

REPORT ON THE SOLAR RAIN CLEAN WATER SYSTEM DEPLOYMENT IN CAGAYAN DE ORO CITY

AIC RECOMMENDATIONS:

Create a Xavier University (XU)-Ateneo de Manila University (ADMU) Innovation Center partnership. This partnership can operate under the following conditions:

1. ADMU AIC can provide back-up technical support for the long-term rehabilitation program of affected areas in Cagayan de Oro City. Three AIC staff members: Paul Cabacungan and Jun Granada may serve as the contact/resource persons who can be sent to Cagayan De Oro to do the necessary ground and field works.
2. XU will identify a barangay that can serve as a model where a Gawad-Kalinga-like community can be set-up. This barangay will have a clean water system, rainwater harvesting, LED lighting, wastewater management and other low-cost technology that may benefit the community. Other barangays can replicate what has been done in this model barangay.
3. XU will provide manpower in the person of Engineering students and faculty willing to be trained by the ADMU-AIC to install the above-mentioned low-cost technology in the model barangay.
4. XU will provide the space where equipment will be stored and communication facilities are available (with telephone line and computer with internet connection).
5. ADMU-AIC will continually coordinate with MWSS and Water District to ensure distribution of potable water to affected areas.

AIC ACCOMPLISHMENTS:

Day 1: December 19, 2011 (Monday)

9:25 am –my flight from Manila to CDO

11:00 am – training of Engineering students and faculty members to set-up the following:



a. gravity-fed solar powered clean water system



b. solar powered clean water system via pump



c. LED lighting systems (all other pictures and videos to follow)

4:30 pm – meeting with Fr. Eric Velandria and some XU administrators; briefing on what transpired in the morning

9:00 pm – Fr. Eric Velandria asked me to assess the water that will be distributed through a fire truck. It was distributed as non-potable water because there was no assurance that the truck itself was disinfected before water was poured into it.

Day 2: December 20, 2011 (Tuesday)

8:00 am to 3:00 pm – coordination meeting of Xavier University with many sectors/groups –

most of the topics were water sourcing, treatment ways and distribution. Attendees were: Darwin Flores and Judy Dizon of Smart Communications, Mabel Apostol and Allan Desildo of Corporate Network for Disaster Response (CNDR), Paul Cabacungan of Ateneo Innovation Center, Fr. Eric Velandria and Nico Mendiola of Xavier University (XU), Ariel from Save the Children, Roggie with 3 staff of Aboitiz Foundation, Danny of Cebu Abutis power sales. The highlights were:

- Darwin Flores of Smart Communications brought a sample of Lifestraw that converts Class D water into potable water using nano-technology. He is asking XU to test it so they can donate 100 units (flow rate: 9 liters/hour). 3,000 people will be served considering that each person consumes 3 liters/day; Lifestraw will last up to 6.6 months. Each unit's regular price is P3,500 but can be procured at a price of P2,500 during disasters. Lifestraw cannot filter heavy metal/chemicals and cannot desalinate salt water. Perhaps ok to use with firetruck. Ok to bring lifestraws during rehabilitation and will be distributed per family since it takes long to clean water.
- Red Cross and Air Force/.Army are focused on retrieval of bodies so relief operations are channeled through Xavier University
- Aerial shots are needed to assess the extent of damage in different areas (can be done by AIC Incubated company, Skyeeye, that uses unmanned aerial vehicles to map & assess through pictures and videos taken on disaster areas)
- Hardest hit are Balulang, Calacala, Consolacion, Carmen, Macasandig
- Media can give a clearer picture of the situation – Bombo Radio was recommended
- XU has a place to store goods and volunteers can repack and distribute. XU's main responsibility is to accept and distribute goods.
- Aboitiz will send goods but does not have the capability to repack and distribute. Aboitiz will donate canned goods, water and biscuits and XU will have space for them.
- Maynilad is working on water distribution in some other areas.
- Smart will donate water bottles and XU will distribute.
- Water and Sanitation (WASH) is the major issue according to Ariel.
- There are reports of diarrhea cases already.
- I reported that I trained the XU engineering dept. on how to use the solar powered water cleaning system. I will explore the possibility of putting the UV technology on fire trucks that are distributing water. I will coordinate with 2 water companies.
- Fr. Eric discussed his plan to have orocan pails where water will be stored and people will just get from there.

Addition to the meeting in the afternoon: Volt Flores of Pueblo, Won Joo Lee from Join Together Society, Dodong Borja of Touch Foundation, Jerry of MWSS, Benny of Fast Cargo, Aldrin of Mitsubishi, Elias Salazar of Plan International, Baltazar Tribulnalo of National Disaster Coordinating Council, Bro. Philip of Church of Jesus Christ

- Won Joo Lee can provide water and fire trucks; he donated 1,000 starter kits (cost per kit is P1,100)
- Touch Foundation conducts a survey and deploys people to barangays to identify families that need relief goods; focused on one barangay – Balulang; coordinates with XU to reach more areas
- MWSS puts water treatment and checks portable treatment plant (PTP) set up in certain areas; will assign only one PTP to XU and will leave XU responsible for distribution
- Fr. Eric expressed his inclination to just adopt one community
- Jerry needs tankers to deploy water for rapid distribution
- Disinfecting fire truck with chlorine will take 4 to 8 hours; possible innovation is stainless/plastic tank to be mounted on an elf for water distribution
- Fast Cargo will provide relief goods, bottled water, 10-liter tankers and elfs.
- Mitsubishi will provide L300 van for packed food distribution -- free service for driver and van, can be used from 1:00 to 5:30 pm
- Location for new PTP is at Tagnawan spring, the two PTPs are already established in Ilaya Bridge and Bara

Day 3: December 21, 2011 (Wednesday)

8:00 am

- I met with Fr. Eric and he requested that I make a my accomplishment report on water so they can use it for XU's website.

9:00 am

- I oriented Jun Granada of the work to be done. I endorsed all the equipment to him and introduced him to all my contacts.

10:00 am

- We visited two of the hardest hit barangays – Macasandig and Balulang.
- We coordinated with Jose "Jun" Escoto of MWSS Corporate Office at the Ilaya Bridge where one PTP is stationed. He mentioned that there was a stainless tank that had not been deployed yet because there was no elf available. They also needed a plug and/or faucet installed on the tank. It has to be filled up with water before loading it on an elf. Jun Granada was tasked to install the plug/faucet so the tank can be used for water distribution. Jun will also install the ceramic & carbon filter and UV light on the tank to make sure that the water to be distributed is potable. Paul and Jun relayed the message to Fr. Velandria about the need for an elf and Fr. Velandria agreed to send the elf to bring the water-filled tank to affected areas.
- Mr. Escoto mentioned that there was another PTP coming from Israel and was expected to arrive via a Navy boat this Friday, Dec. 23. He was asking assistance from XU to accompany the person who will install it at the Tagnawan spring. Fr. Velandria was informed of the details and Jun and I volunteered to take care of meeting up with the person and oversee the installation of another PTP in Tagnawan.
- We coordinated with the Water Ditriect (WD). In their station in Macasandig, 10 open faucets were installed so people can use the water for bathing and cleaning. Only one of those 10 faucets provides potable water. We went to the main office and met with Mr. Bienvenido Batar, Jr., the Assistant General Manager of Water District. We asked permission to connect our clean water system in one of the open faucets. He agreed and provided assistance to allow us to connect the system to one of the faucets. More can be installed should they find the water quality suitable for drinking.
- We requested for a list of areas where water faucets have been installed and which of those faucets do not provide potable water yet. We were planning to put clean water system on those faucets. We were given this list. From the list, two barangays do not have access to potable water yet and have to be prioritized in the installation of clean water system. In those faucets where clean water system will be installed, carbon filter will also be set up to lessen chlorine content.
- We also talked to Ms. Bing of XU's Biology Department and asked her assistance in testing the water quality before and after passing through the AIC's clean water system. She agreed. AIC is the point person in coordinating with XU's Biology Department with regard to water testing. MWSS is currently not capable to do water testing because their water testing facilities are affected by the flash flood.

12:30 pm

- Everything that has transpired in the morning was reported to Fr. Velandria for action and consideration. He said he will issue a petty cash so Jun Granada can reimburse his expenses. He also tasked Bro. Neil to cancel his flight to be able to assist Jun Granada in accepting the PTP arriving via a navy boat.

1:00 pm

- We went to XU's Engineering Building and turned over the clean water system set-up to Jun Granada so he can deploy it right away.

1:30 pm

- I went to the airport to check in for my 2:15 pm flight.

Reported by:

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Addition to the minutes which I noted down when Nico Mendoza went out:

1. The following will give P1 million each to give 3,000 families with starter kits containing pitcher and 6 glasses, 6 plates, pot, pan, bowls (kitchenwares), “batya”, pail, dipper, clothes clips on top of the medical mission that will be conducted where free medicines (priority: tetans toxoid and ATS) will be given out: (a) German doctors with medical team, (b) Owner of Crocs, (c) one company.
2. The German doctors wanted to identify the areas where there are no medical missions yet to avoid duplication. Fr. Velandria said that they have to coordinate with Dr. Ruth of Xavier University.
3. Fr. Velandria asked for a list of generic drugs that will be needed because there are pharmaceutical companies who are willing to donate needed medicines.
4. DSWD has a calamity fund that needs to be utilized wisely.
5. Plan International claims that there is fund and that they can help come up with a proposal to ensure that funds will be released for disaster management. Fr. Velandria asked them to take care of this proposal and promised to provide them the needed space.
6. Bro. Philip can provide water tanks and will look for trucks to transport these tanks.
7. Fr. Velandria wanted to start with the rehabilitation where people will be self-sufficient. He hoped that people will be provided with cooking oil, mat/malong, rice, pail, hygiene products, portalets, etc.
8. Plan International suggested that dole out and rehabilitation efforts can be done simultaneously.
9. There is a need for partnership for rehabilitation.
10. Social science students can do field research. People must be encouraged to celebrate Christmas despite what happened. School of education can ask for volunteers to spend time with the kids and conduct teaching for an hour.
11. Catholic Relief Service (CRS) pledged to give jerry cans, pails, hygiene products, aqua tab, cash for labor or services rendered.
12. The German medical team will draft a letter that will be endorsed by the municipal hall before they conduct medical mission. Hopefully, the municipal hall will provide manpower for crowd control.