

& Give Forward



Rational Criterion

Water scarcity is common to most rural areas in Thailand as the locations are far from the main water system which is located in the cities. Consequently, villagers are left to find their own water supply with limited knowledge, skill or experiences. Children have no choice but to drink the dirty water without or from a poor filtration system. Health issues arise on top of the poverty for folks to bear.

Pass the Love Forward Water Project was initiated by **Mr. Pakpoum Mahasith** (Bobby), Chief Executive Officer of EcoloTech Co. Ltd., the developer of Air Molecular Water Technology. One of the corporate objectives is to run projects for social responsibility, emphasizing on the practical solutions to provide clean drinking water for rural communities.

Along side is **Ms. KedKaew Thongjaroon**, Managing Director of Aufu Co., Ltd. a creative designer, who makes the cloth bags of all kinds. The team surveyed some communities by targeting in Galyani Vadhan District, a remote area 160km from Chiangmai where we found the lack of clean drinking water in many schools in the area. This led to the idea of raising fund for developing a water system that meet drinking water quality standard for all kids.



Pass

Forward

Pass the Love Forward Water Project is not just a normal donation project as we may be familiar with. It is actually based on an outstanding basis of 'pay it forward' concept. Those who participate the activities will feel the pride and inspired by their merits.

At the beginning, the idea is to persuade a group of student volunteers to help produce a set of premium products (hand-painted cloth bags) in limited edition, co-operated with hands of graphic and product designers. The finished products were sold to fan club members with generous minds. All of volunteers intended to donate and spread their wishes to help out the needy children. The profit revenue was spent to build the drinking water system for the chosen school. After the first project achievement, students from the first school who received water system will be volunteer to help to produce product designed by a new artist to raise fund for the second school - Dong Sam Muen School located not far from the first one in the same district in mountainous area.

On the first phase of the project, 'pay-forward' pilot model was used for the other 5 chosen schools. One artist or designer was assigned to raise fund with mutual interests individually for each school. The project receivers of each school will feel proud on the new drinking water facilities given with 'Give-and-take' mindset.





Clean Water for Mankind







Ban Mae Dat Noi School Galyani Vadhana District Chiang Mai





Target School #1

Bann Mae Dad Noi School is located in Galyani Vadhana District in Chiangmai Province, 4-hour drive from the city with the distance of 160Km up the mountains. Its altitude is about 1,300 feet from the normal sea level. The school is in high area and very far from the public water system. The villagers had to find their water supply from a well, distance of about 3 km from the village. The water is found murky and muddy in dry season. In the past, the villagers also found no sufficient supply of groundwater due to the limestone terrain underneath.

The school administration had to purchase about 15-20 buckets of clean water for drinking and cooking every week for total 180 staffs and students in total. The water costs 45 Baht per 20-litre size bucket. The water selling price there is high due to transportation in the area. Some students have to bring their own drinking water in containers or plastic bottles from home.

Problems and Challenges

- 1. The rainy season in Chiangmai ends in December or earlier. There will be very little or no rain until May in the following year. Therefore, there will be shortage of water for consumption. No or little groundwater available in the little streams in those areas.
- 2. Because of the drought, during most time of the year, the school is not the only group of people who require water from the well, but the villagers also fight for water.
- 3. The school is built on limestone bedding area, no groundwater is available after the 3 attempts of drilling.

The Need for Drinking Water

400 Liters per day or 100,000 Liters per year for a total budget spending by the school 250,000 Baths per year or 7,000 USD

Existing facilities

6 old rain reservoirs with the size of 10,000 Liters



Objectives and Targets

- Stage 1: Support the school to be self sustaining in the production of drinking water
- Stage 2 : Reduce or eliminate the cost spent for drinking/household water in school
- Stage 3 : Help the school to create an income to sustain their own drinking water facilities in the future

Solutions in the Past

- Seek government funding or raise private funds in Chiangmai Province
- Ask for donation of bottled drinking water

Problems Analysis & Solutions



Project expenses

- Improving all gutters
- Managing rain water collection
- Water pipe system
- Water filtration system
- Water QC
- Automatic control system
- Labor and Transportation costs

Budget = THB 250,000

Problems analysis

- Inefficient water management system due to lack of professional guidance
- Inability to produce drinking water from the existing resource

Solutions

- Clean and improve the existing 60K liter water storage tank (or equivalent to 5 Sq M²) to keep water for at least 6 months during dry season.
 - Apply auto-bacterial and anti-algae coating inside the water tanks.
- Improve and clean of all roofs and gutters.
- Install a coarse screen/materials to filter rain water (initial state).
- Install a fine materials to filter/purify the drinking water as same as the industrial standard quality.
- Install water control system and sensor. Collect the water testing data and send it online to the engineering center in order to verify its cleanliness for drinking.

Benefits

- Inexpensive natural source of water supply reserved during dry season or drought time
- Eliminate problems of any contamination in rain water in the area by nature
- One time investment for over 5-year
- Multi-layer filtration and proper preventive maintenance will keep system to last for many years

Disadvantages/limitations

- Amount of rain water collected depends on the weather
- Annual essential maintenance expenses
- No regular keeper to take care of the system
- The school need to raise fund or seek helps when it's time to replace the filter



STEP 1 SEEKING FUNDS

Step 1 Set up plan

Set a creator team to design and create the original merchandise(s) for fund raising from generous buyers in the cities

Step 2 Find volunteers

Persuade students in cities schools to participate as volunteers in hand-painting the cloth bags. This could build up their awareness on the needs and make themselves pride as the givers to the end receivers, the students in remote areas.

Step 3 Marketing channels and process

Cloth bags of 500 limited edition items (each is one of the kind) will be sold (B 850 each) via the project's social media fan page and artist's Instragram pages. The news was spreaded out effectively with 'like's and share's). There is an administration team taking care of packing, handling and shipping the item (cost B50 / piece). Net price including delivery is B900 / piece.

Step 4 Actions

All income from the sales will be spent to purchase all equipment needed and paid for the installation of the water system. One week will be needed for installation. The system will be handed to the school by the artist and product designer with the local press present at the event.

Social Impact Assessment

- 200 students (1 school) have clean drinking water regularly for the whole year.
- School spending for drinking water can be reduced.
- Carbon footprint from 1-year water transportation was decreased.
- Development fund is founded for school drinking water system maintenance.









STEP 2 DESIGN WATER SYSTEM

The system is designed by EcoloTech Co., Ltd. with the same standard as that of hygienic water making. It was implemented with low cost design but effective management, equipped with long-lasting filter. The project is planned adopting the old ways of living but with innovative technology. This results in full satisfaction by most end users. The project consists of key steps as follow :

Step 1: Improve the rainwater supply storage

The project team often found, at most school sites that they didn't maintain the gutters and water storage tank well. The existing facilities were normally in good condition but abandoned. We then improved them to be reusable, cost-effective and efficient. The concrete storage tank is still robust and could be used to store rainwater all year long.

What we have implemented:

- Installed the gutters to receive rainwater from the roof for all 3 school buildings.
- Provided rainwater storage tank for each building.
- Installed water pump and automatic sensor to take the rainwater from storage tank to the retention tank when reach the maximum level.
- Cleaned the existing main storage tank
- Made the system to be algae free and prevent the mosquito not to contaminate water.
- Installed new taps on the new storage tanks.
- Installed an automatic system to take underground water to reserve in case of rain water shortage.

Step 2: Improve the filtration system

EcoloTech believes that quality drinking water should start from the good water source. Rainwater in mountainous forest area is good, free from any contaminants as those water on the ground. However, the making of quality drinking water up to hygienic standard should rely on good, easy-to-maintain and low cost filter system. Therefore, we have developed a 2-step filtration to ensure water quality as follow:

- Filtration by natural materials : originally designed by Mr. Jone Jandai by using the natural materials that could be found and easy to maintain. Referring to water analysis result of the Department of Health, Ministry of Public Health, we found the acceptable results; therefore, we applied for the filtration of the rainwater taking from the storage tank.
- 2. Filtration by Industrial standard : after the filtration by natural materials, the water is then transferred to the next filtration with fine materials, under the standardized filters and decontaminated by UV treatment.

Step 3: Sensor / Monitoring system

To ensure the quality drinking water will be maintained, we applied other technologies such as:

- Automatic tank level to determine the current level of water in tank.
- Water Cleanliness and current pH monitoring
- Real time IOT sensor to give signal to EcoloTech in case of any deviation or contaminants to water.

Step 4 : Enhance some arts on the facilities

The system is made for all kids in school. To make them proud and have the ownership, we invite them to do hand-painting to the wall of water taps with animation characters designed by Khru Pann, the one of a kind vibrant art piece in Thailand.

Step 5: Assessment and Follow-up.

After project turnover, we will do assessment by quarterly, by 6-month interval, and extend to be every 6 months thereafter, to sustain the effectiveness of water QC control. We intended to publicize the project progress and outcome to the contributors and whom donated every year.

The total cost in system installation above is about 200,000 Baht or 7,000 USD including labor and transportation cost. The revenue from the cloth bags sold was allocated for the costs.







STEP 3 SCHOOL FINANCIAL FUND PROJECT

We realized that to solve social problems was not just providing a tool. By that we could not get through the root causes or come up with any long-term solutions in the end. Asking for donations could also lead to disputes in many aspects. For example, the fund receiver may not be able to maintain the facilities or may be difficult to find the new fund to do annual preventive maintenance. Many times, the facilities even become burdens for community and the problems could not be solved and the project could not expand well for other communities.

Therefore, we consider Social Business Model Innovation in the beginning of the project. The team surveys the area and do the assessment with villagers in order to know their real needs, the environment, impacts, pro and con factors of the receivers in priority. This will help ensure the success of the project.

To set up the initial fund in school could be made via the administration by Student's Cooperation, by promoting the business ventures run by students to make income by objectives. It could be implemented by boosting their ability to reach the good financial source, with the consulting with the experts to bring the good return paid back for the loan. We could bring the profits to maintain the drinking water facilities without spending more budget, but to maintain the initial fund, manage the profit back to the fund that can help promote student's projects further.

The fund control could be managed by the volunteers as mentors to develop good business, with expenses auditing and consult meeting by plan. The project team will assess the feasibility study of the new business ventures by students as proposed and justified them by the concept of Micro Finance.

The School Financial Fund will provide the good directions with knowledges and various approaches to make all students understand and enable themselves to make the passive income, result in long-term benefits in the future.

The Financial Fund Venture will start by January 2021 onwards. In the meantime, the project team is working with students before doing public communication.





Impact

Impact to communities (People)

- School could provide the clean drinking water supply that could make all students and staffs free from diseases due to groundwater consumption without appropriate treatment.
- School could reduce spending on purchased drinking water as did earlier, and enable to allocate the budget to spend on other
- Students could learn how to manage the drinking water and household water as the main resources in their daily lives.
- The standardized system to take care of water resources will be made for the benefit of underprivileged people.
- There will be the long-term project that caused no burdens to school in the future.

Impact to Environment (Planet)

- This is the way to help use the water resource to be the most valued and eco-friendly.
- The project could help find the clean drinking water supply in the area with the minimization of transportation, and lessen the requirement of bottled water that caused waste disposal.
- Keep the rainwater supply clean and ready for students.

Impact for Business (Profit)

- The business model will be developed for the benefits of future project to provide the clean water for other communities.
- We can do problems solving with less natural resources but bring more benefits in business ventures with growth.







PROJECT EXECUTION -





























PROJECT SPENDING

EXPENSES			
MATERIELS	LABOUR	TRANSPORT	OPERATION
130,617.41	34,790.0	0 5,700.00	48,618.55
TOTAL EXPENSES			
219,725.96			
BUDGET TARGET		250,000	
BUDGET AVAILABLE		30,274	

Impact of the project

Social benefits

- 1. 180 Students and teacher can get access high quality of drinkable water daily.
- 2. Water from new system gives water at a better health and improve health.
- 3. Reduce cost of bottled water purchase 72,000 Baths per year. School can use this money to improve lunch quality.
- 4. Project becomes the show case of sustainable drinkable water and show people to learn how to build a quality water.
- 5. After 10 months of project running period, school still have high quality of drinkable water until the next rainy season.
- 6. We can understand more the quality of water in the area and build data to map rain water quality in the area.



The story of Khru Pann

Khru Pann or Mr. Somnuk Klang-Nok is known as a leading Pop Art & Fashion Artist. He is a famous illustrator with the charming characters in his drawings.

Not only making his masterpieces on the canvas, but also share his beauty in works, presenting in the fashionable products or other merchandises in other social organizations as well.

Near to every month, he took his good opportunities to promote his arts in activities to improve the social welfare. Other than the Ramathibodi Foundation, he also help the Children hospital, and other organizations such as to make fund building canteen for hospitals in Chiangmai or building new facilities in the needy schools in the mountains.

Khru Pann was very pleased to help 'Pass the Love Forward' Project. It is his great pleasure to use his arts ability to help society as always.

"We are a part of society. By background, I myself is also the children from upcountry. Therefore, I somewhat know the needs of people who lack things. I know the norms of rural people who has nothing which mean they really have none! In case they were ill, there is no way to bring themselves to the hospital or have no idea how to pay for the doctors", he said.

He considered that in our society, if people are willing to help each other by loving hearts. Little by little, we then can make merits with the outcome of good society and peaceful livings together. Ideally, the riches should share some with the poor. If you have less ready to share, it will be nice just share your ability or power you may have to help make the society better.

As his teacher role by profession, he also use this opportunity to promote this concept to be grown in our society.









OUR TEAM



Mr. Pakpoum Mahasith (Bobby) CEO EcoloTech (Project Founder & Leader)

Ecologist, Innovator, Business coach and Social Entrepreneur, a former global business strategist for multi-national in Paris for more than 15 years. Pakpoum is recognized as the innovator for planet saving technology and had been granted by Thailand ministry of Science for his several innovative solution for climate crisis. He recently granted for new version of Air to Water technology in 2018.

Beside, Pakpoum spends his time as Sustainability mentors for government agencies and university. He is also president of The Freedom Story, foundation who fights against child trafficking and prevention in the Northern region of Thailand.

For more than 8 years, Pakpoum travels around Thailand in remote areas to advise and help villages to improve their quality of life and quality of water.



Ms. Kedkaew Thongcharoon (Moh) CEO Aufu (Project Co Founder)

Product designer and Eco Resort Owner, Kedkaew is an experienced in producing premium products, especially fabric bags. Aufu has been trusted by many leading companies in creating products to promote branding.

She is responsible for coordinating the project and overseeing product design for the Pass The Love Forward Project by working with many well-known artists. In addition to product design in this project, Aufu also takes care of the product ideas that will be produced by the community.



Mr. Ariyawit Siahampai Managing Director of Ariyakit Supply Co., Ltd., Community Engineer Consultant And Alternative Energy

Advisors



Asst.prof. Kowit Suwannahong, Ph.D.

Design consultant of Water Sanitation System Faculty of Environmental Science Burapha University



Mrs. Ariyawit Siahampai Advertiser and Public Relation Specialist, Ariyawit spend her 20 years in media and entertainment industry as press relation.

