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## Question & Answer Corner

We welcome any opinions, and questions to this Q & A Corner. Please contact us.

Question: How do people drink more tap water? (from P.W. Thailand)

### **【Answer -1】**

1. More available tap water services with affordable prices to various water consumers. (Especially competitive prices compared with bottled water's prices). Open policies from the governments to allow & stimulate not only individuals, local water companies but also foreign companies or organizations to participate in producing tap water with low operation & maintenance cost.

2. Improving awareness of the local people on how healthy they stay if they drink the safe tap water through clean water education programs of nations, NGOs, or mass media, etc.

(Ms. Trang, Japan)



### **【Answer -2】**

There can be two meanings in the question "How do people drink more tap water?".

1. How let people consume tap water more?
2. How let more people drink tap water directly?

When the questioner is asking the first meaning, Ms. Trang's answers is quite good. While, the questioner wants to ask the second one, Ms. Trang's second answer is still useful. Furthermore, I want to tell the questioner that drinking tap water directly is not important.

Drinkable tap water means very safe water to use for any purpose of daily life. And such water can give people hygienic circumstance.

Let people know advantages of drinkable water correctly with activities which Ms. Trang recommends.

(Mr. Sasayama, Japan)



### **【Answer -3】**

To make the people drink more tap water at least we have to do three.

1. Ensure whole process of water treatment run well as standard operation and provides good

quality water and meet health standard regulation.

2. Ensure that water quality controlling to be done continuously.

3. Ensure that the water in distribution pipe is clean and sterilized.

(Mr. Fauzil Husni, Indonesia)



**[ Answer -4 ]**

By reading the answer from different experts, I think that the question could be like below:

1- "How to make more people drink water directly from the tap?" Or

2- "Why more people drink tap water directly?"

If the question is no.1, then the answer from Mr. Husni (Indonesia) is good but I think that the water utility need to have education scheme in order to convince people to have firm confidence on our water quality.

If the question is No.2 then the answer is depend on the action taken by the utility and the social context of the country and behavior of the people.

(Mr. Ek Sonn Chan, Cambodia)



***On-site Report: Support for water supply in Rwanda***

***Tokiya Momozono***

My name is Momozono of Yokohama Water Co.,Ltd. I am writing this article in Rwanda. Currently I am working as a member of two projects contracted by JICA at Kigali City (the capital) of Rwanda. One is a non-revenue water (NRW) reduction project and the other is a transmission pipe design project of Kigali city, Rwanda.

The country of Rwanda is called as "the country of a thousand hills". It is a wonder place that makes you feel like being surrounded all by hills no matter where you are in Kigali. From the viewpoint of maintaining water supply facilities, we can say that it is a geography that is very difficult to maintain and manage. For example, there is 230 m of a ground difference from the Nzove water treatment plant, the largest WTP in Kigali City, to the Ntora distribution reservoir, the



largest one in the city; therefore water is pumped up through 9 km of transmission pipe with a diameter of 600 mm. After the Ntora distribution reservoir, water is conveyed by gravity to 79 reservoirs located on a chain of hills in Kigali City. Since water is distributed from the top to the bottom of the hill, hydraulic pressure comes as high as 2.0 Mpa in some area.

In the NRW reduction project, we have been conducting activities to reduce the high NRW ratio of 38%. In the course of taking measures from various aspects such as future planning, pilot area management, underground leakage survey, I am in charge of installation of service pipe and repairing of distribution pipe. As in the case of Japan, the most leakage in Kigali City

found at service connection, so I think that improvement of pipe connection and pipe repair is important. Next, I would like to introduce the issues felt through the activities and what kind of approaches we are teaching the pipe connection and pipe repair.

Currently, when branching a service pipe from a distribution pipe, staff of WASAC (Water supply utility in Kigali City) usually punch into a distribution pipe by using a hot heated steel bar. Although this method can make a branch, the punched holes may not be secured enough hole size resulting in poor water supply, or packing may be damaged and cause leakage. Therefore, we are developing the drilling technology using the manual drilling machine which is provided. Many staff is surprised that how a drilling machine is convenience, and can perfectly punch a round hole with smooth edge.

After drilling, we install a service pipe from the branch to the customer meter by using materials prepared by the customer (PVC pipe and steel pipe). The staff cannot make a good thread cutting because they use only a thread cutting dies that are not well maintained as well as they cut the thread on the steel pipe with water instead of oil. I pointed out many times the importance of maintaining the tools. They seem to assume that it be better to put a many time rolls of Teflon tape (seal tape) used for pipe joining; some put the tape as many as 30 times.

A Teflon tape is somewhat thinner than one made in Japan, the quality of threads is also poor, so I teach them to put about 10 times.

For water filling and pipe cleaning after installing a service pipe, I instruct them to remove the meter in advance. Because there are many cases that do not sufficiently clean the pipe after repair even in the leak repair work of the distribution pipe, it is necessary to prevent clogging of the strainer of the water meter.

Since the staff had not conducted residual chlorine measurement, we instruct to do at the same time with water pressure measurement. In Kigali City, as there are some intermittent water supply areas, and invasion of drainage into the water pipe, residual chlorine measurement is important. Although it has come in 20 times of measurements since we started, we have confirmed residual chlorine of 0.0 ~ 0.5 mg/L. With regard to water pressure measurement, it is possible to assess the pipeline status from the difference between the assumed and the actual water pressure, which we can use as the basic information for future expansion of pipe network and introduction of distribution zoning, so I convey the importance to accumulate information.



*Leakage from the largest transmission pipe*



*Staff with a hot iron bar for drilling on distribution pipe*



*Drilling by a drill machine*



**Staff measuring residual chlorine and pressure**

When the all works are completed, the staff shares information on the position of the meter, the information on the construction contents together with the construction completed photo through “what up” (SNS) within the water supply utility. Although I admire these efforts, I advise that it is better to record the information on offset of distribution pipe, earth covering, and service pipe and equipment as a drawing.

I spent most working time here to accompany them and OJT at the installation site of new service pipe. I think that working together at such an installation site of a service pipe is quite good occasion for me to understand the present situation and also provide technical training. Finally, concerning what is a difference between Africa (Rwanda only) and Asian water supply utility, I do not feel a big difference. I think managers and staff are doing hard their daily work. The most different point is that supply is not catching up with the water demand, so the average water supply per person of the domestic users is as low as 30 l/p/d, and I saw many people drawing water with a poly bucket.



(end)

**Visiting Thailand & Cambodia  
for technical exchange  
of WaQuAC-NET members**

**1. Period: February 26 to March 6.**

**2. Schedule:**

**Feb. 26: Metropolitan Waterworks Authority,**

Seminar on:

- “Presentation of the technical training and the JWWA Conference in Japan” by MWA staff
- “the Cylindrospermopsis issue” by Mr.Sasaki

**Feb.27:** Meeting with **Thai JICA** staff

Exchanging the recent JICA assistance of water supply in Thailand and WaQuAC-Net activity.

**Feb. 28: Provincial Waterworks Authority**

Meeting on the introduction of WaQuAC-NET activity.

**Mar. 1, 2: Kohn Kaen University,**

Meeting with Dr. Ishibashi for the possibility of the cooperation with Khon Kaen Univ.

Observation of water treatment plant for 50,000 students and staffs.

Seminar on:

- Influence of climate change in MWA.
- International cooperation in water supply.
- Lecture of biological issues and the control.
- Meeting of establishing a network for small water supply in Khon Kaen area.

**Mar. 3:** Visiting Mr. Ueyama Office

**Mar. 4: Phnom Penh Water Supply Authority,**

Observation of planned intake area for new WTP in PPWSA and Sewerage pumping station,

**Mar. 5&6:** Meeting with General Director of PPWSA and Deputy GD for the cooperation between PPWSA and WaQuAC-Net, and situation of PPWSA .

OJT on biological check for water quality staffs.

**3. Traveler:** Sasaki, Yamamoto

*(by Yamamoto, WaQuAC-NET Office)*

Our member!

**Mr. Varich Boonprasert**  
From MWA, Thailand



*Mr. Varich stayed in Japan for joining a training from last August (see newsletter Vol. 34 for his welcoming). Before leaving Japan, we asked him to write his experience in Japan.*

*(WaQuAC-NET Office).*

Hello everyone. I'm Pond, scientist of Metropolitan Waterworks Authority in Thailand. I came to Japan for Kanagawa Overseas Technical Training Program. I trained in the field of Waterworks and laboratories.

The main training place is Kanto Gakuin University, under the supervision of Motoyuki Kamata sensei. I have chance to training and visiting many places. I trained at Nishiya Purification Plant, Regional Water Quality Center of Kanagawa Water Supply Authority, Samukawa Purification Plant, Tap water Quality Management Center and Division of water purification of Public Enterprise Agency-Kanagawa Prefectural Government. I visited TSS Tokyo Water Company, Aoyama sedimentation lake, Sagami Lake, Sagami River, Sagami Dam, Doshi River, Kawai Water Purification Plant, Kubota Pipe Factory, Shake Intake Weir, Iizumi Intake Weir, Kuriyama Water Purification Plant, Chiba Nogiku-no-sato Water Purification Plant, Tanigahara Water Purification Plant, and Eco Expo at Tokyo Big Sight. Moreover, I had a good chance to join 2017 JWWA international Conference at Takamastu, the first international conference of me, Japan Water Association Kanto Regional Branch About holding water quality research presentation 2017,

the 63rd Seminar of the Japan Water Environment Association, and seminar of Water Environment Society.

For this training program, I get many new information, knowledge and technique about waterworks and laboratories. I learned and saw various waterworks system and process and practiced various laboratories. I discussed the problems and case study between Japan and Thailand waterworks. It is the great experiences.

In addition, the training of this program, I have learned the Japanese cultures, for instance, tea



ceremony, Japanese cuisine cooking, Japanese art: chigiri-e, various Japanese festivals. I also learned Japanese cultures and behavior from living. Many things are good. The one thing that I know before and I found it by myself is when you lost something, you will get it back. And when I free, I always go many places for travel and sightseeing. I went to Tokyo, Kanagawa prefecture, Kagawa Prefecture, Kyoto Prefecture, Osaka Prefecture, Hiroshima Prefecture, Saitama Prefecture, Chiba Prefecture and Gunma Prefecture, so very interesting and funny. I love Japan so much and this is the 3rd time for me, but it is the first time for living, so is not difficult for me. Many things are similar as my living in Thailand. For me, 6 months are very fast. However, I get many good experiences and knowledges, I will bring these to Thailand and apply for my job and my life as much as I can do. Thank you for everyone who supports me for this training and living in Japan. I will keep in touch, remember and I promise I will come back again.

***[Farewell party]***

On March 11, we had a farewell party for Mr. Pond in Yokohama. Dr. Kamata of Kanto Gakuin Univ. and our members including Mr. Sasayama, Mr. Sasaki, Mr. Inoue, Ms. Yamamoto joined there, and talked with him on his achievements of the training and impressions of life in Japan. I was impressed to hear that Dr. Kamata said “It was good for me to receive Mr. Pond as the trainee for my first experience to host an overseas trainee. Because he has known the procedure of water quality analysis, he understood my request quickly and could carry out smoothly.” And he was interested in Japanese technologies. He said to want to apply some technologies which he learnt in Japan when he would go back to MWA.

\* Pond is the nickname of Mr. Varich Boonprasert  
(Yamamoto, WaQuAC-NET Office)



*Sasayama, Kamata, Pond, Yamamoto, Inoue, Sasaki (from left)*

**Introduction of new members**

- Ms. Lao Chansayna (Cambodia)
- Ms. Chanpisey Dara (Cambodia)
- Ms. Sreypov Sreang (Cambodia)
- Ms. Kim Saukhoun (Cambodia)
- Ms. Molika Lim (Cambodia)
- Ms. Wasana Watanakul (Thailand)
- Mr. Witorn Ma-ied (Thailand)
- Ms. Kusumal (Thailand)
- Ms. Narumon Praphasamut (Thailand)
- Mr. Kiji Masato (Japan)

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

~Interview~

**Visiting JHA Office**  
**Akiko Sakamoto**



On Feb 15, I visited the Japan Habitat Association (JHA), an authorized NPO in Japan and talked to Mr. Daisaku Shinohara, secretary general of JHA, and also a member of WaQuAC-NET, about the activities of JHA.

**What are the activities of JHA?**

As a partner organization of the United Nations Habitat, we are engaged in the activities aiming at improving the deterioration of the residential environment caused by urbanization, disaster and conflict. We also provide financial assistance, public relations, and staff dispatching as our own project.

**Activities related to water?**

We conduct a project for regeneration of water source forest in Laos. In Luang Prabang province in Laos, the forest has been cut down, which increases concern about the influence on the water source recharge function. Therefore, we started the activities with active participation of the local residents, which aimed at sustainable environmental conservation. As a project activity, we planted trees such as fruit trees in a water source forest, and prepared a system to provide afforested areas to residents who do not own their land. The project is designed to enable the residents to obtain cash income from fruit trees through a market, and to plant further for more income generation, and by which the residents are able to manage a cycle



of reforestation.

**Any activities to sustain planting project?**

One is to raise seedling for planting. We make seedlings by propagating stocks using the technique of grafting and layering. In addition, through school workshops, we expect that children learn about the importance of forests and how to raise seedlings, so that children can play a role of transmitting the information and disseminating to the community.



**Any effort to increase the residents' commitment?**

We need to take responsibilities for the opinions heard from the residents. For example, when explaining the residents to launch a planting project, we carefully explain the purpose and the benefits of the project to the residents, as well as paying close attention to the opinions of residents such as what kind of fruit trees they want to plant. By reflecting the residents' opinions firmly in the project, not only we can build the relationship of trusting each other, but we can increase the residents' commitment to the project. As a result, residents are empowered to increase their independence and creativity to straggle.

**What experience can help you work with local people?**

After graduating from university, I experienced in the service work such as hotels. With the word "I would like to contribute to society through music"

by the owner of the club with live music, where I worked at that time, I established a social contribution organization and started to work for international cooperation through its activities. I believe that the ability to accept others' opinion cultivated through experience in the service industry is now useful in cooperating with companies and local residents.

**[JHA Information]**

JHA has carried out "Reconstruction Mulberry Project", a reconstruction support project for the Great East Japan Earthquake. We support for the recovery of agriculture and the

independence of affected children through selling the products from a mulberry which is resistant to seawater damage and has good nutritious.

URL: <https://www.habitat.or.jp>

**After interview**

I strongly expect that NPO, which built the strong relationship with local people, to cooperate with experts and development consultants so that the international cooperation can be more promoted with response to local needs. I would like to express my gratitude to Mr. Daisuke Shinohara, who warmly accepted my interview.



**Essay:**

**Heading to the countryside of Myanmar**

*Mina Yariuchi*



Currently I am staying in Yangon in Myanmar for JICA project, but I traveled around a town called Kalemmyo in the northern part of Myanmar on my holiday. I would like to share with you about my experience.

Kalemmyo close to the Indian border of about 900 km north, 2.5 hours away by a plane, of Myanmar's biggest city Yangon, is the second provincial city of the Sagaine Division, with a population of around 300 thousand. I visited



there in the New Year's holiday, the coldest season of the year, when the temperature falls close to 10 °C in the morning and evening unlike Yangon. Because there is no heating facility at home, people spend wearing a woolen hat or



*A tube well and pump at the front yard*



*Candle market*



*A sign close to Indian border showing the northern cancer*

coat indoors. (When sleeping, they put a coat and woolen hat, and the whole family sticks together and shares blankets!).

Because there is no water supply system in the town, each house has a tube well and pump up to a roof top tank as the first thing in the morning. Water is sent through the pipes from the tank by gravity so that the family can use water in a kitchen, a toilet and a shower room. Due to the topography of the town, surrounded by the mountains, cold and clear water runs in the waterway in the city. The groundwater looks to be abundant, but it is getting difficult to pump up enough in the dry season in the past few years, I heard. For drinking water, local people purchases a 10 liters bottled water.

Until the last year, people could not use electricity for 24/7, so that many families do not have a refrigerator or a washing machine. The electrical appliances we can see at home are a rice cooker, a hot plate (because there is no gas, this and a charcoal stove are used for boiling and cooking), electric fan, TV, and, of course, smartphones! Since not having a refrigerator, people go to the market in the early morning and buy food for the day. When I went to see the market early in the cold, which open from 3 am to 6 am daily, I found the "candle market" where people sell and buy under the lit of the hundreds of candles on a road.

I visited the town because it is the hometown of my Myanmar colleague, Ms. Thi Thi Soe. I stayed for 3 days with her family, which are so friendly and cheerful family of four sisters including Thi and her parents. The entrance door is always wide open, very close and warm relationship among neighbors, there are always someone visiting and chatting in the living room, someone coming to borrow tables and dishes for

hosting neighbors on Buddhist memorial day, some colleagues of the family member gathering to continue working in the dinning place, and someone visiting to bring some fruits for me by saying "you have a foreign guest?". On the contrary, I was brought by Ms. Thi to visit the neighborhood, and treated for tea and lunch. I felt the depth of ties in the community strongly.

Although I stayed for long term in a foreign country for work, the opportunity to feel the lives of the local people closely is unexpectedly small. This homestay was a priceless opportunity for me, so that I can get to know the local life, feel the social relationship among neighbors. I here express my deep gratitude to Thi and her family who warmly welcomed me to stay.



*Host family in front of their house (Thi Thi shown at the right, and the next is Yariuchi)*

(end)

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(Yariuchi, Yamamoto)

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

**Next Activity**

Under progress	Restructuring our website
June 10	Newsletter 37 in Japanese
July 10	Newsletter 37 in English