at Sendai City WWB**

2012.4.5 at Sendai City

- 1) **Mr. Hiroshi Sasayama**
(JICA Vietnam Project
& Yokohama WWB)



In 2011, Thailand and Japan met

unprecedented disaster respectively. Damage and recovery for each case were already reported in newsletters of WaQuAC-NET. We had an occasion to exchange experience of overcoming big disaster between Metropolitan Waterworks Authority of Thailand (MWA) and Sendai Waterworks Bureau of Japan in April 2012. Sendai City WWB understood WaQuAC-NET activity well and supported the meeting following courtesy visit to director general and directors.



With Director General of Sendai City WWB

First, Ms. Keiko Yamamoto, the representative of WaQuAC-NET, told the purpose of the meeting to executive staff of Sendai Waterworks Bureau and members of MWA showed their condolence and sympathy to victims of the big earthquake and tsunami. Then we started reporting by each member.

The scale of flood in Bangkok was extreme large. Activities to overcome the flood crisis by MWA and civil volunteers impressed us very much. Unique point of their activity was using WEB and social network services to inform condition of water supply to people rapidly. Fortunately, telecommunication system had no trouble during the flood. Using such network services are the difference from Japanese way. Only mass media is used in Japan to transmit official information because information among different media might be different due to different time for transmission and make confusion to people even network services can provide information immediately.

At Samsaen treatment plant, relatively small scaled plant of MWA, good quality water was obtained by reducing amount of treating water and increasing coagulant dosage according to the advice from WaQuAC-NET members in Japan. Many counties and organizations came to Bangkok to support MWA. WaQuAC-NET also contributed to MWA activity even though

WaQuAC-NET is an activity mainly on WEB and not real time. This result shows that WaQuAC is useful to members in many countries.

I could get information on the disaster in Japan 2011 by only internet because I have been in Vietnam as a JICA expert of a project since 2010. This was the first time to know the detailed situation of damage and recovery of waterworks in one of disaster area, Sendai. This was also the first time for MWA members to know the detailed damage of water supply system caused by earthquake and tsunami. They listened carefully to a staff member of Sendai showing slide show. They were interested that the disaster prevention plan of Sendai waterworks bureau was built up according to the disaster prevention plan of the municipality. They understood that how priority points were decided to supply water. One staff member of Sendai waterworks bureau told us that decision by each staff member was more important to rapid measures rather than the manual against disaster while anything were confused just after the disaster happened. Then they are considering such factors in human resources development. I thought that the disaster prevention plan should be revised with some idea at such view point.



Presentation by Ms.Nisapas and Ms.Sivilai

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2) Mr. Kazuhiko Watanabe
(Sendai City WWB)



5th April, Firstly five visitors from WaQuAC-NET made a courtesy call to Mr. Akira Yamauchi, Director General, Sendai City WWB. Mr. Yamauchi just took up a new post as a director general by personnel changes in April. It was first time for him to work for water supply sector. Therefore it was very fresh and useful for future international cooperation by Sendai City that Ms. Yamamoto explained the actual situation that local authorities play key roles of international technical cooperation in the field of water supply through showing the cases of Mr. Sasaki and Mr. Sasayama who belong to Yokohama City WWB, in addition to explanation of the purpose of this visit and activities of WaQuAC-Net.

After changing place, we held a meeting for an exchange of information and opinions. I felt sorry to visitors that 7 to 10 staff of Sendai City WWB joined the meeting by turns due to unsettled situation because it had passed just a few days since new fiscal year started.

In the presentation by Ms. Nisapas and Ms. Sivilai, firstly we were very surprised at big area and huge scale of Bangkhen WTP. And at the following flood damage pictures, we realized desperate measures under fears of rising up water level gradually and being pressed for time. Of course, they had physical fatigue without sleeping and resting, and furthermore I assumed they were being under considerable psychological pressure.

In East Japan Great Earthquake which we experienced, difficult problems such as tsunami, power cut, snowfall, fire disaster in industrial complex, shortage of food and fuel, moreover

correspondence of radioactivity surged us one after another after sudden earthquake, so there were struggling continuance correspondence like a breathless. While having listened to the presentation, I compared and thought that the flood in Thailand was likened to a Japanese horror film, and East Japan Great Earthquake was likened to a Hollywood movie.

Presentation from Sendai City WWB was given by Ms. Kawamura who is a second year staff since employed. Second year means she did not work on 11th March 2011. However, we appointed her in expectation of her English skill, smile and brave. How was that?



Ms. Kawamura explains by power point

Although we had still more topics to talk in exchange of opinions, it was over time so we moved to site visit.

On the previous day visitors already had visited Ishinomaki City which is one of the most severe stricken areas of Tsunami. I guided Annyoji distribution reservoir where water leaks from expansion joint happened due to collapse of flow arrangement wall and destroyed road nearby and also I took them to high-rise municipal housing whose almost all of pillars had been affected X form shear failure by the earthquake.

Tsunami damage and nuclear power plant accident have been highlighted in East Japan Great Earthquake, however I think visitors also could understand that the earthquake was very

strong in itself, therefore some structures suffered serious damage depending on construction age, condition of location and nature period of structure.



Inside of Anyoji distribution reservoir

As concluding this report, it seems us to be better to return to the party of the previous night. Dr Hiroshi Konno, a professor of Tohoku Institute of Technology, and Dr. Yoshinobu Ishibashi, a professor of Tohoku Gakuin University were present also at the party. In conversation with Professor Konno, He told that the basic design of water supply and sewage in Sendai city was implemented by W. K. Burton, however, unfortunately it is seldom known to the people and staff of Sendai because it might be took a long period of time by completion from the design, and performing technical assistance to developing countries is an act which succeeds his soul and spirit. Through conversation, I renewed the passion to international cooperation.



*Drinking party on the previous day (4th April)
From left, Ms. Sivilai Ms. Nisapas, Ms. Yamamoto,
Mr. Sasayama, Mr. Watanabe, Dr. Ishibashi, Dr. Konno.*

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3) Ms. Kanae Kawamura
(Sendai City WWB)



I have just worked for one year in Sendai City WWB. So I was afraid about whether I could play such a major role, when I was asked to give a presentation about Great East Japan Earthquake for staff of MWA, Thailand. However, I thought it was a good opportunity. I prepared presentation with the help of my senior coworkers and bosses to give a successful presentation. Especially, I prepared English presentation as carefully as I could. How was my presentation?

By participating in this event, I was able to get a lot of things. Especially I was impressed by the presentation of Ms. Nisapas and Ms. Sivilai, because their work against the flood showed so great ability of judgment and prompt. Since I have not so much experience of water supply, I was so moved that MWA's measures of aeration and addition to oxidation agent to response for the deteriorating raw water quality. In addition, I was surprised that they prepared to that kind of facility very quickly.



With staff members of Sendai City WWB

If we make a misjudgment in a time of disaster, the damage spreads further. So, to make an accurate judgment is very important in that kind of situation. I think it is very useful to share various countermeasures against disaster in the world.

I started my working career in the year when we had the Great East Japan Earthquake. I think that I would be concerned with disaster measures in various forms from now on. I am still an inexperienced engineer. But, I want to do my best to be a mature civil engineer with building social network and thinking globally.



Welcome Ms Nisapas and Ms Sivilai to JWWA

Mr. Yoji Matsui
(Japan Water Works Association)

1. Petit-Seminar in JWWA

On Tuesday 3rd April, 2012, we, members of Japan Water Works Association welcomed two ladies from MWA (the Metropolitan Waterworks Authority, Bangkok, Thailand). They were Ms. Nisapas Wongpat, and Ms. Sivilai Kitpitak. Both of them were invited by WaQuAC-NET to Japan and visited our office in Ichigaya, Tokyo.

I heard from Ms Keiko Yamamoto that two ladies were being to Japan on the beginning of April, and I had planned to have a petit-seminar at JWWA office utilizing this occasion, because Japan's water people are eager to know how MWA and their staff members had coped with the big flood that attacked Bangkok and other cities of Thailand last year.

The petit-seminar started at 15:00 at the No.5 meeting room of JWWA Building's 8th floor. Name of participants are as follows. Because of short notice, the participants were rather limited.

- Ms. Nisapas Wongpat, Ms. Sivilai Kitpitak
- Ms. Keiko Yamamoto (ex JICA Senior Adviser)
- Mr. Hiroshi Sasayama & Mr. Shinichi Sasaki (Yokohama WWB)
- Mr. Masaru Sakuma (Tokyo Metropolitan WWB)

Mr. Takashi Kojima (Tokyo Suido Services Co.)
 Ms. Nirmala Hilinawati (Indonesia, a graduate student of Tokyo Institute of Technology)
 Mr. Yukio Kudo & Mr. Fujio Oikawa (Water Quality Division, JWWA), Mr. Toru Miyagaki (Kawaguchi Laboratory, JWWA),
 Mr. Toru Tomioka, Ms. Rie Osawa, Mr. Keisuke Matsuo and Mr. Yoji Matsui (International Division, JWWA).

Unfortunately, on that day, the weather in Tokyo area had changed to be very furious in the afternoon and we had to stop the event earlier than we planned. You may wonder why we had to stop even the event was held in the strong structured JWWA building. As you may remember on March 11, 2011, a lot of office workers in Tokyo area had to stayed all night at their office, i.e. they could not be back to their home because most public transportation had stopped due to the big earthquake. As the same token, on 3rd April 2012, a lot of the management people of companies thought their staff members should be home earlier before the public transportation had stopped. Then we had to finish the seminar at 16:30.

Anyway, we had enjoyed the petit-seminar and



Lecture at JWWA

got valuable information from the experience of MWA coping with the big flood.

2. Measures against flood crisis by MWA

Firstly, I was much impressed by the consistent policy of MWA, that is, not stop supplying water for customers even under the big flood. The governor of MWA, Mr. Chareon Passara's top-down policy had been accepted by staff members of MWA and they had united together and done their bests.



Secondly, I have learned they put the priority on protecting power receiving equipments and they involved Bangkok's citizens to make handmade sandbags which used for bank around water treatment plants. A lot of citizens had worked up with sweat. MWA looked successfully got people's awareness by these activities, that is, they got two results by one effort on this crisis event.

Thirdly, I am not professional on water quality management, but I understood staff members of water quality management in MWA had done big job through day and night during the flood how to cope with contaminated water sources that flow into the Bangkhen, Mahasawat, and Samsen WTP. I suppose it was not easy that big amount of chemicals had been dosed into the raw water properly. You can find this story by Ms. Nispas on the previous issue of the WaQuAc-Newsletter no.13.

3. Personal Story

Finally, as I was an ex-JICA expert in NWTTI project in 1987, I have been very happy to hear MWA's stories directly from MWA staff members every time. I hope the good relationship between WaQuAC-NET members and MWA staff members have been continued and enhanced through this newsletter.

To Ishinomaki, the disaster area

Mr. Shinichi Sasaki
(Yokohama WWB)



On April 4. We, Sivilai, Nisapas, Yamamoto, Sasayama and I headed to Ishinomaki, the disaster area of the Great East Japan Earthquake by changing from a super express to a rental car at Sendai Station. The stormy wind which attacked Tokyo on the previous day had reached to the north, so highway was controlled the speed limit, and the car was flown-shaken strongly. We could struggle to arrive safely at Ishinomaki.

As passing National Road 398 for a few minutes, we came to the vast and desolate area; Nagahama District. Since the wreckages of the disaster had been already all cleared, we could only see the part of concrete foundation of houses to guess how the buildings and streets were. All of us could only stare at flat and vast ground.

Huh? Did anyone throw a Coke can away? No, it's too big! As getting closer to it, we found that was a dented huge tank. The tank seemed to tell us the message to remind us of the terrible situation of that time.



We went to Kadowaki Primary School with 30 classrooms in 3-stories building at the foot of mountain in Kadowaki, Minamihama District.



In front of debris mountain

The building was mostly blackened by a fire caused by a drifted car crashing to gas cylinders resulting in involving following several cars to be burn with.

At the outdoor shower space of the swimming, we were surprised again! All water taps there including taps for eye washing and ordinary taps were bended to U-shape. I cannot imagine the power of water to bend them.

In speechless at overwhelming destroy, we walked the school yard where many children used to play around.



middle-aged woman walked toward us and exchanged greetings. She came from Gifu (located in the Central Japan), and said her son graduated from a university in the disaster area. She could not help coming to visit people who might help or have contact with her son in those



days. She was impressed by knowing that two of our members visited from

Thailand. Though we

just stood and talked in the school yard, both of us were so relieved to talk each other under such a depressing time. Then we went to Mt. Hiyori passing by the City Hospital which had been closed. When looking down from the top of Mt. Hiyori (altitude 56.4m), we could see vast and flat disaster area stretching from east to west. Some damaged large buildings were dotted there. We stopped and had late lunch at a coffee shop "Kazamidori". When we were about to leave there, the shop owner's wife talked to us. "I know people from outside our prefecture cannot imagine sceneries of this town before the disaster, but it was so built up area that we could only see roofs of building until the sea when we looked from here; many people lived and bustling fishery district. The black huge tsunami came and took houses and people away in a moment.



People who could manage to survive rushed up to Mr. Hiyori through the steep hill with only their barest necessities. Hundreds of people were holding each other in the shrine and the park on the top of mountain and shouted their families' names and screamed. At that time, pupils of the elementary school evacuated from 3rd floor of the school to the mountain by bridging plates. We gave them cheers. From the following day, we supported to prepare foods for the people who went in ruins to look for their families and friends. Now, the rubble were cleared and tidied up, but I want you to see the sceneries as imaging one of that time. And I hope you will convey it to many

people."

After coming down Mt. Hiyori, we could see the Old-Kitakami River at the far end. We could say there was a graveyard of ships. Many fishery ships from tens to hundreds ton were tossed to the ground and left along the river.



We drove the car to Onagawa Town through Road 398. The fishery port which located at foot of a mountain was also ruined.

There were several RC buildings which were gone down on their side from foundation of the buildings in desolate place where the rubble cleared. The authority decided to preserve the buildings as historical material. a evidence of the disaster. There is Onagawa Nuclear Power Plant up the road, and some villages are scattered along the coast of the Pacific Ocean.

Firstly, we felt little guilty for only seeing around the disaster area. However, I changed my mind as looking at unimaginably damaged situation. I should know the real situation of the disaster and convey it to many people. To do so, I do need to walk and look around more, and also want to listen directly to people there. Unfortunately toward sunset, we had to return to Sendai for the next appointment though we were still nervous with the observation.



**6th WaQuAC-NET mini-talk
Preparation and Cancellation**

WaQuAC-NET had planned to hold mini-talk with the presence of Ms. Sivilai and Ms. Nisapas from Thai. The subjects of meeting were considered as; the measures to be taken for keeping water quality, information sharing to public, cooperation and coordination of volunteers, etc., in order to learn MWA's practice at the time of big-scale flood last year. The date of mini-talk was set on 3rd April, and Ms. Sivilai and Ms. Nisapas prepared for making presentations. As you may remember, the 3rd April was the day which the stormy wind hit on the central Japan region. It caused severe traffic network shutdown. Two Thai ladies made a small seminar at the JWVA. Our plan was to take them to the venue at Yotsuya after the JWVA seminar. However, the order of return home was declared, so we decided to cancel the mini-talk finally. We are very sorry that many of members looked forward to participating the session. It was thankful for small mercy because the JWVA seminar was completed.

Please refer the report regarding the JWVA seminar in this paper. We apologize to bring trouble to some members who wanted to participate due to delay of informing cancellation.

(Ms. Yasuko Kamegai Kokusai kogyo)

Rekindling old friendship

2 April
Welcome party
In Ichigaya



4 April Friendship party
In Sendai City.



6 April Farewell party
in Shinjuku



<Report of WaQuAC-NET General Meeting 2012>

22nd March, 2012 at Shinjuku, general meeting was held with 13 participants. Mr. Sasayama who is a chief adviser of JICA Vietnam technical cooperation project, came back to Japan and joined the meeting with his wife. First, Activity and financial report of 2011 were presented. Second, Activity plan was proposed and approved. After that, participants have talked and drank livelily for 4 hours. After closing, an old member took younger members a small bar which is well-known as a training, old one said.

(by Yamamoto)



***** Introduction of New Member *****

Mr. Yoshinobu Ono
(Yokohama WWB)



I am glad to meet you. I am Yoshinobu Ono working at Yokohama Waterworks Bureau. I had been dispatched to Hue, Vietnam as a short term expert of JICA from September till December of the last year. Project name is "The Project on Capacity Development for Urban Water Supply Utilities in the Central Region of Vietnam." This project is carried out for capacity development of the WSCs related to the Water Safety Plan in order to realize access to safe water in the central region of Vietnam. I gave guidance about operation and maintenance of facilities as an expert to Vietnamese colleagues who are the lecturers of the Training Center for Water Sector in the Central Region (TC) and staffs of Hue Construction and Water Supply State – One Member Company Limited (HueWACO).

Training Center implemented retraining course about operation and maintenance of facilities in October, 2011. This course aimed at raising the level of all participants because we incorporated method of group discussion in this course and all of participants discussed actively. In addition, lecturers of the TC tried to improve the contents of the training voluntarily during the period of this training course. It is a great achievement from the viewpoint of continuity of this activity after the end of the project.

Although it was my first work in foreign countries, I could spend rich time during the three months. However, I think it still have many problems

concerning the proper maintenance of equipment. I encountered a case of a scene as follows. It has been not functioned properly although equipment had been introduced. The pump cavitation has occurred to change the operating condition of equipment due to an increase in water supply. It has been not enough awareness and activities about labour safety.

I joined this network because Ms. Yariuchi invited me to join the member when I was just thinking I want to keep in touch with something continuously that kind of activities. I can always read WaQuAC-Net as "WaqWaq net" meaning exciting in Japanese. Actually I would participate in activities with excitement. Thank you.



*My lecture to lecturer
(Zero Accidental Activities)*



*the retraining course
(Lecturer is Mr. Khoi of TC)*

Introduction of New Members

- Mr. Yoshinobu Ono (Japan)
- Takashi Saiki (Japan)

◎ **We welcome new members anytime.** ◎
Please contact us

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Topic: protection of water supply from a disaster

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Next Activity

Aug. 2012 Newsletter No. 15 (JPN)

Sep 2012 Newsletter No 15 (ENG)