



Netherlands Enterprise Agency



FDW SUSTAINABLE WATER FUND PROJECT

SUSTAINABLE AND RESILIENT PRO-POOR WATER SUPPLY

CEBU, PHILIPPINES

2015–2022





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THIS JOURNAL SUMMARIZES THE ACTIVITIES AND SUSTAINABLE OUTCOMES OF THE PROJECT, AND REFLECTS ON THE SUCCESSES, CHALLENGES AND PARTNERSHIPS' STRENGTHS ENCOUNTERED DURING IMPLEMENTATION.

THE SUSTAINABLE WATER FUND PROGRAM (FDW)



The Sustainable Water Fund (FDW) is a Public-Private Partnership (PPP) facility operating in the international water sector. Its aim is to enhance water safety and security in developing countries in a sustainable, inclusive and scalable manner. This PPP-approach focuses on Integrated Water Resources Management (IWRM), agricultural water efficiency and Water, Sanitation and Hygiene (WASH). FDW is financed by the Dutch Ministry of Foreign Affairs, Directorate General International Cooperation (DGIS) and is executed by the Netherlands Enterprise Agency (RVO). Since 2012, FDW has granted a subsidy budget of €150 million, which has been used to support 42 public-private collaboration projects in 24 countries.

The *Sustainable and Resilient Pro-poor Water Supply Project in Cebu* originated from the 2014 call for proposals. This PPP has a pro-poor approach to provide both improved and new connections to the urban poor of Metro Cebu, including the city's Low-Income Communities (LICs). The partnership also addressed the resilience of poor communities through WASH activities and Disaster Risk Reduction. This was realised through close collaboration between Dutch drinking water companies (VEI), the local water operator Metro Cebu Water District (MCWD), an NGO (Eau et Vie), and the Netherlands and Philippines Red Cross. The project thus incorporated FDW's fundamental elements of sustainability, inclusivity and scalability throughout its implementation.

What makes this project unique is the involvement of a social enterprise for WASH service delivery to the urban poor, and disaster preparedness at household and institutional level. While significant results have been realised, relevant lessons have also been learned, including long term sustainable service provision, ownership issues, land entitlement and urban planning. Lessons of this project are included in the **FDW report "A decade of RVO management"**.

INTRODUCTION TO THE FDW CEBU PROJECT



Left to right: Patrick Egan (Project Manager, VEI), Marco Schouten (former CEO, VEI) and Marion Derckx (The Ambassador of the Kingdom of the Netherlands to the Philippines)

On November 8, 2013, Typhoon Haiyan struck the Philippines killing more than 6,000 people and causing an estimated €5 billion of damage. The city of Tacloban was hit hardest with vulnerable communities wiped out and the Water District's supply system destroyed. This lack of clean, safe water made the terrible aftermath much worse.

By chance VEI, a not for profit Dutch water operator, Metro Cebu Water District (MCWD) and a French NGO called Eau et Vie were all in Tacloban offering assistance to the local Water District. On meeting, they assessed the lessons learnt from the disaster and decided to form a public private partnership to mitigate such future events in Metro Cebu. They were shortly joined by the Netherlands and Philippine Red Cross.

In 2014, the Netherlands Enterprise Agency launched the second call of their Sustainable Water Fund programme (FDW). This initiative promotes Public-Private Partnerships

to improve water safety and security in developing countries. Lead by VEI, the Partners successfully applied for a 55% subsidy to a FDW project named "Sustainable and resilient pro-poor water supply, Cebu, Philippines".

The 5-year project (later extended to 8-years), valued at €7.2 million had two principal objectives:

1. Provide 80,000 urban poor people with access to safe and sustainable MCWD water (SDG-6)
2. Improve the resilience of the water supply and communities to natural disasters

A PROJECT MANAGER'S PERSPECTIVE



Project signing ceremony

"It was an honour to manage this project and work alongside such dedicated professionals from VEI, Metro Cebu Water District, Eau et Vie, the Netherlands Red Cross and the Philippines Red Cross.

Through the Partners' efforts and the passion of local community volunteers, we managed to achieve or exceed every objective.

From an initial target of 80,000 people, we provided 135,000 of the urban poor with access to safe, affordable and resilient drinking water. Moreover, the project improved the well-being of over 42,000 people living in vulnerable communities through our WaSH and Disaster Risk Reduction interventions.

These tangible benefits were evident on the ground and through the continual positive reaction of the beneficiaries. The impact of the project was tested during the 2021 pandemic and December 2022 super-typhoon Odette when as a result, many fatalities were avoided, and livelihoods maintained."

Mr. Patrick Egan

*Resident Project Manager of the FDW Cebu project,
VEI B.V.*

PAYMENT MODALITIES

The FDW Cebu project centred on improving access to water for the urban poor, and improved resilience of Metro Cebu Water District and vulnerable communities to natural disasters.

Access to water for the urban poor is fundamentally dependent on:

1. The *cost effectiveness* of MCWD to install expansion pipes to these communities; and
2. The *ability* of the customer to then pay both the connection fee and water consumption.

The project was initially designed with two approaches to meet these requirements

	BENEFICIARY TYPE	CONNECTION FEE	WATER BILL	COMMENTS
1	Formal urban poor	Up-front €90	Monthly payment	Grant made the installation of expansion pipes financially viable
2	Informal low-income Community	Daily payment	Daily payment	NGO constructed metered water system supplied by MCWD bulk water

However, during project implementation, it became apparent that two other payment modalities were needed. These were made for households that had access to MCWD water, but could not afford the up-front €90 connection fee.

	BENEFICIARY TYPE	CONNECTION FEE	WATER BILL	COMMENTS
3	Formal low-income community	Subsidized by €55	Monthly payment	Households cannot afford the up-front connection fee, but can afford the monthly water bill
4	Formal low-income Community	Spread over 12-months	Monthly payment	

The €55 subsidised connection fee was funded by an additional grant from the Water for Life Foundation. While extremely welcome by the households, it was a finite budget and would not be a sustainable option after the project closed.

To counter this, MCWD trialled a payment by instalment option for 100 household applicants. The connection fee was spread across 12-monthly payments with no additional administrative charge. This was such a success, payment by instalment became a permanent option to new customers and has proved to be very popular. It also allowed the subsidised connection fee option to be removed early. This is one of the biggest wins of the project.

PROJECT OUTCOME – ACCESS TO WATER FOR THE URBAN POOR (SDG-6)

	DESCRIPTION	TARGET	REALISED
1	Expansion pipes to 24 formal low-income areas	50,000 people	90,000 people
2	Daily payment at 9 informal low-income Communities	15,000 people	18,000 people
3	Subsidised household connection fee	19,000 people	16,000 people
4	Payment by instalment of the connection fee	500 people (trial)	>11,000 people

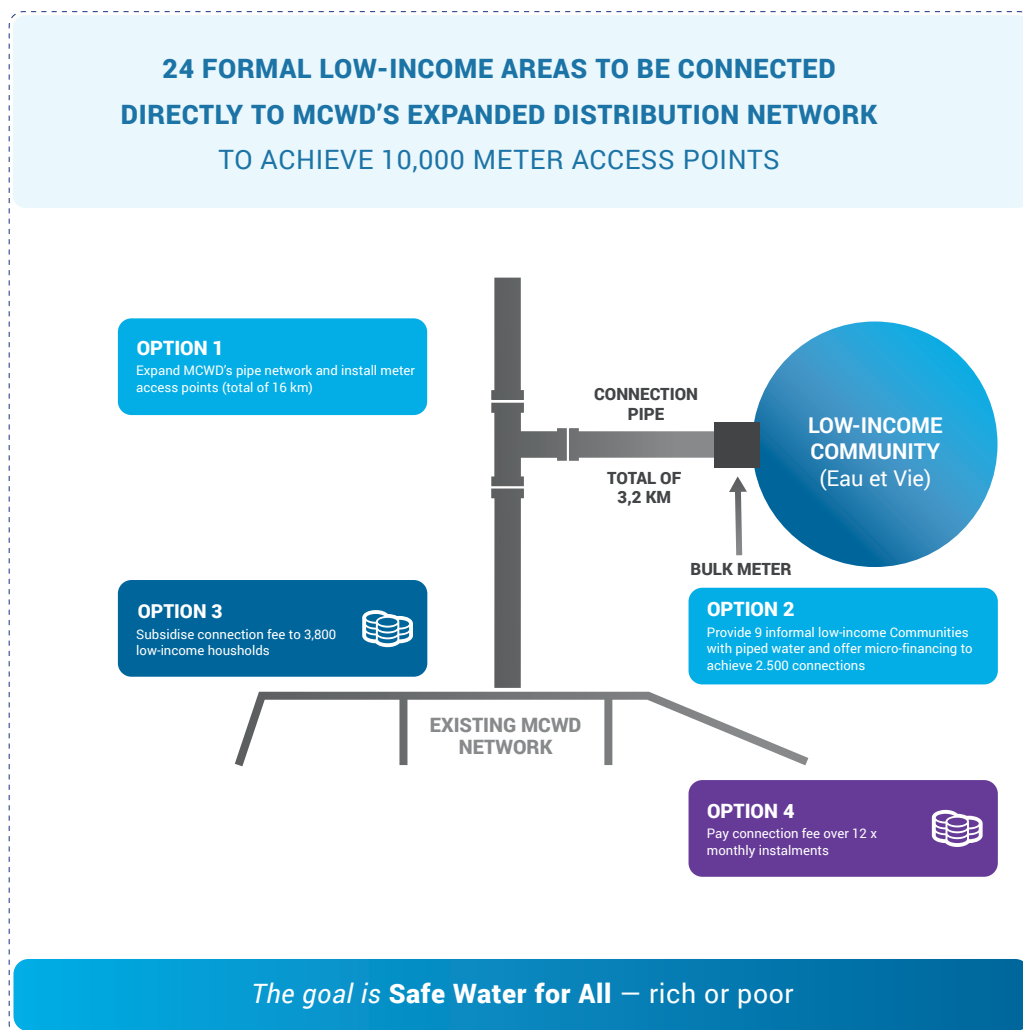


Figure 1 / Illustration of the 4 FDW Cebu payment modalities

THE PUBLIC PRIVATE PARTNERSHIP

The Netherlands Enterprise Agency Sustainable Water Fund grant was administered by RVO. There were five project Partners contributing to the PPP; these being:

1. VEI B.V. (formerly known as Vitens Evides International): lead partner
2. Metro Cebu Water District
3. Eau et Vie
4. Netherlands Red Cross
5. Philippines Red Cross

Each partner financially contributed to the project as shown in Figure 2:

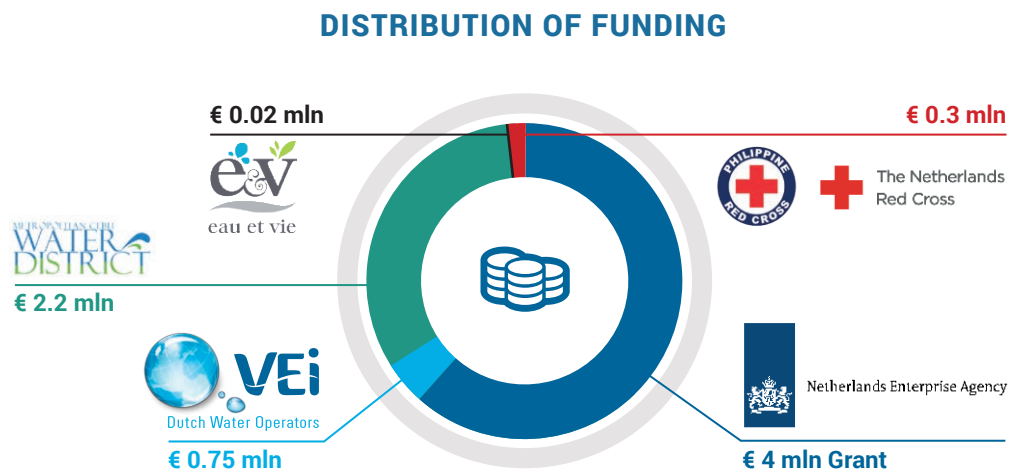


Figure 2 / Breakdown of Partner contribution to the project

The **RVO** grant contributed €4 million to the total project cost of €7.2 million (55%).

MCWD provided the largest own contribution as they were the main beneficiary of the project. Almost all their €2.2 million was spent on expansion pipes to urban poor areas and mobile generators. This was financially matched with a larger grant component. Without the grant, MCWD would not be allowed to connect these urban poor areas, as they do not pass the mandatory rate of return test required by the water Regulator.

VEI contributed €0.75 million to support the project management and provide MCWD's training / capacity building.

This again was matched with a similar but smaller grant component. VEI is a not-for-profit company and their contribution was provided by the Dutch drinking water companies under their international CSR policy.

The Netherlands and Philippines Red Cross contributed €0.3 million, which was matched with a corresponding grant.

Being a small NGO, Eau et Vie contributed the least financially but provided the unique service of daily water billing that secured the project. Their contribution was supported by an additional €0.5 million grant.



VEI B.V.

NETHERLANDS, PRIVATE COMPANY

VEI (formerly Vitens Evides International) is a not-for-profit private company that provides an international Corporate Social Responsibility vehicle for 7 of the 10 Dutch drinking water companies. VEI specializes in long-term Water Operator Partnerships (WOPs) whereby peer support and training is provided to developing water utilities. Experts are sourced from the seven drinking water companies to work side-by-side with their mentee counterparts so that knowledge is sustainably transferred to the utility.

VEI has 44 WOPs in 19 countries, including 3 in the Philippines; these being SWF Metro Cebu, SWF Cagayan de Oro and Central Visayas under the WaterWorX program. VEI has a strong track record in securing grants to co-fund these WOPs such as winning the grant for this project.

Responsibility

As lead partner, VEI was responsible for project management and administration. VEI also provided MCWD with technical assistance to improve their operational and financial sustainability via peer-to-peer training in the classroom and field.

Outcome

Improved sustainability of the MCWD operations with an accredited Water Safety Plan.

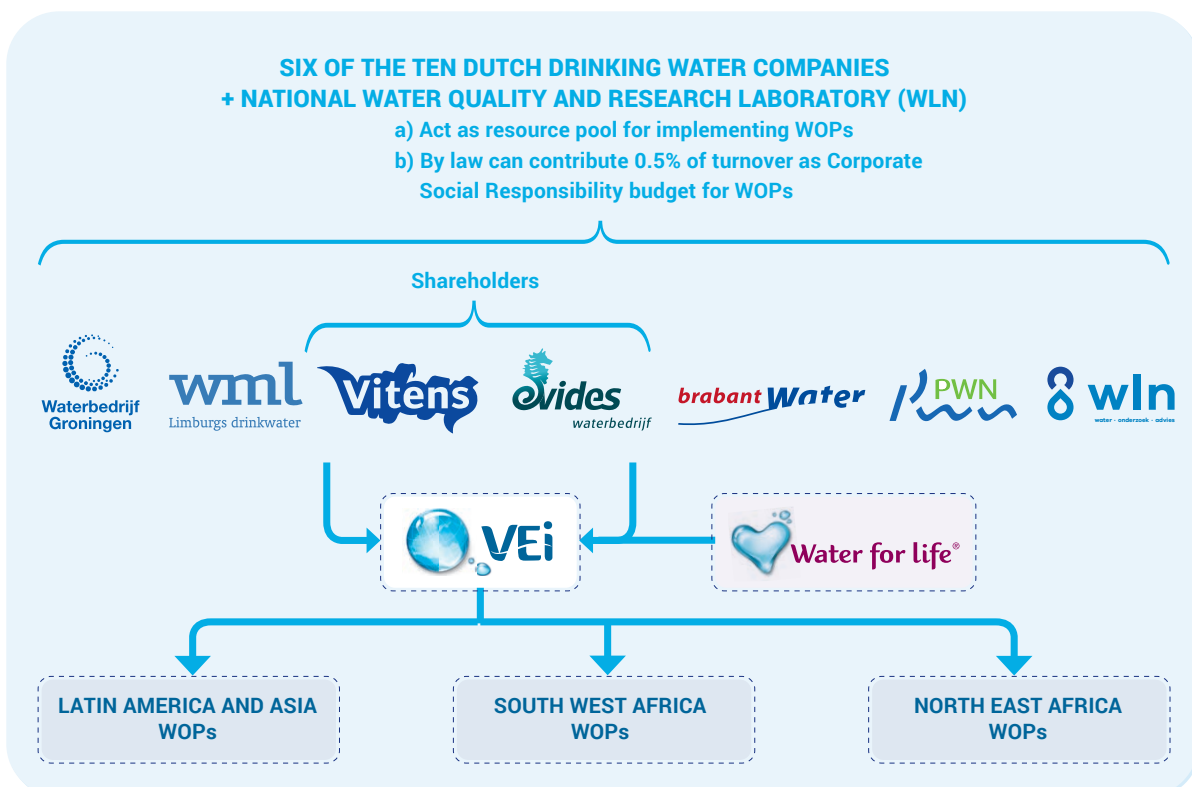


Figure 3 / Corporate Structure of VEI

VEI “Experts” are sourced from the 7 mother drinking water companies; for example, if MCWD requests a Human Resource Expert, VEI will:

- Assess the training needs of MCWD’s Human Resource Department
- Write a Terms of Reference to be advertised in the drinking water companies’ resource portal
- Jointly select and interview suitable candidates with MCWD
- Arrange the in-country mission with a program and objectives.



VEI provided MCWD with a mixture of technical, financial and management training. This was delivered on-line, in the classroom and in the field. All training was demand driven by MCWD based on their annual needs assessment. It included,

- Leak detection and Non-Revenue Water
- Plumbing
- SCADA and Human Machine Interface
- Strategic water demand planning
- Water quality and resources
- Asset management
- Water safety planning
- Network management
- Financial training
- Customer relationship
- Results based management
- Corporate communication
- Change management
- Human resources



A critical part of this capacity building was assisting MCWD to produce an accredited Water Safety Plan (WSP) to World Health Organisation standards. This is a risk based approach to reducing the threats to water quality arising from the catchment area to customer tap. Dozens of hazards were identified in the field, the risks assessed and prioritised, and control measure put in place as mitigation. The whole risk assessment, scoring and control is repeated each year to maintain safe and reliable drinking water.



METRO CEBU WATER DISTRICT

MCWD / PHILIPPINE, GOVERNMENT OWNED AND CONTROLLED CORPORATION

Metro Cebu Water District (MCWD) has the mandate to provide water and sanitation services to Metro Cebu, a high urban density area of 2.2 million people living in four cities and four towns; these being Cebu City, Mandaue City, Talisay City, Lapu-lapu City, Liloan, Consolacion, Cordova and Compostela. MCWD serves 210,000 properties, which is 55% of the service area.



Water Districts in the Philippines have no financial support from the government and must cover their operational and investment costs from water sales. Tariffs are extremely low making capital investment such as distribution pipes difficult to fund and hence the reduced service area coverage. This particularly effects urban poor areas where the low return on investment makes the laying of connecting water pipes too expensive, making wealthy sub-divisions the priority.

MCWD is controlled by the Cebu City government, and the Mayor appoints the Board of Directors. Cebu City requested that they too become a project partner, albeit in a passive role aside from the granting of permits to dig, identifying households below the poverty threshold and supporting milestone events and ceremonies.

Responsibility

MCWD was the main contributor and beneficiary to the project. They were responsible for providing 89,000 people with access to water via the construction of expansion pipes to urban poor areas, installing the inter-connection pipes and bulk meters to the boundaries of Eau et Vie's low-income Communities, and managing the emergency generators at key water sources.

OUTCOMES

1. Increased access to safe, sustainable and affordable water for urban poor areas.
2. Improved typhoon resilience of key water production facilities by using mobile generators.

Installing expansion pipes to urban poor areas

MCWD installed 22km of distribution pipes to 24 poor communities in the heart of Metro Cebu at a total value of €3.1 million. Due to the complexity of land owner rights, each pipe scheme took around 2-years to complete.

The pipe schemes included the installation of 783 meter access points known as “stub-outs”. In total, the meter stub-outs provided 17,500 households with access to water (89,000 people).

Meter stub-outs are both a blessing and a curse. They are cheaper to install than individual house meters and reduce Non-Revenue Water as theft is much harder. However, the

customer pays a higher price installing their pipe from the meter to the property, and there is a risk of contamination from the “spaghetti pipes”.

As part of the project’s pro-poor approach, MCWD adopted a policy of installing additional meter stub-outs into the heart of the communities (referred to as an “extended stub-out”) rather than at the usual side of the main road. This results in reduced length of spaghetti pipe from the meter to the house, which improves customer water pressure, reduces the overall connection cost, looks tidier, and reduces the risk of contamination from leaks and ingress of dirty water.



Sitio Tahna (before and after): overloaded stub-outs with spaghetti pipes were replaced with expansion pipes and extended stub-outs into the heart of the community

Willingness to connect

The uptake of actual connections compared to access to water points was surprisingly slow. Convincing potential customers to abandon their traditional source of water in favour of MCWD water was difficult. One of the key lessons is that potential communities should be orientated on the financial and health benefits of MCWD water in parallel with the pipe being installed.

EMERGENCY PORTABLE GENERATORS IN METRO CEBU

Power outages are common in Metro Cebu. The project paid for 27 portable generators to enable continuity of supply at MCWD's production facilities. They proved invaluable in the aftermath of Typhoon Odette when power was down for more than 6-weeks.



Metro Cebu Newly procured emergency generators arriving at MCWD's vehicle depot

Fatima Malzarte – Beneficiary

“Our water connection from MCWD definitely improved our daily lives. Now we have a source of water in our house. Before, we had to fetch water from water pumps and deep wells then wait until the water cleared due to its turbidity. Using MCWD water, we do not need to wait anymore. We can now easily do our chores. We are very grateful to MCWD and VEI for access to clean water in Sitio Lutaw. We are really happy.”



John Macabinta – Head of Corporate Planning, MCWD

“The portable generators are invaluable to MCWD. Not only do they keep critical wells running during power outages, they are also used at new wells whilst waiting for a permanent electricity supply to be installed by the utility.”



EAU ET VIE – TUBIG PAGASA

FRENCH, NON-GOVERNMENTAL ORGANISATION (NGO)

Eau et Vie (E&V) specialise in providing drinking water to low-income communities (LICs), many of which are informal settlements that water utilities are not legally allowed to connect. E&V registered two entities in the Philippines to (i) provide water supply; and (ii) support WaSH services; these being “Tubig Pagasa” and “Water and Life” respectively. This section describes how Tubig Pagasa contributed to the FDW Cebu project.

Tubig Pagasa

Tubig Pagasa (TPA) acts as a private operator to distribute water from MCWD’s bulk meter to individual households within the LICs. Each household connection is metered, rather than using traditional communal standpipes for three reasons: (1) it gives dignity to the household; (2) the water bill provides families with a legitimate evidence of address that allows them access to pro-poor government programs and other services; and (3) previous experience showed that communal standpipes are at risk from being taken over by criminal gangs.

Tubig Pagasa use locally trained plumbers to install and maintain the water system, and locally trained staff to meter read, bill and collect the water revenue. The frequency of the billing cycle depends on each community’s ability to pay and can range from daily to weekly. This is the unique service provided by Eau et Vie. Their customers generally have an irregular income and find it difficult to budget for a monthly water bill. However, they always have some Pesos in their pocket to pay for a few days of water consumption. Their billing system even has the functionality for a cus-

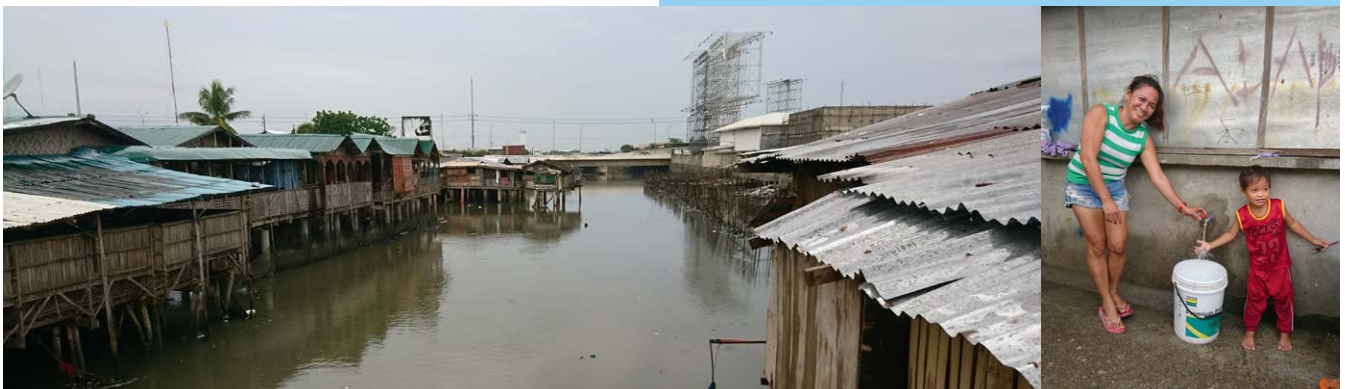
tomers to over-pay the bill to use as credit for “rainy days”. This quickly becomes a saving scheme that allows the billing frequency to be reduced. The intent is that after seven to ten years, Tubig Pagasa has recouped their investment, the households are able to save for a monthly water bill, and MCWD has the option of adopting the water network and customers. This methodology provides a hugely beneficial service to the poorest communities in Cebu and will eventually become a sustainable revenue stream for MCWD. The collection rate of >98% shows that no matter the financial circumstances, everyone can avail from safe and reliable water providing the payment modality fits.

Responsibility

Tubig Pagasa is responsible for supplying MCWD water to 18,000 people living in informal low-income Communities and disaster relocation areas.

OUTCOMES

Safe, sustainable and affordable water supplied to 9 Low-Income Communities.



Tangke Low Income Community

Eau et Vie – Tubig Pagasa

This component of the project provides potable and sustainable water to the homes of low-income Communities in the cities of Metro Cebu. By end of 2022, the project achieved the following results:

- 2,978 household water connections
- 18,000 people with access to potable running water at home



The project also provided 36 handwashing stations amid the COVID-19 health crisis.

Even during Typhoon Odette, the continuity of water service was sustained whilst also maintaining an average of less than 8% water loss and greater than 98% payment collection rate.

Both the technical and social complexities of urban poor communities were addressed by Eau et Vie's Water and Life model (E&V). They build a system that works with the urban poor set-up, such as a door-to-door billing service conducted by collectors hired from the areas of intervention. The frequency of the payment is also determined in consultation with the community with some starting from daily collection and eventually shifting to once a week or twice a month.

Innovations

Today, E&V utilizes an app called Wamasys that allows the collectors to record consumption and payment in real time when doing the door-to-door collection. They also carry a portable printer that prints the official receipt upon payment. This has strengthened transparency and the receipt serves as proof for the people of the now legal service they are enjoying.

The team is also continuously seeking innovations that can make the operations more efficient. A recent development is a bench-type meter calibration that allows the plumbers and in-house engineer to calibrate multiple meters at the same time.

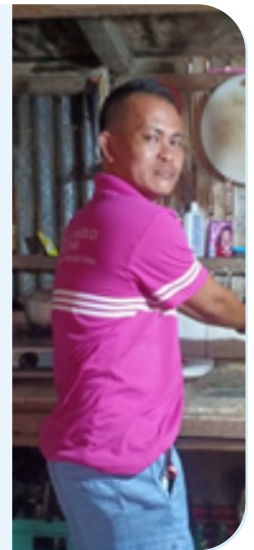
Judith Cagandahan
— Mandaue City, Cebu

“Before, when we did not have a private connection, we fetched water from our house. Now that we have a private connection, the hard time of fetching water is no longer experienced.”



Ronnie Amistoso
— Mandaue City, Cebu

“The connection of E&V Water and Life / E&V Tubing Pagasa is very different compared to the previous water source, which was the deep well. Deep well has a stinky smell and the water is muddy. Now I have two private water sources, E&V Water and Life / E&V Tubig Pagasa, and the deep well. We can use the potable/clean water for cooking, bathing and others while we are using the deep well connection for flushing of our toilet for example.”



United Nations:

‘Everyone has the right to a water and sanitation service that is physically accessible within, or in the immediate

vicinity of the household, educational institution, workplace or health institution.’

HUMAN RIGHTS STANDARD ON WATER ACCESS

AVAILABILITY

W&L provides piped water at home that is available 24/7 with a team of plumbers ensuring proper maintenance of the water network.



W&L conducts pre-survey to understand the context of each community.



AVAILABILITY

The cost of water is on average less than 3% of the household income. They are now able to save money and even start a small business thanks to the water service.



ACCESSIBILITY

As the water is made available right at the home of the inhabitants, they no longer need to walk far and spend hours on water collection.



They also coordinate closely with the HOA, community leaders, and LGU to ensure that the intervention is acceptable and appropriate to all groups.

ACCEPTABILITY

QUALITY AND SAFETY

W&L regularly tests the water pressure, water quality, and conducts flushing to ensure that the water remains potable and safe for the people.



EAU ET VIE – Water and Life

Eau et Vie (E&V) specialise in providing drinking water to Low-Income Communities (LICs), many of which are informal settlements that water utilities are not legally allowed to connect. E&V registered two entities in the Philippines to (i) provide water supply; and (ii) supporting WaSH services; these being “Tubig Pagasa” and “Water and Life”. This section describes how Water and Life contributed to the FDW Cebu project.

Water and Life

Water and Life (W&L) is registered in the Philippines as a NGO and provides the soft / institutional services in the Low-Income Communities. Water and Life and Tubig Pagasa work in parallel to (a) provide drinking water; and (b) address community issues such as vulnerability to fire, disaster risk reduction, unhygienic practices, solid waste management, sanitation systems and fragmented or weak communities’ organizations.

Responsibility

Water and Life contributes to the second project goal of increasing community resilience to natural disasters.

Once water flows at the heart of each community, E&V deploys a water-related support program through its NGO, Water and Life Philippines. With this, urban poor communities are also equipped on how to utilize their new water connection at home, and how to improve their wellbeing and the resilience of their community.

Each of the served communities has a volunteer fire brigade trained and equipped with the right tools to extinguish fires and conduct first aid. E&V believes that equipping the community with the power to protect and utilize water access is a key factor in resilience-building. Water security must withstand both natural and manmade disasters. The key to this is strengthening the human capacity to protect themselves and the infrastructure that provide this very basic need.

OUTCOMES

Increased self-sufficiency of communities to better manage health, sanitation, and disaster resilience.



Tubig Pagasa Volunteer community fire brigade practicing emergency drills

The reach of Water and Life is broader than the people connected to Tubig Pagasa's water, as they cater to the whole community. By 2023, Water and Life achieved the following results:

- 90,000 kilograms of solid waste collected through clean-up drives
- 601 volunteer firefighters trained
- 72,400 individuals equipped in water and sanitation, solid waste management, firefighting and emergency management, and community empowerment

The four pillars of Water and Life's social interventions

Gender equality is at the heart of the capacity building as often in these communities the man is at work while the females raise the families.

Water action is gender equality action.



Hygiene and Sanitation Program



Community Empowerment Program

Environmental Program



Firefighting and Emergency management Program



Water action is climate action.

NETHERLANDS AND PHILIPPINES RED CROSS INDEPENDENT HUMANITARIAN ORGANISATION

The Netherlands Red Cross and Philippines Red Cross joined forces to implement WaSH and Disaster risk Reduction interventions in the project's Low-Income Communities.

The Netherlands Red Cross

The Netherlands Red Cross (NLRC) via their Manila office, were accountable for delivering the WaSH program and improving resilience of poor communities to disasters such as typhoons and earthquakes. NLRC developed their rural approach to an urban context and managed the subsequent administration.

The Philippines Red Cross

The Philippines Red Cross (PRC) Cebu City Chapter were responsible for implementing all the field related activities of the NLRC project strategy. This was focused on community health programs such as WaSH, community latrine construction and disaster risk reduction (DRR). PRC predominantly worked in the same Low-Income Communities as Eau et Vie, and they complimented the services provided by Water and Life.

Responsibility

The Red Cross were responsible for implementing WaSH and DRR interventions to over 40,000 vulnerable people. Also, for providing 6,000 people with access to improved sanitation facilities via communal and school latrines. They trained several hundred community health and disaster management volunteers to make the interventions, while additional community members were trained on latrine operation and maintenance. One unexpected but valuable benefit was these volunteers were available, trained and equipped to assist the communities during the pandemic and the aftermath of Typhoon Odette.

The Philippines Red Cross worked in 10 Low-Income Communities to implement WaSH and Disaster Risk Reduction Interventions. In total over 400 volunteers were trained on these activities, who in turn implemented the activities within their communities under the close supervision of Red Cross.

OUTCOMES

Increased resilience of communities by improved health and response to future disasters.

Cebu city Community volunteers implementing WaSH sessions





The project provided 8 Barangays with Emergency Response Equipment. Volunteers were trained on their maintenance and safe application.

Marilyn Cabanes

– Community Volunteer / Latrine Beneficiary

“I am Marilyn Cabanes and I live together with my family; 7 children and 11 grandchild in the same house. Before the latrine was installed, this seashore was really smelly because it was where the people defecated. We are very thankful that the Philippine Red Cross arrived in our community. They really help and teach us a lot. Now we have toilets and also access to water via Tubig Pagasa. On top of that they encouraged the residents of Barangay Tangke to work together to build a healthier and better community.”



Basak San Nicolas low-income Community:
Water, Sanitation and Hygiene training.



Community and school latrine construction and maintenance

There was very few operational latrines in the Low-Income communities and open defecation was the norm. To restore the dignity of the residents and improve hygiene, Red Cross constructed latrines and hand-washing facilities.

These were managed by locally trained staff as a private enterprise and supervised by the Barangay Water and Sanitation Association.



Cebu city Communal latrine facility



School latrine facility



WATER FOR LIFE FOUNDATION GRANT CONTRIBUTION

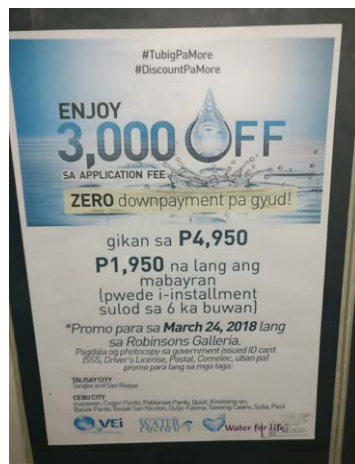
The Water for Life Foundation (WfL) was established in 2004 by the Dutch drinking water utilities. Customers are invited to pay additional to their water bill and this contribution is used for sustainable water services in developing countries. Each year, over €1 million is raised with 100% of the donations going directly to the projects.

WfL Cebu

In 2017, the FDW project realized there was a large proportion of urban poor families that could not avail from a MCWD water service. They were financially able to afford the monthly water bill, but they could not afford the upfront connection fee payment of €90. Consequently, VEI and MCWD submitted a successful proposal to the WfL Foundation for a grant covering the connection hardware for up to 3,800 households. The hardware consisted of the water meter and angle valve valued at €55. The remaining €35 connection fee was then spread across a 6-month period making MCWD services affordable to this type of user.

1-Stop Shop Application Events

Specific communities were identified that had MCWD distribution pipes outside their homes, but the billing database showed many had not connected. MCWD interviewed these communities to determine if they would connect should the fee be 60% subsidized. On a positive response, MCWD would hold a “1-stop shop” event in a local basketball court whereby families were orientated on being a MCWD customer and then guided through the application process including notarization. The events were held on a Saturday, within easy reach of the applicants and the whole process took less 1-hour, and so were very convenient for people who typically worked 6 or 7 days a week.



Metro Cebu 1-stop shop application process for connecting to MCWD water system

Results and Sustainability

The subsidised connection program had a finite budget and hence not sustainable. To counter this, MCWD trialled a payment by instalment option for 100 household applicants. The connection fee was spread across 12-monthly payments with no interest charged. This was such a success, payment by instalment is now a permanent option

to new customers and has proved to be very popular. It also allowed the subsidised connection fee option to be removed early. This is one of the biggest wins of the project. In total, 3,200 households (19,000 people) availed from the connection subsidy, whilst by the end of 2020, 2,200 households (16,000 people) and counting used the payment by instalment.

HELPING VULNERABLE COMMUNITIES DURING THE COVID-19 PANDEMIC

The pandemic hit Cebuano's hard. Only 1 person was allowed out of the house for shopping and essential services during the lockdown period of April to October 2020. Livelihoods stopped and businesses closed; children eventually returned to school in August 2022. Project Partners played a huge role in providing water and hygiene assistance during this time.

Metro Cebu Water District

- In the difficult times of the pandemic, MCWD allowed partial payment of arrears until October 2021
- MCWD rented over 20 trucks to deliver free water to vulnerable communities, including non-customers
- During the lockdown period, MCWD operated a skeleton staff to ensure essential services were delivered.



Eau et Vie

- The project won €36,000 grant to locally construct and operate 40 COVID hand-wash stations
- Tubig Pagasa provided 3-months of free water to their customers during the total lockdown period
- Water and Life supported the project communities with hygiene materials.



Philippines Red Cross

- By good fortune, the project had trained over 230 Community Health Volunteers who were ready to help the Low-Income Communities (LICs) mitigate the effect of the pandemic
- The project reallocated €35,000 to PRC for procuring PPE, hygiene kits, hand-washing facilities, hot meals and community based surveillance
- PRC received donations to purchase a molecular laboratory to test people with COVID symptoms
- Without the project, the effects of the pandemic on the LICs would have been much more severe.



PROJECT ACHIEVEMENTS

The project achieved or surpassed every target and objective. The numbers presented below do not reflect the true success of the project. The visible benefit, the gratitude of the residents, and the ability of the communities to overcome pandemics, floodings and typhoons are the real testament of the project.

By anyone's standards, €7.2 million over 8-years is small money for an international project consisting of 4 active Partners, hardware and capacity building investments, and interventions that reach > 40,000 vulnerable people.

It shows that with the correct approach, competencies and flexibility, FDW projects are powerful tools to realise great benefits from modest budgets.

	KEY DELIVERABLE	TARGET	REALISED	PARTNER
SDG-6: ACCESS TO SUSTAINABLE WATER AND SANITATION				
1	Extend the water pipe network	19.15 km	21.7 km	MCWD
2	Provide access to water via meter points	10,000 h/h	17,512 h/h	MCWD
3	Provide access to water via subsidised connection fee and payment by instalment	3,900 h/h	5,425 h/h	MCWD
4	Provide access to water in informal LICs	2,500 h/h	2,978 h/h	Eau et Vie
5	Access to sanitation facilities	1,200 people	6,080 people	Red Cross
IMPROVED RESILIENCE OF THE WATER SYSTEM TO DISASTERS				
6	Provide emergency mobile generators	# 27	# 27	MCWD
7	Provide capacity building and training to MCWD	600 staff	1,400 staff	VEI
8	Accredited Water Safe Plan	1	1	VEI
IMPROVED RESILIENCE OF VULNERABLE COMMUNITIES TO DISASTERS				
9	Water, sanitation & hygiene intervention	20,000 people	42,309 people	Red Cross
10	Volunteers trained	380 people	450 people	Red Cross
11	Community and school latrines constructed	10 facilities	10 facilities	Red Cross
12	Disaster Risk Reduction preparation	9 Barangays	9 Complete	Red Cross

ACCESS TO WATER AND SANITATION TARGET: 81,200 PEOPLE
 REALISED TO DATE: 140,927 PEOPLE
 ACTUAL CONNECTED TO WATER AND SANITATION: 87,958 PEOPLE

TYPHOON ODETTE WAS THE ULTIMATE TEST ON HOW EFFECTIVE THE PROJECT HAD IMPROVED VULNERABLE COMMUNITIES' RESILIENCE TO DISASTERS... IT PASSED THE TEST. WITHOUT THE PROJECT, THERE WOULD HAVE UNDOUBTABLY BEEN MANY MORE CASUALTIES AND SERIOUS HEALTH ISSUES.

SUPER-TYPHOON ODETTE

THE ULTIMATE TEST OF THE PROJECT

On December 16, 2021 super-typhoon Odette (internationally known as Typhoon Rai) struck Metro Cebu. It later became the second most costliest typhoon in Philippine history. The aftermath was devastating to properties, businesses and livelihoods. At least 21 people were known to have died and thousands displaced.

How the Project Helped

- **Emergency power for 6-weeks**

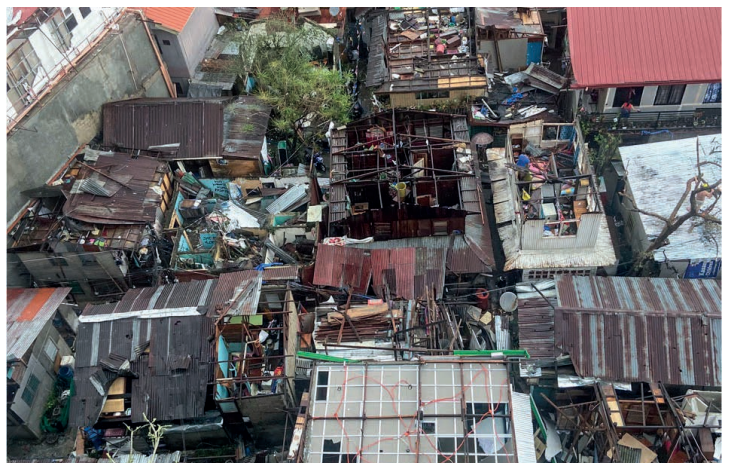
All the power lines were damaged and many roads impassable due to fallen trees. Power was not recovered for 6-weeks. However, MCWD had trained for such an incident and the project's 27 mobile generators were rotated across Metro Cebu's deep wells. The mobile generators restored 20% of the supply in 48-hours, providing a lifeline to the cities and towns. There was no other supply of water – bottled water ran out after the first day. Without the generators, the consequences would have been catastrophic.

- **Disaster Risk Reduction (DRR) Plans implemented**

There was also no cell phone or wi-fi coverage for 6-weeks, yet the DRR plans rehearsed by communities and the Red Cross worked perfectly. All vulnerable residents were safely evacuated to designated sports centres and shopping malls the day before the typhoon. These facilities were stocked with food, water, blankets and hygiene kits. Consequently, there were no casualties.

- **Robust water connections**

The project paid for meter cages to protect the access points from damage and theft. This small investment meant that less than 100 water connections in the Low-Income Communities were damaged.



Aftermath of Typhoon Odette ships were grounded from the resultant waves and properties destroyed

Testimonial – Clarito Misal, Principle Engineer, MCWD

"It was only my second week as generator manager when the typhoon struck. It was total chaos with collapsed buildings, fallen trees, no power and no communications. By a miracle, we had the 27 mobile generators provided by the FDW project. We managed to rotate the generators

across 126 deep well sites so that everyone had sufficient water to survive. Within 2-days, we had communicated out a schedule to communities and provided 20% water supply. Without the generators, a disaster would have become a calamity."

REFLECTIONS – KEY SUCCESSES

Looking back over the 8-year period, it was inevitable the project journey would take many unexpected twists and turns, ups and downs, celebrations and disappointments..... not to mention marriages, births, parties and all the other events experienced from a close partnership.

The key successes were:

1. The project achieved / surpassed all targets and kept within budget. This is remarkable considering the impacts of the pandemic, typhoons, floodings and several changes in Mayors and Board of Directors
2. A sustainable partnership that continues after the project ended:
 - MCWD and Eau et Vie will continue to supply and serve new Low-Income Communities
 - VEI and MCWD have continued their partnership via the 7-year Dutch funded WaterWorX program
 - Netherlands Red Cross and Philippine Red Cross continue their collaboration in the LICs
 - In 2023, VEI and Eau et Vie partnered on a similar project in Dhaka, Bangladesh
3. There has been a welcome shift by MCWD to a pro-poor approach:
 - Meter access point are installed in the heart of the Low-Income Communities to minimise the customers' costs of laying their own pipes from the meter to the house
 - The connection fee's payment by instalment option is available to all new applicants
 - Provision of trucks that deliver free water to vulnerable communities after calamities



Pakna-an, Mandaue City
Meter cage, reader



Tanke, Talisay City
Maintained latrine

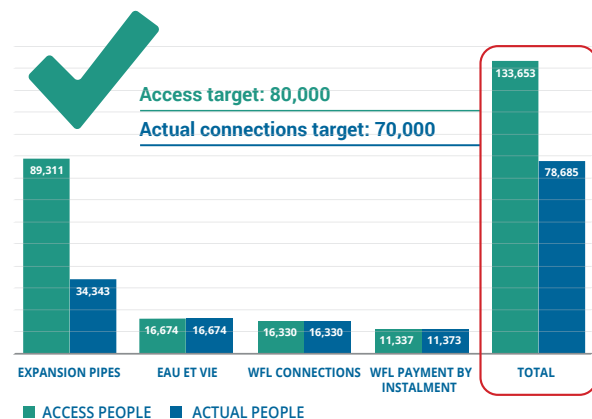


Lusaran, Cebu City
New water source built 2022

4. The project results are sustainable with some up-scaling:
 - New water sources coming on-line allows MCWD to increase the number of meter access points
 - Eau et Vie have expanded their operations to other parts of the Philippines
 - Red Cross has internationally standardised the urban WaSH model developed during the project
 - MCWD is preparing the updated Water Safety Plan ready for renewing its accreditation

LESSONS LEARNT AND CHALLENGES

FDW CEBU ACCESS TO WATER VS ACTUAL CONNECTIONS (PEOPLE)



The project provided many learning points and challenges that were overcome. These were shared and discussed with other SWF programs under the RVO Inspire series of webinars, so others could avail from the knowledge.

1. Installing distribution pipes in dense, city centres is difficult and protracted.

On average, from initial survey to final commissioning, it typically takes 2-years to lay a 2km pipe with all the necessary permit to digs.

2. Private land / multiple (claimed) owners stopping the pipe laying. There is no “right of way” or easement in the Philippines. Instead, MCWD enters individual negotiations with land owners that sometimes results in the pipe schemes being abandoned.

3. Maintaining sustainable water sources on an island like Cebu is incredibly difficult. There are no rivers of any worth and water is mostly abstracted from 124 deep wells suffering from depletion and salinity intrusion. An El Niño weather event occurred over the majority of the project duration resulting in less rainfall on land. This was exasperated by unregulated water abstraction, a lack of city planning that does not take into account water resource and future demand, and increasing hard surfaces that prevents aquifer replenishment. Some of the project’s pipes were decommissioned due to a lack of supply. VEI has since assisted MCWD in applying for Dutch grants to help co-fund the construction of desalination plants, which are the only pragmatic way of producing a reliable (though operationally expensive) water supply. The first plant is due for operation in late 2023, after which the decommissioned project pipes will also be brought back into operation.

4. By project end, 61% of the meter access points became actual customer connections. Convincing households to connect to the water supply is surprisingly difficult. One would imagine that families would be delighted to have a meter point outside their home, but many are suspicious, unsure of the benefits or happy to source their water in the same way as previous generations. Some of this attitude is derived from a bottled water manufacturer’s highly successful advertising campaign that claimed MCWD water is unsafe to drink. The lesson learnt is that a soft approach is required within the target community to orientate potential customers on the benefits of MCWD water so that there is a greater willingness to connect once the meter points are installed.

CONCLUSION

Thanks to the flexibility of the Donor and the expertise of the Partners, the FDW Cebu project was a great success. All targets were achieved or surpassed.



IT IS SAFE TO SAY THE TWO KEY OUTCOMES WERE MET:

OUTCOMES

1. Provide 80,000 urban poor people with access to safe and sustainable MCWD water (SDG-6)

By 2022, the project has provided access to water for over 130,000 urban poor people. From this, 82,000 people are actually connected and this figure will increase as more families understand the benefits of MCWD water.

The project has provided applicants with four options for connecting to MCWD water depending on their financial circumstances – the most significant being the fee spread over 12-monthly payments at no extra cost. Truly, everyone in Metro Cebu can now avail from MCWD water – rich or poor.

2. Improve the resilience of the water supply and communities to natural disasters

Typhoon Odette and the pandemic proved that the project had achieved this outcome.

MCWD had procured 27 mobile generators that were matched to the ratings of all their 126 deep wells. This allowed them to rotate coverage across Metro Cebu and supply a lifeline volume of water during the subsequent 6-week power outage caused by the typhoon. Red Cross executed the practiced Disaster Risk Reduction Plans and safely evacuated vulnerable communities to safe havens such as sports centres and shopping malls.

Regarding the pandemic, Red Cross had ready trained 230 Community Health Volunteers that immediately started work in mitigating the effects of COVID-19 in the vulnerable communities. This was boosted by the project providing hand-washing stations, PPE, test kits, hygiene packs and food parcels.

Looking forward

The FDW project is by definition “sustainable”. Every decision made during its implementation was tested with the question “will this still continue after the project?”. The Partners confirmed their collaboration in February 2023’s Final Evaluation workshop. MCWD will strengthen their pro-poor focus created during the project and work with VEI on the Dutch 2023 WaterWorX program. The Eau et Vie business model is solid and they will work with MCWD to

identify new low-income Communities for water supply. The Netherlands and Philippines Red Cross continue to train new health, disaster reduction and sanitation volunteers to maintain the facilities and improve community resilience to disease and disasters.

For a small amount of money, such a lot has been achieved and the legacy of the project is secured.



This is a publication of VEI b.v. Look for more information at www.vei.nl or [YouTube](https://www.youtube.com).

September 2023

