

Improving living conditions in depressed areas through sustainable access to running water, fire prevention, sanitation and waste management

Philippines - Bangladesh - Ivory Coast



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List of abbreviations and acronyms

Abbreviation	Complete Name	Description	Country
Barangay	Barangay	In the Philippines, cities and municipalities are subdivided into smaller political units called « Barangay »	Philippines
DNCC	Dhaka North City Corporation	DNCC is the local administration in charge of Dhaka Northern area	Bangladesh
DWASA	Dhaka Water and Sewerage Authority	Water distributor in charge of Dhaka region	Bangladesh
E&V	Eau et Vie		
LTHAI	Lower Tipolo Homeowners Association Inc.	Community-based organization in Lower Tipolo (area within the Barangay of Tipolo, Mandaue City)	Philippines
Maynilad	Maynilad Water Services Inc.	Water distributor operating in Metro Manila Western area	Philippines
MCWD	Metro Cebu Water District	Water distributor operating in Metropolitan Cebu area	Philippines
MIWD	Metro Iloilo Water District	Water distributor operating in the city of Iloilo and nearby cities and municipalities	Philippines
NGO	Non-Governmental Organisation		
ONEP	Office National de l'Eau Potable	National office under MIE authority, in charge of drinking water access and management throughout the territory	Ivory Coast
SJP	Shobar Jonno Pani Ltd.	Local social business created by E&V	Bangladesh
SODECI	Société de Distribution d'Eau de la Côte d'Ivoire	Private water distributor in charge of water distribution in urban and peri-urban areas	Ivory Coast
TPA	Tubig Pag-Asa	Local social business created by E&V registered under the laws of the Philippines	Philippines
UNDP	United Nations Development Programme		
UPPRP	Urban Partnerships for Poverty Reduction Project	Poverty Reduction Partnership between UNDP and Bangladeshi government	Bangladesh
W&L	Water and Life	Created by E&V in Philippines and Bangladesh, these local organisations manage project development	Bangladesh Philippines

Introduction

Eau et Vie (E&V) is a Non-Governmental Organisation (ONG) founded in 2008. It aims to improve in a sustainable way, living conditions of the most disadvantaged populations in urban depressed areas of developing countries. Its founders, Valérie Dumans and Philippe de Roux, both met in the field while working in Philippines on a micro-credit programme of an NGO called InterAide. Once they came back to France, they continued their social development advocacy and commitment through several organisations.

E&V aims to improve family's living conditions by installing running water networks at home and providing trainings, sanitation, waste management and fire-fighting services.

Through social entrepreneurship and working in close collaboration with communities, E&V supports the creation of small local social businesses in depressed urban areas, where official distributors cannot work in compliance with their quality standards. These local social businesses operate according to a methodology adapted to residents' living conditions. They are in charge of network building, distribution in depressed areas and provide associated services, including invoicing and maintenance. At the same time, NGOs founded by E&V ensure community building through hygiene training and fire prevention and implement sanitation and waste management services.

All these activities are conducted in accordance with needs expressed by slum residents and in partnership with local and international development stakeholders. These projects impact on population's health (lowering of water-related illness and unsanitary environment-related illness) as well as on their living environment (job creation, savings for family budget, lowering of violence in these districts). Finally, these projects enhance slum residents' self-esteem. These areas have long been neglected by public policies. Actions taken by E&V and its partners within these areas enable to place authorities face to face with their responsibilities and contribute changing the way they consider slum residents. E&V model states that slum residents are not passive recipients of aids, but are actors and clients who collectively choose to improve their living conditions.

E&V strategic plan is divided into 4 phases covering a 7 to 10 years period:

1. Providing access to potable running water to district families and installing fire hydrants managed by trained volunteers from district community.
2. Providing communities and local leaders with a set of water management, environment conservation and hygiene trainings.
3. Installing community-level sanitation facilities (latrines and sewerage) and waste management.
4. Building on, assessing and measuring the impact of these actions on residents' living conditions.



Abstract

1. 2014 achievements

1.1. In the field

		Slum (year of network opening)	Targeted beneficiaries (number of households)	Access to running water (number of beneficiary households)	Prevention and Fire-fighting	Hygiene awareness	Environmental, awareness, sanitation and waste management	Enhancing community building
PHILIPPINES	CAVITE ¹	Salcedo II (2011)	600	338 families	1 fire hydrant per 122 families 1 volunteer fire-fighter per 20 families 45 people trained in fire-fighting 36 people trained in first aid	Global Hand Washing Day (300 children and 30 adults) World Water Day in Manggahan (68 participants)	Neighbourhood Clean-up Day (470 participants)	Numerous meetings with people community representatives and other actors working in slum districts
		Manggahan (2012)	320	193 families				
		Pugad Ibon (2012)	300	242 families				
	CEBU	Lower Tipolo (2013)	500	444 families 4 public places (480 users)	1 fire hydrants per 100 families 1 volunteer fire-fighters per 14 families 32 people trained in first aid	Global Hand Washing Day (30 participants)	Neighbourhood Clean-up Day (200 participants)	
		Malibu (2014)	312	216 families	1 volunteer fire-fighters per 17 families	Global Hand Washing Day (30 participants) 171 people sensitised to water quality	Neighbourhood Clean-up Day (80 participants)	
		Paknaan (2015)	1,200	End of census				
Philippines total		3,232 families	1,433 families (7,880 people) 4 public places (480 users)	114 volunteer fire-fighters 15 fire hydrants	626 sensitised people	750 sensitised people		
BANGLADESH	DHAKA	Bhashantek (2013)	3,600	1,081 12 public places (4 mosques, 3 schools, 1 praying areas and 4 day-care centers)	62 new people trained in fire-fighting 10 fire-fighting brigades created	Global Hand Washing Day (365 pupils) Public event: Clown Benraoshi Polli (150 people) Hygiene awareness in a health centre (207 people)	Partnership agreement signed with DNCC and to implement a waste collection project Feasibility survey (256 people)	
		Total Bangladesh	3,600 families	1,081 families (4,860 people) 12 public places (910 users)	70 volunteer fire-fighters 1 fire hydrants	734 people	256 people	
	Total number of beneficiaries		6,838 families	2,514 families (12,740 people) 16 public places (1,390 users)	184 volunteer fire-fighters 16 fire hydrants	1,360 people	1,006 people	

¹ Number of targeted families in Cavite was adjusted in 2014 to 1 220 (810 in 2011 preliminary survey).

1.2. In France

In 2014, E&V projects have undergone an assessment process of its economic model and activities in Philippines and Bangladesh by HydroConseil, a consulting firm specialised in water and sanitation-related matters in developing countries. It was also marked by Aquassistance mission, an organisation counting experts in water, sanitation and waste issues. Choice of an integrated approach coupled to social entrepreneurship is more and more recognised to enable water, sanitation, waste management and fire prevention in precarious districts of large cities in developing countries.

After a final prospective mission in Ivory Coast, where all local partners support the launching of a pilot project, a 3-years programme (2015-2017) was drafted and submitted to several potential partners.

E&V website was completely redesigned. It displays all approaches and actions by country and topic. A scorecard allowing agencies' activity monitoring was developed and is automatically up-dated thanks to the water sales management software.

Headquarters' effective grew as it welcomed E&V co-founder and a second project officer. Finally, E&V strengthened its base in Pays de la Loire region.

2. Conclusion

By end of 2014, 12,740 people living in Cavite, Cebu and Bhashantek slums had access to potable running water at home. In these districts, 1,400 users of public places also benefited a connection to SJP or TPA networks. Payment collection rate exceeded 95% after due date. Water agencies improved their financial, operational and institutional sustainability. On their side, W&L NGOs kept developing their activities. In total, all areas taken together, 184 volunteer fire-fighters were trained and equipped. 1,360 people were sensitised on hygiene practice. Two innovative pilot projects have been defined: the first one aims to organise domestic waste collection in Bhashantek slum; the second one aims to equip Pugad Ibon slum with public latrines.

Two external missions reinforced E&V approach that is combining potable water access through a social business and sanitation and fire prevention access through a NGO.

The economic model adopted by E&V is intended to ensure sustainable access to water in the target communities. It includes a water selling price suitable with social business balanced accounts and affordable costs for beneficiaries. Terms of social business sustainability are now clearly defined. Future intervention areas will be selected accordingly.

2015 was marked by E&V change of scale. Activities will be developed in current operational areas. New projects will be launched in four (4) new cities: Chittagong in Bangladesh; Tacloban and Iloilo in the Philippines; and Abidjan in the Ivory Coast.

Projects progress in Philippines

1. Cavite

1.1. Earlier achievements

In 2008, E&V created a local social business named Tubig Pag-Asa (« Water for Hope ») and a local NGO named Water and Life Philippines (W&L). TPA and W&L projects are aligned with government objectives, which by 2015 set a target of 86.6% and 83.8% of population will have access to potable water, and access to sanitary toilet facilities, respectively. These objectives meet pressing needs. According to the National Water Resources Board (NWRB), small water distributors must urgently start operations and provide running water to depressed areas, where no other distributor operates. Further to a long advocacy work done with W&L contribution, this government agency validated the TPA model and now wishes to develop it.

In 2009, a first network was built in Sipac slum, north of Metro Manila. Unfortunately, a fire destroyed the whole area in 2010 while 75% of the 783 targeted families were connected to TPA running water network. This disaster wiped out everything, families were relocated in other communities and TPA was not able to continue its project. These few months activities in Sipac highlighted the usefulness and viability of this project. Thus, local water operator and partner of the project, Maynilad Water Services Inc., invited E&V to start a new project in south of Metro Manila suburbs, in Cavite's depressed communities. A partnership agreement was signed in 2011 between TPA and Maynilad for 15-year duration.

On end of 2013, TPA began operations in three (3) slum communities in Cavite, namely: Salcedo II (since September 2011); Manggahan (since January 2012); and Pugad Ibon (since December 2012). To date, a total of 717 households now have potable running water direct to their homes. The Cavite branch office had an average monthly deficit of € 470, payment collection rate which was below 80% resulting to more than 8% of service users had their water supply cut. In contrast, water leakage rate in TPA network was below 5%.

At the same time, the communities were equipped with fire hydrants and volunteer fire brigades were trained and equipped. Hygiene and environment awareness sessions were conducted together with community building actions.

2013 achievements		
Services	Number of beneficiaries	Means/Actions
Access to running water	717 families (about 4,000 people)	717 connected to TPA Cavite network (Salcedo II, Manggahan and Pugad Ibon)
Fire prevention and fire-fighting	810 families (about 4,500 people)	1 fire hydrant per 80 families 1 volunteer fire-fighter per 30 families 150 people trained in fire-fighting 113 people trained in first aid
Hygiene awareness	230 children	Global Hand-washing Day in Pugad Ibon
Environment awareness	320 families (about 1,800 people)	Neighbourhood clean-up Day in Salcedo II (140 participants)
Enhancing community building	810 families (about 4,500 people)	Numerous activities and intra and inter-districts meetings

1.2. 2014 achievements

Year 2014 was marked by a consolidation of Cavite operational activities.

2014 achievements		
Services	Number of beneficiaries	Means/Actions
Access to running water	773 families (about 4,250 people)	644 connected to TPA Cavite network (Salcedo II, Manggahan and Pugad Ibon)
Fire prevention and fire-fighting	1,220 families (about 6,700 people)	1 fire hydrants per 122 families (10 fire hydrants) 61 volunteer fire-fighters trained 2 training sessions gathering 81 people
Hygiene awareness	365 children and 30 adults	Global Hand-washing Day in Manggahan and Salcedo II
Environment awareness	1,220 families (about 6,700 people)	Neighbourhood Clean-up Day in Salcedo II, Manggahan and Pugad Ibon (470 participants)
Enhancing community building	1,220 families (about 6,700 people)	Numerous activities and intra and inter-districts meetings

A. Access to running water

Cavite water network development

As TPA continues to expand its water network in Cavite, the number of families with service connection has increased by **8%** reaching out to **773 families** at the end of 2014 (previously 717 at the end of 2013). The area coverage rate now reaches **63.3 %**, covering **80%** of Pugad Ibon relocation area, **60%** of Manggahan and **56%** of Salcedo II. This area welcomes families with a higher standard of living and which are able to adapt to the classic operator's process (monthly payment in particular). It allowed Maynilad's network extension and explains TPA difficulties to find new clients.



The extension of activities foreseen in 2013 in Makabli and Kaingin districts, in Santa Rosa (Laguna) will be conducted in their first area only. TPA and local distributor Laguna Water District are currently conducting discussions regarding Makabli, where 300 disadvantaged families live. As Kaingin is a temporary relocation area, TPA is not planning to expand in this area any more.

Tambakan mapping and surveying have been finalised. But TPA was not able to launch its project as the land on which the slum is located was bought by a private owner who built a water network from a well and wished to manage water distribution by its own means.

Due to failure to launch activities in these last districts and due to Maynilad network expansion in a part of Salcedo II district, the objective of 1,310 beneficiary families could not be reached.



From a technical perspective, heavy rains disrupted the maintenance activities in Salcedo II during the year. Few leakages were found but water leakage rate remained low along the year, below 5%, as pipes are protected and installed along alleys. TPA met Maynilad technical team to discuss water clarity issues. It was agreed that a weekly network "rinse" would be done (until then, frequency was variable, usually on a monthly basis or upon clients complains).

In Pugad Ibon, the project of which provide water service connection to a day-care center which was first planned in 2013, was finally accepted and supported by the local government of Kawit City and the local office of Philippines Reclamation Authority (in charge of land reclamation and rehabilitation in the field of public works). Work is now in progress. The school, which welcomes 60 children daily, will also benefit from a hand-washing and teeth brushing stations. In Salcedo II, a day-care center has already been connected to water network but is not yet equipped with hand-washing facilities. Regarding Manggahan School, W&L has equipped existing hand-washing stations with soap distributors offered by E&V partners during the "Global Hand-washing Day".

In 2014, 773 families (4,250 people) were connected to TPA potable running water network.

Continuation of prospection in Cavite

Several prospections were undertaken during the year:

- City of Kawit:

- In **Samala Marquez**, where Maynilad has been supplying 100 to 200 families out of 2,500 district residents since 2013.
- In **Water Field**, where Maynilad plans to build a network. At the moment, most families own a well. TPA must decide if it would be opportune time to develop a network in this district, due to the high number of wells. Indeed, the volume of consumed water could be insufficient to allow TPA operational costs amortisation.

- City of Bacoor:

- TPA continued its prospection and identified a new slum community: **Talaba 2** where the social business could operate in partnership with Maynilad. This area should be subject to an agreement between TPA and Samahang Tubig Maynilad (Maynilad social programme). Surveys amongst residents and a district mapping were conducted. Meetings with city hall engineers in charge of the area also took place. Nevertheless, operation in this slum faces several organisational difficulties. On one part, Bacoor water distributor MWSS (Metropolitan Water Networks and Sewerage System) stalls Manila operations in the slum, for the benefit of “community water distributors” on the pretext of abuses done by some small operators. This local recommendation refers to directives of the director, with whom TPA is in close relationship. On another part, head of Talaba 2 district is still reluctant to the implementation of a project in its community. TPA team needs to rely on its local partners to unblock the situation. Finally, one of the landowners refused to allow network pipes traverse his property. Negotiations are still necessary before starting a project in this slum area. The local community wishes to mobilise to improve water access conditions. The situation should become unblocked in 2015.
- **Green Valley** (1,000 families) was identified. TPA plans to operate in partnership with Maynilad. A further study will be launched on early 2015. The objective would be to start water distribution by end of 2015.

Sustainability of TPA Cavite agency

By end of its third year of operation, TPA Cavite Agency has not reached financial profitability yet but is getting close to it. Yearly deficit is € 1,051, instead of € 5,640 in 2013:

TPA CAVITE 2014			
Water sales	€ 59,516	Personnel expenses	€ 30,408
Service charge	€ 257	Operation expenses	€ 4,482
Connection fees	€ 8,751	Taxes and licensing	€ 1,433
Bank interests and other incomes	€ 154	Amortisation expenses	€ 7,095
Agency incomes	€ 68,679	Financial charges	€ 184
Water supplier charges	€ 16 597	Participation to headquarters expenses	€ 7,167
Water analysis charges	€ 262		
Gross operating charges	€ 51,820	Net income	€ -1,051

Viability of an agency relies on 5 points:

a) Number of clients

On end of 2014, 63.3% of the 1,220 families targeted in all three intervention districts were connected to TPA Cavite network. To reach profitability, the agency must develop its catchment area and reach a minimum of 1 200 clients. One of TPA Cavite main objectives in 2015 is to start building water networks in Makabli and Talaba.

b) Payment collection rate

A weekly collection system was implemented at the end of the year. By the end of December, the cumulative collection rate of water bills payments reached 99%, instead of 80% in 2013. A new management of outstanding invoices was implemented. Now, when a client does not pay its bill for two consecutive times, he receives a letter from the collector informing that its connection will be cut. This letter is also sent to the technical team which will proceed to the connection cut thanks to a padlock. Then, the client must pay outstanding invoices to the agency before the technical team restores the client connection. Furthermore, a list of clients with consequent outstanding invoices was established and sent to each head of district in order to encourage these clients to pay off their bills to TPA. This firm line is essential to raise general awareness that ensuring the company's financial viability is the best way to ensure sustainable services.

The scorecard generated from the water sales management software has been implemented. From now, agency managers produce automated monthly results (collection rate, number of beneficiaries, volume of water consumed...). This scorecard, transmitted to the country manager and France headquarters, provides a management tool to reach objectives and spot potential defaults on payment or data entry errors.

c) Water sales volume

In 2014 monthly water consumption reached 8.36 m3/family (all operation districts put together) instead of 7.56 m3/family in 2013 and 6 m3/ family before TPA started operations. Based on a daily consumption and on 5.5 people per family, each member of connected families consumes 51 water litres per day, which increased compared to year 2013 and exceeds World Health Organisation minimum volume defined as viable and necessary to cover short term vital needs (fixed to 20 water litres per day per person). But it is still below minimum volume necessary to cover mid-term needs, fixed to 70 litres per day per person. In practice, some families are still supplied with well water, which is of low quality and mainly free water. Nevertheless, these wells have been less and less used since TPA arrived and a consequent number of them are now closed or abandoned:



District	Pugad Ibon	Manggahan	Salcedo II
Number of wells at TPA arrival	16	3	63
Number of wells currently in use	1	1	16

d) Network water leakage rate

The agency registered an 8% water leakage rate, instead of 5% in 2013.

e) Personnel and operational expenses

TPA Cavite agency counts nine employees and covers 50% of TPA Philippines headquarters' expenses. The team consists in an agency manager, an administrative assistant, a data entry clerk, four collectors and two plumbers.

B. Fire prevention and fire-fighting

In all three districts of Cavite, fire-fighting brigades are operational: (22 volunteers in Salcedo II, 20 in Pugad Ibon and 19 in Manggahan) and fire hydrants are in working order (4 in Salcedo II, 3 in Manggahan and 3 in Pugad Ibon)

All three communities of Cavite held a gathering in March, in Pugad Ibon for a **fire-fighting** 'refresher' training session. Community leaders joined the activity which brought in a total of **45 people who underwent the training session**.

Another fire fire-fighting exercise **took place on September in Pugad Ibon**. Within two minutes, the first volunteer fire-fighters reached the fire scene equipped with extinguishers and within three minutes, a fire hose was deployed. Further to the practice session, the Bureau of Fire Protection (BFP) certified the capacity of the trained volunteers. Trainings and practice sessions were highly appreciated by the local community because the professional fire-fighting units have no access to Cavite area.

Fire brigades' efficiency was highlighted when a fire occurred in Salcedo II on 22nd May which was caused by electric power misuse. W&L fire-fighting brigade quickly extinguished the fire, which caused little damage.

On a technical point of view, water pressure issues affecting fire hydrants still remain. Indeed, despite W&L action to move fire hydrants upstream from meter boxes, in case of fire, water pressure remains insufficient for fire hydrants farthest from the main network connection. For a better efficiency, it would be necessary for Maynilad to provide higher pressure to TPA network. This point is currently being discussed.



In total, each district of Cavite counts **1 fire-hydrant per 122 families** living in the intervention area and **1 volunteer fire-fighter per 20 families**.

W&L organised a **first aid training session** in Pugad Ibon, gathering **36 people** from the community, representatives and volunteer fire-fighters. The training was provided by Philippines Red Cross.

C. Hygiene training and awareness raising

Global Hand-washing Day

W&L team organised **Manggahan's first "World Water Day"**. This event aimed to sensitise **68 participating children** to water and environment preservation, hand-washing and teeth-brushing, through fun and interactive workshops.



A **global hand-washing day** was also organised in **Salcedo II elementary school** with **297 children and 30 adults**. Children were able to learn proper hand washing technique and at the same time held other several activities on to promote hygiene practices. The population was particularly enthusiastic.

Meetings were held among Pugad Ibon and Manggahan community representatives in order to redefine responsibilities of each of them and organise several activities such as Salcedo global hand-washing day or Pugad Ibon neighbourhood clean-up day.

D. Sanitation

W&L worked on identifying and meeting several actors (NGOs, international institutions, local authorities ...), to carry out an analysis of services provided and development of strategies in terms of sanitation and waste management in each of its operation areas. On November 2014, **Guy Fournere**t, a French sanitation expert conducted an audit in order to suggest adapted solutions in the field of district sanitation. He visited all three intervention areas: Cavite, Cebu and Iloilo.

W&L project of a partnership with PCWS (Pure Clean Waste Solutions Ltd.) considered in 2013, was dropped. This project concerned the implementation of a pilot waste and sanitation management project in Pugad Ibon. But it was subject to a considerable elevation of the site ground due to high risk of flooding in the area. This is due to the fact that Pugad Ibon is surrounded by fishponds and wet lands. W&L initiated discussions with landowners, in order to use the abandoned ponds' ground for area elevation. Owners adopted a sceptical behaviour: deeper ponds mean more complex maintenance. Furthermore, some of these ponds were on sale. Such infrastructure investments do not seem appropriate as long as this question has not been solved. W&L raised this issue with local authorities.



Nevertheless, a **public latrines project is currently under study**. On November, a meeting was held between Cavite province governor and two civil engineers from "Alidon Engineers". These engineers were identified to work on this social business project, planned to start in 2015. A field meeting was also organised for this purpose.

In Salcedo, in order to solve drainage pipes blockage issues, TPA started implementing, with Barangay support (district municipality), improvements of the existing drainage network to declog the system. At the close of 2014, 50% of them were in compliance. The remaining operations will request for adaptations in some parts of the network.

E. Waste management

Neighbourhood clean-up day

For the fourth year in a row, W&L had been organising a **neighbourhood clean-up day**, in all three intervention areas. The city hall made available some personnel, waste collection bags and a truck to retrieve waste materials. W&L provided the remaining equipment (broomsticks, shelves, gloves, masks and wheelbarrows). **Mobilisation was very strong this year: 120 people in Salcedo II, 250 in Pugad Ibon and 100 participants in Manggahan district.**



During second quarter, W&L team, together with ten representatives of each district, visited a waste management project implemented by the Villar Foundation. This foundation created a huge waste sorting and recycling facility (plastics and compost) as well as, a community garden. Community representatives were very enthusiastic toward the development of a composting pilot project (domestic waste) in their districts. W&L must assess arrangements requested for the implementation of this activity.

Organisation of waste collection in Salcedo II

In 2013, public bins were installed in Salcedo II next to convenient stores that retail basic necessities. This solution is efficient but requests for W&L to ensure regular waste collection, due to local authorities' difficulties to get organised. This organisation needs to be optimised through the implementation of a waste management pilot project in 2015.

F. Enhancing community building

Residents became more and more involved in projects and had taken initiatives, thus they show project appropriation. For instance, Salcedo II community representatives and volunteer fire brigade members meet twice a month to clean up the community streets. For each activity organisation, community representatives proved to be very active, during event preparation as much as event process.

There are numerous enthusiastic testimonials from district resident's regarding TPA/W&L project impacts: water access simplicity (time saving, no more bucket transportation), clean water; the community feels reassured and protected thanks to volunteer fire brigade efficiency and presence within the district.

Appointments and coordination and training meetings with Manggahan community representatives and Manggahan survey executives were held during the year in order to prepare W&L impact survey and assessment.



2. Cebu

2.1. Earlier achievements

Cebu water production only covers 50% of the entire population needs, compared with 80% in Metro Manila. For Cebu slum community residents (living in the second largest city) water expenses are highly significant as they represent above 25% of households' budget. Relative water cost is higher than in Metro Manila, combined with a lower standard of living. In Cebu slum communities, water costs per cubical meter can reach up to PhP 125 (about € 2.30), compared to just PhP 17 when connected to regular distributor. Very few houses are connected to the local distributor, as most of families cannot afford to pay for network connection fees and cluster installation fees which have an average price of € 360.

After few months of negotiation and prospection, an agreement was signed on June 2012 between TPA and local operator Metropolitan Cebu Water District (MCWD), in order to connect Lower Tipolo residents of Barangay Tipolo to its water network. The network was built in 2012 and its inauguration was held on early 2013.

On end of 2013, TPA was operating in 2 Cebu slum communities: Lower Tipolo (since September 2012), and Malibu (since November 2013), providing 315 families with potable water at home and 75 poor families with potable water collective connection. Cebu agency counted an average PhP 5,000 monthly deficit (about € 95), a 93% payment collection rate and only three clients has their cluster cut. In contrary, TPA water network leakage rate was quite high 12%.

At the same time, both districts were equipped with fire hydrants and benefited from trained and equipped volunteer fire-fighters. Hygiene and environment awareness actions were organised within districts, completed with community building actions.

2013 achievements		
Services	Number of beneficiaries	Means/Actions
Access to running water	390 families (about 2,000 people) 4 public places	315 connections to TPA Cebu network 75 very poor families connected to collective taps
Fire prevention and fire-fighting	600 families (about 3,300 people)	1 fire hydrant per 80 families 1 volunteer fire-fighter per 23 families 40 people trained in fire-fighting
Hygiene and water awareness	276 people	Global hand-washing day (71 participants) Global environment and ocean day in Lower Tipolo (175 participants) Water quality awareness sessions (30 participants)
Environment awareness	473 people	Individual composting pilot project (23 families) Neighbourhood clean-up days in LTHAI and Espinas (200 participants) Awareness contest "reduce, re-use, recycle" (250 participants)
Enhancing community building	600 families (about 3,300 people)	Numerous activities and intra and inter-district meetings

2.2. 2014 achievements

Year 2014 was marked by the inauguration of TPA network in two new slums: Malibu and Paknaan. The launching of these new projects will allow TPA to strengthen the viability of Cebu branch office.

Activities carried out in 2014		
Services	Number of beneficiaries	Means/Actions
Access to running water	660 families (3,630 people) 4 public places	550 connections to TPA Cebu network (Lower Tipolo and Malibu) 75 very poor families given access to 3 collective taps (Lower Tipolo) 1 day-care center (70 children) connected to TPA network (Lower Tipolo)
Fire prevention and fire-fighting	1,100 families (about 6,000 people)	1 fire hydrant per 100 families à Lower Tipolo (5 fire hydrants) 10 new volunteer fire-fighters (meaning a total of 35 volunteers) in Lower Tipolo and 18 in Malibu (meaning 1 fire-fighter per 15 families) 60 people trained in fire-fighting 32 people trained in first aid
Hygiene awareness	231 people including 60 children	Global hand-washing day in Lower Tipolo and Malibu 2 water awareness sessions (171 people)
Environment awareness	280 people	Neighbourhood clean-up day in Lower Tipolo (200 participants) and in Malibu (80 participants)
Enhancing community building	1,100 families (about 6,000 people)	Numerous intra and inter-community activities and meetings

A. Access to running water

Lower Tipolo water network operations

Lower Tipolo water network, inaugurated in 2013, quickly proved to be consistent with slum residents' needs. On end of 2014, **89% of families living in the area were connected to TPA network. 444 families** were equipped with a home connection and **75 very poor families** were given a water access through collective taps managed by TPA.

The Lower Tipolo day-care center, which welcomes **70 children** daily, was connected to water network and hand-washing stations were installed, allowing good hygiene practice at school.



Inauguration of Malibu and Paknaan water network

In 2014, TPA objective was to extend its network across three new areas: Malibu (312 families), Paknaan (1,200 families) and Montuyong. Difficulties obtaining construction authorisation delayed networks opening, which finally occurred on August in Malibu and on December in Paknaan (Mandaue new relocation area). Montuyong construction authorisation should be delivered in 2015.

During Malibu network opening, TPA faced low pressure issues in MCWD network as well as misunderstandings between the operator and the line owner, FF Cruz, to which TPA was connected. TPA unblocked the situation thanks to its good relationship with both companies and further to continued advocacy. **On end of 20014, 216 families living in the area had access to running water**, meaning a 67.5% coverage rate.

Paknaan network construction should be finalised on early 2015. While awaiting the complete individual network installation, two collective taps have been installed to provide a temporary water connection to neighbouring families.

Connections of Malibu and Paknaan day-care centers to TPA network are currently under study.

**In 2014, 660 families (3,630 people) are connected to TPA potable water network
75 very poor families (410 people) have access to 3 collective taps managed by TPA
1 day-care center welcoming 70 children daily is connected to TPA network.**

Prospection of new areas in Cebu

26 areas have been visited along the year in order to assess community needs. These visits were held in slums of following areas: Cebu City, Talisay City, Lapu-Lapu City, Yellowbell, Looc, Lapu 2, Canjulao Cordova and Sitio Lawis.

W&L invested in a GPS to facilitate mapping process in intervention areas. Mapping is realised along with preliminary studies, which will be updated during impact assessments. Cebu City also provided numerous information on areas adapted to project extension.

Furthermore, TPA Cebu received a delegation from Department of International Development and Dutch Embassy which support water access projects in precarious areas. Between January and June 2014, several appointments were held between TPA, Vitens Evides International, Vitens and Evides

Foundation in charge of these projects and MCWD, to fill up an application file with the Dutch Cooperation Agency. The project was approved on November and will start by the end of June 2015. It aims to serve 80,000 people over a five-year period from 2015-2020. Partnership agreements are currently under negotiation.

Viability of TPA Cebu agency

At the end of its second year of existence, TPA Cebu agency has not reached profitability yet. Net annual deficit worsened compared to year 2013, due to an increase of amortisation expenses from Malibu investments made on early 2014. Water distribution only started at the end of the year. The increase of amortisation expenses was not balanced with corresponding incomes. In 2015, the agency activities will allow to reach balanced results.

In 2014, the annual deficit reaches € 3,769 compared to € 1,140 for the previous:

TPA CEBU 2014			
Water sales	€ 35,637		
Registration fees	€ 1,109	Personnel expenses	€ 19,062
Connection fees	€ 14,653	Operation expenses	€ 3,960
Bank interests and other incomes	€ 69	Taxes and licensing	€ 287
Agency incomes	€ 51,469	Amortisation expenses	€ 9,098
Water concession charges	€ 14,681	Financial charges	€ 854
Water analysis charges	€ 129	Participation to headquarters expenses	€ 7,167
Gross water sales incomes	€ 36 659	Net incomes	€ -3,769

Viability of an agency relies on 5 points:

a) Number of clients

On end of 2014, 444 families from Lower Tipolo and 216 families from Malibu were connected to TPA Cebu network. At constant costs, in order to be profitable, the agency must increase its catchment area and reach at least 1,200 clients. One of TPA Cebu major objectives in 2015 will consist in covering all Malibu district, starting operations in Paknaan and installing Mantuyong network.

b) Payment collection rate

With its 98% payment collection rate, TPA Cebu agency only counted 9 clients with a cluster cut on 31th December. In 2015, the team will work on maintaining this excellent performance. Some measures were taken to decrease arrears: improved communication between data entry clerks and collectors, closer control from collectors and 10% discount applied to clients who fully pay their connexion fees.

The scorecard automatically generated from water sales management software, was installed. The agency manager now produces monthly results (collection rate,



number of beneficiaries, volume of water consumed...). This scorecard is transmitted to the country manager and to France headquarters and used as a management tool to achieve objectives and identify payment or entry irregularities.

c) Water sales volume

Each family consumes an average of 8.48 m³ water per month in Lower Tipolo and 11.56 m³ of water per month in Malibu. On a daily basis and based on 5.5 people per family, it represents 50 litres of water per inhabitant and per day in Lower Tipolo and 70 litres of water per inhabitant and per day in Malibu. The consumption of well water within the districts has a limiting factor to the TPA water consumption. As what was previously done in Cavite, TPA Cebu agency should reflect with water suppliers upon lower selling price and increase of residents' consumption.



d) Network leakage rate

The agency faces a relatively high leakage rate (around 20%), due to several leaks on the network, partly caused by land movements due to earthquakes. A quarterly network inspection and evaluation to determine the status of the network will be established and combined with the training of the plumbers who are in-charge of maintenance.

e) Personnel and operational charges

TPA Cebu agency has six employees and contributes 50% of TPA Philippines headquarters' charges. The team is composed of an agency manager, an administrative assistant, a data entry clerk, two collectors and a plumber.

B. Fire prevention and fire-fighting

Lower Tipolo district is equipped with **5 fire hydrants**, installed in 2013. The formation of its community fire brigade was completed in 2014 with the recruitment of 10 new volunteer fire-fighters. The team now counts **35 volunteer fire-fighters**. In **Malibu district**, **18 people trained in fire prevention already joined the brigade** and 3 fire hydrants should be installed on early 2015.

In order to provide continuing capacity building to the fire brigades of Lower Tipolo and Malibu, two fire-fighting practice sessions and one simulated evacuation were held, with the financial and logistical support of Mandaue Rotary Club. In line with this, an article was published in the internal newsletter of water operator MCWD regarding Lower Tipolo fire-fighting training session held at the end of the year.



Volunteer fire-fighters recruited and trained by W&L were given the opportunity to prove their skills during the “Mandaue City Fire Olympics” organised on last 21st March. W&L volunteer fire-fighting brigade won First Place and the money prize they received was used to buy new supplies.

To get pass through water pressure issues reported in 2013 in Lower Tipolo, W&L distributed fire extinguishers to volunteer brigades while waiting a more lasting solution and adapt network installation to cover all houses within a 100-metre radius.

**Lower Tipolo counts 1 fire hydrant per 100 families
and 1 volunteer fire-fighter per 14 families.
Malibu counts 1 volunteer fire-fighter per 17 families.**

On April, W&L organised a training session in first aid in Lower Tipolo with **32 participants** (community representatives and volunteer fire brigade). Like the Cavite session, the training was provided by the Philippines Red Cross which was specifically adapted to the needs of the residents and allowed them to share on their daily difficulties.

C. Hygiene and water training and awareness raising

Global hand-washing day

The “Global hand-washing day” was organised in two areas: Lower Tipolo and Malibu with **60 children participants**. During the event, children learnt how to wash hands with soap and participated to the other several hand-washing related activities.



PHAST² Programme

Discussions are still going on with Philippine Red Cross (based in Manila) regarding the implementation of PHAST programme (Participatory Hygiene and Sanitation Transformation) for the period 2015-2017, in all intervention areas.

Water quality awareness

W&L had organised two **information and awareness meetings on water quality issues** in Malibu, which was participated by **171 residents**.

² Method designed by the United Nations Development programme and World Health Organisation, to get population involved in the searching process for satisfactory and sustainable hygiene and health related solutions.

D. Sanitation

W&L worked on identifying and meeting with different actors (NGOs, international institutions, local authorities...), in order to carry out an analysis of provided services and developed strategies in the field of sanitation and waste management.

The following major needs have been identified: necessity to install communal toilettes in Maharlika, Jayme and in some part of LTHAI and the implementation of a drainage system in Maharlika, Jayme, Uniwide and Espina (all of them are Lower Tipolo sub-districts).

On November 2014, **Guy Fourneret, a French sanitation expert, conducted an audit in Cebu** in order to offer adapted solutions and answer community specific needs in terms of **sanitation and sewage water treatment**. In 2015, a technical feasibility study will be conducted to improve sanitation and sewerage systems. Furthermore, a complete mapping of drainage systems and existing latrines will be conducted. A meeting was set with the “Foundation for the Philippine Environment” to discuss a sanitation pilot project in Cebu with their financial support over the 2015-2016 period.



E. Waste management

Development of a composting and waste sorting pilot project

In the communities, waste collection is not organised and the volume of waste disposal remains an issue for the entire City of Mandaue. This is a recurring situation in poor communities of the Philippines. W&L examined methods implemented by other organisations which could be adapted to the local context.

LTHAI community organisation (Lower Tipolo Homeowners Association, Inc.) has been managing for years a **collection and resale system for recyclable materials**, called “junk-shop” (paper, plastics, metal, glass, machines, batteries and copper). This method consists of collecting and selling recyclable materials to secondary collectors who will then resell them wholesalers at a higher price. In addition to optimising waste management, this system provides incomes to residents as well as the community. This project works well and W&L wants to duplicate it in other areas.

Neighbourhood clean-up day

Two festive neighbourhood clean-up days were organised in 2014 in Lower Tipolo and Malibu districts, gathering **200 and 80 people respectively**. Communities were mobilised to clean up public places and adjacent streams. For an organisation made easy, the city government provided a truck and W&L provided broomsticks, rakes and shovels.

A state of waste production and usage will be conducted in 2015. It will be used as a base for a domestic waste pilot project in the form of a social business in Lower Tipolo.



F. Enhancing community building

To ensure the sustainability of W&L and TPA projects, W&L works in close collaboration with existing residents' organisations and supports their creation and development. When no local organisation exists, W&L helps the community to create residents' committees, in charge of defining their needs and participating in implemented solutions. Thus, elections of representatives were held in Lower Tipolo, within Jayme sub-district which was not yet organised.



As TPA work is well advanced in Malibu district, W&L organised community representatives' elections in the area. These people will be W&L and TPA privileged interlocutors for projects implementation. A meeting was held between community representatives and some members of the volunteer fire-brigade (15 participants) in order to update them on TPA and W&L latest activities.

In Paknaan, an information and awareness raising meeting was held, gathering representatives from all 12 communities. A decision was taken not to organise new election, but instead each organisation will nominate someone as W&L interlocutor. This meeting gave the opportunity to share on W&L activities and missions with community youth participants. They are very motivated to take part in hygiene promotion and fire-fighting activities.

During a gathering with Lower Tipolo community representatives, they provided feedbacks on W&L activities in the community. In addition with very touching testimonies, residents highlighted a decrease in violence which previously occurred while queuing at the wells. On its side, the fire brigade was proud to respond on fire incidents, not only within their communities but also in other areas as well.



3. Prospection in Iloilo

Despite considerable advances in discussions and prospectations in Iloilo in 2014, some administrative issues arose between stakeholders of MIWD and other local water providers (Flo Water) which had delayed TPA project launching in the slum communities. Nevertheless, all actors involved finally brought their support to TPA and W&L and a partnership agreement that should be signed in early 2015 between TPA and MIWD.

Two intervention areas were identified, namely: Lanit and San Isidro Jaro relocation areas, managed by Gawad-Kalinga Philippines organisation. The 1,100 residents of San Isidro use well water or rainwater collection systems. The 79 families already installed in Lanit (out of 1,000 expected families) can't consume well water and are constrained to purchase bottled mineral water at PHP 1,250 /m3.



As a first step, TPA's objective is to provide a sustainable access to running water and sanitation to 1,800 families (about 9,900 people) living in San Isidro district. Then TPA will extend its actions to Lanit area.

4. Prospection in Tacloban

Prospection activities are currently being carried out in Tacloban, region ravaged by a terrible typhoon on 8th November 2013. After the disaster, TPA and W&L Cebu agency teams brought their support to victims, by participating in bagging activities in emergency centres. Indeed, Cebu is located six hours sailing time from Tacloban and was a rear base of logistic operations in the devastated area.

Following this period of emergency, TPA and W&L brought their support to Tacloban city government, and contributed in improving water and sanitation network design in the relocation areas. Thus, during the reconstruction phase, a trustful relationship was built with the various development actors and local authorities, especially with the water distributor, Leyte Metropolitan Water District. TPA aims to provide potable water access to 1,800 families (9,900 people) within a three-year period.

5. Partnerships

In the field partnerships

Tubig Pag-Asa (TPA)

TPA is a Filipino company in charge of building and maintaining water network in precarious districts, distributing water and collecting payments from its clients. It was created with E&V support.

Water and Life Philippines (W&L)

W&L is a local NGO, created by E&V, in charge of developing hygiene awareness and fire prevention activities as well as, community building in TPA intervention areas. Based on community needs, it manages sanitation and waste management issues.

Maynilad Water Services Inc. (Maynilad) - partner in Cavite

Maynilad is the official private water operator in Manila region, within the framework of a 25 years concession, since 1997. Before its privatisation, Maynilad was a partner of Holding Corporation and Ondeo Water Services, Inc. (formerly known as Suez-Lyonnaise des Eaux). Since 2009, TPA set up partnership agreements with Maynilad to develop its project in the region.

Metro Cebu Water District (MCWD) - partner in Cebu

MCWD is the private water operator in Cebu region. Since November 2010, TPA and MCWD have been working in partnership to provide water access in Cebu district. A 15 years duration agreement was signed on June 2012 regarding Lower Tipolo project.

MIWD - Metro Iloilo Water District (MIWD) - partner in Iloilo

MIWD is the official water operator in Iloilo region. Since November 2010, TPA cultivates a relationship with MIWD in order to extend its project to Iloilo region. A partnership agreement between MIWD and TPA should be signed by early 2015 regarding the launching of the programme in San Isidro district.

Flo Water and Prime Water

A consortium composed of two Filipino water distributors. They especially act as Iloilo water providers.

Local authorities

Local government units provide support to events organised by W&L by lending equipment and other logistical concerns. City mayors actively participate in W&L actions, so do the Bureau of Fire Prevention by providing trainings on fire-fighting skills and techniques.

Local communities

From its very first prospection visits in targeted areas, TPA and W&L call upon local communities (recruitment of personnel to conduct prospection work, discussions on needs assessment...). Some activities are carried out with the population. District representatives are elected, and become the main link between TPA, W&L and the rest of the community. LTHAI organisation actively participates in W&L actions organisation.

Partners networking

Vitens Evides

A partnership is currently being discussed with Dutch foundation Vitens Evides International, subsidised by Netherlands Development Organisation to develop running water access in Cebu depressed districts. TPA is expected to be the water operator, in collaboration with Cebu city and water supplier MCWD.

Expertise

HydroConseil

Trafigura Foundation mandated an external evaluation of E&V projects and economic models. For this purpose, two HydroConseil experts (consulting firm in water and sanitation issues in developing countries) travelled to Philippines and Bangladesh on October. The outcomes of this expertise were instructive and enabled to validate E&V approach, highlighted possible improvements prior to future developments in order to reach financial sustainability.

6. Project sustainability

Viability of W&L and TPA organisations

a) Human resources

In 2014, TPA and W&L human resources were bolstered:

W&L:

The W&L programme manager based in Cebu ended her IVS contract on January. Her successor arrived in the field on July and has been supported, since November, by a communication officer on a 1 year civic service contract.

TPA:

The salary scale was revised and the organisation chart was updated during the year. As a new agency manager took charge in Cavite on December 2013 and working methods and administrative organisation were adjusted in 2014. A new data entry clerk was hired in Cavite. In early June, a local water engineer and expert joined the team to supervise TPA Cebu technical team. He is supported by a French engineer hired under IVS contract. Cavite data entry clerk and agency manager were trained in Cebu in water sales management software. TPA first employee (hired in 2009) retired on April.

W&L and TPA:

In February, an administrative and financial assistant was hired to support the administrative manager. She wants to resume her studies. All TPA and W&L employees had their annual medical check-up. This was very much appreciated by the entire staff.

On end of 2014, TPA and W&L counted 22 employees: 3 local managers, 15 local employees most of them being from intervention districts, 4 expatriates, amongst whom a TPA country manager assisted by a technical executive and a W&L programme manager assisted by a communication executive.

b) Material and technical resources

Material and technical resources are listed in appendix.

Institutional viability of W&L and TPA

Both TPA agencies obtained an official "Business Permit": TPA Kawit from Cavite area and TPA Cebu for Mandaue area. W&L contributes to developing a legal framework for E&V to obtain proxy certificates from public services which are adapted to its approach. All documents from W&L requested by local authorities have dully been submitted and W&L fits administrative requirements.

Financial viability of W&L and TPA

Although TPA agencies are not financially viable yet, they improve their payment collection methods and keep developing in order to reach profitability.

Conclusions of the expertise written by HydroConseil consulting group are encouraging:

- “TPA economic model is close to viability, allowing 90% of expenses to be covered by incomes.”
- “Increasing clients’ number should considerably reduce agencies financial costs.”

Nevertheless, HydroConseil encourages TPA to renegotiate its water purchase rate with water providers and apply for “Output Base Aid” subsidies, such as subsidies currently negotiated between TPA and Netherlands Development Organisation. Furthermore, HydroConseil deems necessary the recourse to local public subsidies.

The scoreboard developed by E&V headquarter and implemented in both agencies should allow a better follow-up and contribute in improving agencies performances. W&L activities are financed by subsidies, mainly from European partners. Search for local funding from organisations such as international organisations will intensify in 2015.

7. Conclusion and prospects for 2015

1,433 families (or more than 7,880 people), living in slums of Cavite (South of Manila) and Cebu (second largest city of the country), **now have access to potable water at home thanks to TPA**. In addition, 4 public places (1 school and 3 collective taps for Cebu poorest families), provide water to 480 people daily. In Cebu, deployment of services was slower than expected, mainly due to delays from water operator MCWD which ensures the social business provision. Nevertheless, **Malibu** and **Paknaan networks** were inaugurated and Lower Tipolo day-care center was connected to TPA network. In Cavite, the arrival of the new agency manager enabled to improve organisation and identify new intervention areas. Relationships with water operator Maynilad are excellent.

On-going negotiations with Vitens Evides should allow a considerable extension of TPA agency activities and serve about 80,000 people by 2020.

W&L NGO continues providing its long-term support to TPA projects by enhancing community building and strengthening its training and awareness activities, while raising residents numerous enthusiastic testimonies on TPA and W&L projects impacts. The first “World Water Day” was organised in Manggahan and new first aid training sessions were provided by the Philippines Red Cross. Visit of a French sanitation expert allowed offering realistic solutions in the field of sanitation and sewage management.

2014 was a year of structuration for E&V projects in Philippines. Moreover, the assessment of TPA economic model by HydroConseil consulting firm allowed highlighting strengths and weaknesses of the social business:

Strengths and weaknesses of TPA model

	Strengths	Weaknesses
Investments	Most of investment costs are covered by connection fees	TPA must pre-finance investments
Water wholesale price		Water provider charges the same rate as the one applied to other clients, while TPA manages customer services (invoicing, payment collection...)
Meter reading, invoicing and cost-control systems	Frequency of meter reading and payment collection allows a strong relationship with clients	Frequency of meter reading and payment collection is costly
Maintenance	With plumbers from the district and equipment stored within the district, network maintenance cost is very low	Low cost and lower quality material will increase material renewal cost
Contract securing	TPA signed water supply contracts with 2 major operators	TPA has not obtained yet its public services proxy certificate authorising water supply activities
Management team	W&L and TPA benefit from management skills from two expatriates in International Solidarity Volunteering contracts, who are very much involved in their work, and offer limited costs compared to standard working contracts	

Source: *Water & Life - Slum Water Supply - Project performance assessment - HydroConseil - 2014*

Considering that a majority of slum residents subscribe TPA services and both water operators and local authorities sign partnership agreements, TPA offer is indeed consistent with clients and local authorities' demand. According to HydroConseil, investing through TPA is an efficient way to increase water access in depressed areas.

The year 2015 should see TPA network expansion in Cavite and Cebu, providing critical mass. E&V is currently negotiating a new partnership agreement with Netherlands Development Organisation and Vitens Evides International in the framework of a multi-year project. This partnership should bring an essential support to TPA network development in Cebu through the financing of 5,000 water meters (service connections) in the form of capital subsidies during the 2015-2020 period. Furthermore, TPA will be launching its activities in Iloilo and Tacloban during the year. At the same time, W&L plans to develop its activities in terms of sanitation and waste management while continuing awareness and community building actions.



Project progress in Bangladesh

1. Bhashantek

1.1. Earlier achievements

In order to carry out its activities in Bangladesh, E&V registered a local social business in 2010, named Shobar Jonno Pani (SJP) (“Water for all”), and a NGO named Water and Life Bangladesh (W&L). Bhashantek district, located north-west of Dhaka and counting 3,600 families (16,000 residents), is undergoing a land development plan signed between the Bangladeshi government, represented by the Ministry of Local Government Division, DNCC (Dhaka North City Corporation) and the UNDP. In 2012, SJP signed a partnership agreement with Dhaka water operator, DWASA, UNDP/UPPRP, DNCC and the Bhashantek community to build a water network across the slum. The water network was built by SJP covering the first half of the slum (3 areas out of 6), offering residents sustainable access to running water at home. At the same time, improvement work on the district alleyways also began.

At the end of 2013, SJP started operations in Bhashantek, where 235 families had access to potable water at home. Simultaneously, W&L conducted hygiene and environment awareness raising actions, as well as, community building actions. Prospection studies were carried out in order to duplicate the project in other depressed areas.

2013 achievements		
Services	Number of beneficiaries	Means/Actions
Access to running water	235 families (about 1,000 people)	700 households connected to SJP network 235 households subscribed a contract and have a running water access
Fire prevention and fire-fighting	3,600 families (about 16,000 people)	2 fire-fighting training sessions (90 participants)
Hygiene and water awareness	448 children	Global hand-washing day (109 children) 6 hygiene awareness sessions in 2 schools (339 children) Editing of 1,000 copies of a child’s book
Sanitation and waste management		Presentation of a sanitation project to the World Bank Signing of a partnership agreement with Swisscontact for the implementation of a waste collection and sorting pilot project
Enhancing community building	3,500 families (about 16,000 people)	Numerous meetings with population, community leaders and other actors working in the slum

1.2. 2014 achievements

The country started and ended the year in a context of social tension. The January legislative elections re-elected the former head of government following several weeks of strikes and blockade in country's main cities which undermined economic activities. This situation affected family incomes, which considerably diminished over the months of socio-political disturbances. As municipal elections were getting close towards the spring of 2015, social unrests persisted until the end of the year.

2014 achievements		
Services	Number of beneficiaries	Means/Actions
Access to running water	1,081 families (about 4,860 people) 12 public places (about 910 users)	784 new families connected to running water (1,081 since the project was launched) 4 mosques, 3 schools, 1 praying area and 4 community nurseries connected to SJP network 3,000 metres of alleyways cemented (60% of targeted length) HydroConseil and Aquassistance expertise
Fire prevention and fire-fighting	Half of the slum 1,800 families (8,100 people)	1 fire hydrant installed and tested 10 volunteer fire-fighting brigades (1 volunteer fire-fighters per 51 families) 62 people trained in fire-fighting (including 41 women) 40 extinguishers distributed (1 per 90 families) 1 mission held by CASC-APPUI (French fire-fighting organisation) 20 flame resistant gloves and hoods distributed
Hygiene and water awareness	734 people (including 565 children)	14 awareness raising actions, including 3 hygiene focused actions and 11 hand-washing focused actions 734 people sensitised, including 565 children, 157 adults (107 women) and 12 professional workers 9 interventions: 4 schools and 5 health centres
Sanitation	In progress	Technical support brought to private initiatives to improve grey water removal Topographic survey Aquassistance audit
Waste management	256 people (pilot project)	1 feasibility study on 187 people 1 waste composition analysis on 69 households 3 work groups (36 people) Meetings with leaders Aquassistance audit MOU signed with Dhaka North City Corporation Development of Primary Waste Collection system Partnership agreement with SwissContact
Enhancing community building	Half of the slum 1,800 families (8,100 people)	18 discussion groups and intra and inter-district meetings

A. Access to running water

Inauguration of Bhashantek water network

In 2014, the water network was built across the three first intervention areas, which correspond to Bhashantek first half. Simultaneously with the network construction, advertisements were broadcasted in public places to promote contract subscriptions and meetings were organised with operator DWASA in order to schedule the disconnection of illegal pumps used by residents, despite bad water quality in some areas.

Slum residents welcome the impact of potable and good quality water. Indeed, in Area 1, where many residents still consumed water from illegal pumps, new clients requested for network connection due to a high incidents of diarrhoea cases.

The extension of distribution networks also required the complete disinfection of the network pipes and the water tower.



On end of 2014, **1,081 households (4,860 people) in Bhashantek had access to running water at home.**
12 public places (4 mosques, 3 schools, 1 praying areas, 4 nurseries) serving 910 users daily, were connected to SJP network.

Network construction work could not start in the second part of Bhashantek as DWASA could not obtain the second general water cluster, which should increase network water pressure. Once its network rehabilitation³ will progress further, DWASA should allow SJP to connect its own network to a second pipe located near Bhashantek slum. An agreement should be given in 2015.

Water shortages

On September, acute water shortages affected DWASA whole network. These shortages, due to drought and excessive groundwater extraction, regularly affect Bangladesh and more especially Dhaka. This year, there was such a shortage that water pressure and flow were insufficient to provide enough water in SJP whole network. For the month of October, this water crisis continued impacting the city even more, thanks to the water tower and constant advocacy toward the operator, SJP was able to stockpile water, organise water distribution schedules and efficiently serve its clients.

Potability

SJP implemented regular water quality analysis: the network was chlorinated (for the first time by DWASA) and SJP aims to do so each month. Nevertheless, SJP consumers are not used to the taste of chlorinated water, SJP gradually accustoms its clients to these changes. For the first few months of operation, no contamination was found. Unfortunately, on end of year, water analysis revealed contamination by coliform bacteria. After review, the origin of the contamination was determined: the septic tank located nearby the water tower overflowed. In addition, open defecation is also practised by community members. This problem was quickly addressed by SJP team. By 2015, the objective is to build a surrounding wall to protect infrastructures from nearby latrines and prevent residents from entering the infrastructure area.

³ Funds from the Asian Development Bank

External audit and consulting mission

The assessment of TPA economical model by HydroConseil consulting firm enabled to highlight the strengths and weaknesses of the social business:

Strengths and weaknesses of SJP model

	Strengths	Weaknesses
Investments	Investment expenses are mainly covered by subsidies. This strategic choice is necessary due to the very low water price in Bangladesh.	Most investment expenses are covered by E&V (clients pay about € 6, which corresponds to less than 10% of investment costs). Network amortisation is not included in SJP business plan
Water wholesale price	Water rate invoiced by the provider is probably cheaper than its production cost (water operators are subsidised in Bangladesh).	Water provider charges the same rate as the one applied to other clients, while SJP manages customer services (invoicing, payment collection....)
Connection fees		Connection fees are too low (BDT 600 = € 6) to cover investment costs. By comparison, the operator (DWASA) charges its clients BDT 14,000 (€ 140) connection fees. For its next project, the increase of connection fees should enable SJP to finance a part of its investment.
Water price		Water service price is too low (BDT 20 = € 0.2 /m3) to cover the agency's operational costs. SJP is advised to increase its price.
Meter reading, invoicing and expenses coverage	Frequency of meter reading and payment collection allows a strong relationship with clients.	Frequency of meter reading and payment collection is costly.
Maintenance	With plumbers from the district and equipment stored within the district, network maintenance cost is very low.	Low cost and lower quality equipment will increase equipment renewal cost.
Taxes		VAT is not included in SJP prices.
Contract securing		SJP has not signed yet a contract with water operator.
Management team	W&L and TPA benefit from management skills from two expatriates in International Solidarity Volunteering contracts, who are very much involved in their work, and offer limited costs compared to standard working contracts.	The organisation Water and Life Bangladesh was locally recognised in 2014. It was impossible for SJP to charge expatriates expenses on W&L, thus affecting their results.

Source: Water & Life - Slum Water Supply - Project performance assessment - HydroConseil - 2014

HydroConseil provided the following recommendations to improve water quality in the network:

- Implementing a looping of the water network to stabilise and increase water pressure;
- Installing an automatic filling valve on the water reservoir, instead of proceeding manually as is currently the case;
- Moving water meters horizontally to improve accuracy;
- Increasing the height of meter cabinets to make meter reading easier;
- Realising internal water analysis, by training staff in the use of Potakit portable water quality laboratory.

Before the end of the year, SJP and W&L proceeded with the implementation of some recommendations. A great majority of them will be followed with action.

In the framework of an audit and consulting mission held on September intended to assess E&V water access, sanitation and waste management actions, three experts from Aquassistance organisation, issued the following recommendations on SJP water network:

Recommendations to improve SJP water distribution system

	Objectives	Recommendations
Water provision	Answer water demand	Discuss with operator DWASA on a possible connection of the 2 nd pumping system (located in the main street) with the water reservoir at night. Adjust/adapt distribution schedules to current provision schedule.
Water network	Distribute water including in areas located far away from the water tower	Short term: pump the lower reservoir water via the upper reservoir. Long term: install a water booster pump in the network
	Estimate water leakage related loss	Ensure access to area sub-meters, change the broken ones, and install watertight inspection holes. Calculate night flow.
Water quality	Supply Bhashantek people with quality water	Ensure that septic tanks located nearby the reservoir and perfectly watertight. Increase the frequency of water analysis. Follow-up residual chlorine rate. Purge main pipes (quarterly).
Security	Ensure personnel security	Control ladders used to access the water tower. Buy a safety harness and make sure that personnel who access the water tower properly uses it.
Other operational issues	Share knowledge and improve system operation and maintenance	Write operation and maintenance procedures applied to the main components of the system. Create a maintenance record book (weekly).

Source: Aquassistance Technical Assistance Mission for Water & Life from 20th to 27th Sept. 2014

These recommendations are very valuable and both SJP and W&L started their implementation before the end of the year.

Cementing alleyways

The partnership with UNDP/UUPRP to cement alleyways was finalised on end of June. Only 1,200 metres of alleyways have been cemented, due to a lack of funds. Given the importance of water hoses protection and residents security (to avoid falling on rainy days), W&L decided to finance the cementation of the remaining 1,800 metres of alleyways from its budget 2015. During the year, about 3,000 metres of alleyways have been cemented, out of 5,000 metres (60%).



Viability of SJP Bhashantek agency

Until August 2014, SJP covered all W&L expenses, because NGO registration is a very long process in Bangladesh. Furthermore, fiscal year of Bangladeshi companies covers the period from 1st July to 30th June of the following year.

SJP and W&L proceeded to carry out all reimbursements and adjustments by 30th of June 2014 for the past year. Thus, SJP budget from July 2014 to June 2015 really reflects water operation business activities in a depressed area.

On second half of 2014, SJP Bhashantek agency incomes cover 30% of operating costs, including amortisation:

SJP BHASHANTEK		July-December 2014	
Water sales and service expenses	€ 7,906.55	Administrative charges	€ 11,599.90
Operational subsidies (A)	€ 18,489.90		
Bank interests	€ 57.90	Taxes	€ 24.20
Agency incomes	€ 26,454.30	Amortisation	€ 3,427.80
Water concession charges + water analysis charges	€ 2 674.80	Other direct charges	€ 8,727.50
Gross water incomes	€ 23,779.50	Net incomes	€ - 0

(A) As forecasted in its business plan, SJP receives balancing subsidies from W&L to support the launching of a pilot project. In 2015, the increase of water price, combined with the increase of sales, should decrease these subsidies, which will end by end of 2017.

Viability of an agency relies on 5 points:

a) Number of clients

On the end of 2014, SJP counted 888 clients, allowing 1,081 families to benefit a water network connection. 60% of the 1,800 families living in first part of Bhashantek are connected to SJP network. At constant charges, to reach profitability, the agency must increase its water price and cover the whole area, which includes 3,600 families. One of SJP main objectives in 2015 is to extend its water network to the second half of the slum and change its water price.

b) Payment collection rate

SJP collection rate at due date reaches 90.5% for water consumption and 92.5% for connection fees. Clients are motivated to pay their bills and meter cuts are rare (one day). On average, less than 10 clients get their water meters cut, for one day.

The scoreboard edited from the water sales management software was installed. Now, the agency manager automatically edits monthly reports (payment collection rate, number of beneficiaries, and volume of water consumed ...). This scorecard, transmitted to the country manager and the main headquarters in France, provides a management tool to reach objectives and spot potential defaults on payment or data entry errors.



c) Volume of water sales

Each family has an average monthly water consumption of 6.20 m³. Brought to a daily basis and based on 4.5 people per family, it represents 45.3 litres per person per day. Well water still used, particularly in area 3, limits the consumption of SJP water.

d) Network leakage rate

As in 2014, DWASA general meter was defective, it was not possible to calculate water leakage rate. On early 2015, after the meter was changed, the water leakage rate was below 2%.

e) Personnel and operational charges

SJP Bhashantek agency counts 10 employees: one agency manager, one coordinator, one data entry clerk, three collectors, three plumbers and one maintenance person.

The challenge in Dhaka consists in convincing all partners that the social business financial viability is a shared concern and is the safest mean to ensure service sustainability. A balance should be found to reach it via temporary operational subsidies, decreased water wholesale price and increase of water price and volume of sales. A strategy must be implemented in 2015 to reach this result.

User surveys

Two satisfaction questionnaires were conducted by W&L among SJP clients to collect their opinion on SJP services, their costs and possible improvements. SJP clients are very satisfied with water quality and services provided by the team. Nevertheless residents are not used to pay for weekly bills (some of them would prefer monthly bills), creating some discontent. Clients noticed an impact on their health and report less water related diseases. Women in particular expressed their relief. They are freed from a burden as they do not have to fetch water anymore.

B. Fire prevention and fire-fighting

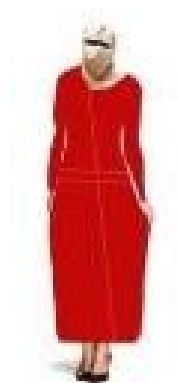
CASC-APPUI mission

In 2014, an agreement was signed between W&L and CASC-APPUI (solidarity organisation of the Rhône region Fire and Rescue Department). Two professional firemen conducted a one-week mission within Bhashantek slum. During the mission, the French firemen **trained 51 Bangladeshi volunteer fire-fighters in the use of material and 7 members of SJP and W&L teams**, in the implementation of fire evacuation plans. They tested a motor pump and trained 3 plumbers from SJP in fire hydrants handling. They also donated to volunteer fire-fighters fire-resistant gloves and hoods and a 50 meters fire hose (not available in Bangladesh). During the mission, they met Dhaka Fire Department members, Bhashantek heads of district and the French Embassy. This mission should lead to a partnership agreement with E&V to continue providing their support in 2015 in Bangladesh, but also in Philippines and in the future in Ivory Coast. The partnership covers the following points: fire-fighting technical support, donation of material as a complement to current equipment, training of volunteer fire-fighters and signature of a partnership agreement between W&L, CASC APPUI and DFCS.



Development of fire-fighting system

In February, **two fire prevention and fire-fighting sessions**, organised by W&L and provided by Dhaka Fire Service of the Civil Defence (FSCD), enabled **68 people** to be trained in first aid. The fire-fighting system was reinforced with **40 portable fire extinguishers** distributed to volunteer fire-fighters during an official material and equipment distribution ceremony. Now, Bhashantek is equipped with one extinguisher per 90 families.



Prototype of non-flammable dress

Following CASC-APPUI firemen recommendations, **a fire hydrant prototype was designed, installed and tested**. The fire-fighting system will be completed with 17 additional fire hydrants in 2015. Furthermore, a prototype of simple fire-resistant dress was designed and will be distributed to volunteer fire-fighting women in 2015. Bangladeshi women clothing (*Saris* or *Salwar Kameez*) are extremely flammable. Finally, the ORYX Company provided 53 T-shirts to volunteer fire-fighting brigades.

In total, Bhashantek district counts **70 trained volunteer fire-fighters**, meaning **1 fire-fighter per 51 families**.
40 extinguishers were distributed, meaning **1 extinguisher per 90 families**.
20 fire-resistant pairs of gloves and hoods were given to volunteer fire-fighters.

C. Hygiene training and awareness

Hygiene awareness

During the year, two hygiene promotion sessions were held in a Bhashantek school. **54 children** (31 girls and 23 boys) and **2 teachers** joined the event and W&L distributed the child's book titled "Sharmin learns how to wash hands", published in 2013.

A clown performance was held to the benefit of **100 children** and **50 adults** from Bhashantek provided the opportunity of presenting the importance of water quality and hand washing practices.

W&L hygiene awareness raising strategy was reinforced thanks to Forum support (Bangladeshi NGO) and the many exchanges made between teams and their hygiene experts.



Global hand-washing day



In 2013 the **Global hand-washing day celebration** was held in two phases due to the general strikes besetting the country. The writing contest on hand-washing was launched in October 2013, and finalised in January 2014 with **311 students and 6 teachers** from 2 slum high schools joined the event.

The aim of awareness workshops held before the writing contest was to sensitise students about the importance of hand-washing, as the most efficient way to prevent diseases. Winners received small awards from Bhashantek heads of district, and all students received soap (offered by Dettol Company) together with a promotional brochure.



The 2014 Global Hand Washing Day celebration led to the development of a new women-oriented awareness raising learning module. In December, an awareness week was organised in partnership with RADDA healthcare centre (local NGO) and **4 nurses, 107 women** and their children, a total of **100 under-6 children** attended these interactive sessions. Each of them received soap and a card illustrating daily key moments to wash hands.



During year 2014, 734 people were sensitised to hygiene, including 565 children.

D. Sanitation

Latrines

Latrines situation is not satisfactory in Bhashantek, because the emptying of septic tanks is rarely possible, due to a lack of accessibility. Aquassistance experts who joined a mission at end of year expressed their appreciation for W&L study⁴ conducted in 2012 and made the following recommendations:

- Identifying and locating latrines in working order and latrines that can be rehabilitated,
- Implementing regular maintenance work after ensuring access to latrines,
- Dismantling latrines that are out of order.

They also studied toilet facilities designed by UNDP and highlighted the following assets: septic tank allows to stock black water in a first tank. The volume of waste water is reduced by anaerobic process, slows down the frequency of tank emptying and in bringing down maintenance cost. In addition, UNDP has identified service providers equipped with a small vehicle called “vacutug” that can get through narrow slum alleyways to empty septic tanks. Finally, from 2015 onward, W&L will carry out a census of latrines, identify local partners and undertake actions.



Waste water and rain water disposal



Dhaka is suffering from severe lack of infrastructures to drain off and treat sewage. Considering the situation, numerous discussions were undertaken with World Bank and DWASA water operator for the implementation of a sewerage system in the slum areas. An ambitious project designed in 2013 and forecasted in 2014 had to be postponed, mainly because the operator lacks motivation to invest and the inadequacy of the downstream. Slum topographic survey was conducted in May upon DWASA request.

Aquassistance experts said that the slum sewerage system could not be connected to Dhaka system due to a lack of downstream municipal infrastructures and a very low topographic level. After many meetings with slum population and community leaders, residents of Area 1 decided to finance the construction of small drain channels. The objective through less ambitious but realistic, is to avoid the accumulation of stagnant water in the neighbourhoods, which is a source of diseases. SJP offered to support this initiative, and will supervise drains construction in parallel with alleyways cementing work. By the end of 2014, about 150 families would have benefited this technical support. Despite this, insufficient sewerage system in the slum and in Dhaka is somehow preventing families from registering to SJP services. Water at home, which represents a significant progress, cannot be properly drained and evacuated which collects and stagnates in nearby homes and properties. Developing these small drain channels is a key issue for year 2015.

⁴ “Knowledge, attitude & practices (KAP) survey and analysis”.

The following are the comprehensive list of recommendations given by Aquassistance experts to improve the district's sanitation condition:

Recommendations for Bhashantek sanitation service improvement

	Objectives	Recommendations
Latrines	Provide minimum sanitation services	Conduct a census / diagnosis of existing latrines. Develop an action plan considering latrines accessibility by emptying machines. Identify with the community the best way to finance septic tanks emptying. Establish a maintenance planning.
Sewage	Reduce health risks	Identify places where waste sewage can be moved without stagnating. Promote the use of washing buckets (dishes and clothes) toward the community.
Rain water	Avoid district floods	Communicate to the community about the existence of flooded areas. Study options to drain off rain water far from homes.

Source: Aquassistance Technical Assistance Mission for Water & Life from 20 to 27 Sept. 2014

E. Waste management

In 2013, W&L signed a partnership agreement with Swisscontact Foundation, to develop a pilot project of door-to-door waste collection based on social entrepreneurship model. In 2014, several field studies were conducted among slum families and businesses to assess their needs, waste management practice and means. A waste analysis completed this phase. In Bhashantek, one household (4.5 people) generates about 2,450 grams of waste daily. In the absence of collection system, organic wastes are currently thrown in ponds (illegal dumping sites inside slum communities), in water drains or even in the street. Recyclable wastes are managed via informal markets across the capital. Remaining wastes are burnt. Residents are aware that waste-related pollution directly impacts their health and expressed their will to participate in the implementation of a primary paying collection system.

W&L solution consists in the implementation of paying waste collection services: wastes will be separated in 2 categories (recyclable and others), then will be brought to a transfer station managed by the city and located at Bhashantek entrance, then a secondary collection will transfer wastes to North Dhaka Landfill. Recyclable wastes will be sold by waste collectors and will provide them complementary incomes. One key to success, in addition to community involvement, remains in municipal services involvement. They will ensure primary collection of wastes from the slum (stocked in slum neighbourhood) and they will co-finance this service together with residents once the testing period is over. The close and trustful relationship built day after day between water operator SJP and its clients, is a major asset to ensure the success of this project.

The signing of the official “Primary Collection Service Provider” partnership agreement between W&L, Swisscontact and Dhaka City took place on mid-December. W&L and Swisscontact will implement the project, and will manage technical support and follow-up.

The city will provide a transfer area at slum entrance to carry away wastes and will ensure regular dump trucks services.

Awareness and promotions campaigns will popularize this new service, based on the same communication line as the one used for water access promotion. Project business plan was validated at the end of 2014 and the programme will start on first quarter of 2015.



During the mission, Aquassistance experts welcomed the initiative and noted the following recommendations:

Recommendations for waste management improvement in Bhashantek

Solid waste management service	Objectives	Recommendations	Responsibilities
Primary waste collection	Door-to-door waste collection, at-source sorting, covering 100% of households	Collectors training and awareness campaign adapted to owners	New NGO or SJP or locally-based organisation
Street sweeping	Have a clean environment within the slum	Evacuate street sweeping wastes during door-to-door waste collection	Each owner
Realisation and maintenance of a transfer station, equipped with a container	Gather and stock slum solid wastes and transfer them to an appropriate place	Build a cemented platform with an access ramp for trolleys and keep it clean	DNCC
Development of a biogas pilot project for family use	Provide energy for family use	Conduct appropriate follow-up on biogas	New NGO or SJP a locally-based organisation including one Aquassistance technician
Collection of household waste management service charge	Develop a sustainable service	Add waste collection charges to water bills as 100% of slum population will benefit this service	New NGO or SJP or locally-based organisation

Source: Aquassistance Technical Assistance Mission for Water & Life from 20th to 27th Sept. 2014

W&L and its partners included these remarks in the pilot project development.

F. Enhancing community building

Meetings with community leaders



Along the year, W&L organised coordination meetings gathering community representatives and organisations operating in Bhashantek.

These meetings are crucial for the effective implementation of activities mainly towards sustainability and in fostering community involvement. W&L and SJP teams systematically sought advice from Bhashantek representatives to ensure the adequacy of activities to meet community needs.



Several issues and topics were discussed during these meetings: deciding network infrastructure locations, presenting a new project (waste management) or survey results, sharing future project schedules, preparing consultants or partners' missions (Aquassistance, CASC-APPUI firemen), resolving conflicts with some clients... In addition, meetings were held throughout the year with regards to human resources management. Indeed, due to the close relation with local community and the recruitment of several local people, some community managers wanted to interfere in recruitment process or contract termination process. The importance of neutral decisions taken without external pressure was

emphasised. In the future, it will be necessary to support democratic elections of community leaders.

With the end-in-view of ensuring the sustainability of the services of SJP and W&L and in consideration of current community organisations, the creation of thematic commissions will be launched in 2015 (one water access commission, one fire-fighting commission, one dedicated to waste management and another one to sanitation services). Community leaders will be encouraged to create these commissions, composed of two or three community representatives, questioned or consulted by SJP and W&L on the implementation or follow-up of projects. Special attention will be given to women representation. These commissions are meant to become the main interlocutors between users and local authorities.

Dead Body Washing Place

The location where SJP water tower was built in 2013, used to be a Muslim ritual area for dead body washing. As space is rare in slums, it was decided with the community that W&L would support the construction of a dead body washing place, to respect local customs. It is a raised and tiled table where the Imam proceeds to dead body washing, according to Muslim ritual, before body burial. The construction work started on end of year and will end in 2015.



2. Prospection in Chittagong

In 2013, W&L conducted an assessment in five slums of Chittagong, 2nd largest city and main harbour in the country. The results aroused World Bank interest, allowing the prospection process to start on April 2014. All partners (local authorities, water distributor, World Bank, UNDP, local NGOs) are very excited about the project. Following the discussions, two slums were selected. In the framework of a depressed area water supply project signed between World Bank and local water operator (CWASA), a drilling campaign will be conducted in 8 districts of the city. SJP was asked to ensure installation and management of a water network in targeted slums. Chittagong situation will enable SJP to develop a more profitable structure, according to model in use in Philippines. Illegal water price is 2.5 to 5 times higher than in the capital city slums. First assessments of local needs highlighted the great interest of future beneficiaries in a new project launched by SJP and W&L.

Considering the needs expressed by local population and authorities in a water access and sanitation project similar to Bhashantek project, a 3 years programme was developed and submitted to different financial and technical partners.

3. Partnerships

In the field partnerships

Shobar Jonno Pani Ltd. (SJP)

SJP is the Bangladeshi social business founded by E&V. SJP sets up and monitors water supply networks and manages payment collection in depressed urban areas. SJP works in partnership with local water operators through partnership agreements.

Water and Life Bangladesh (W&L)

W&L is an international NGO, created in 2010 by E&V and registered with local authorities. It aims to organise activities such as fire prevention, trainings for district communities, studies, surveys, implementation of sanitation and waste management systems in operation areas.

Dhaka Water Supply and Sewerage Authority (DWASA) - partner in Dhaka

DWASA is the public operator mandated by the government to supply water to Dhaka city. DWASA signed a contract with SJP regarding water supply and network development consultancy in slums. DWASA is also partner of the water access and sanitation project implemented in Dhaka by World Bank.

Chittagong Water Supply and Sewerage Authority (CWASA) - partner in Chittagong

CWASA is the public operator mandated by the government to supply water to Chittagong city. A partnership between SJP and CWASA is under negotiation and aims to provide water to Chittagong slum residents as soon as 2015.

Dhaka North City Corporation (DNCC)

DNCC is a local administration in charge of North Dhaka. It carries on Urban Partnership for Poverty Reduction Project (UPPRP) in partnership with UNDP.

United Nation Development Programme (UNDP)/UPPRP

UPPRP is a poverty reduction project developed by DFID⁵, UNDP and Bangladesh government, and carried out by the Bangladesh Rural Development and Cooperative Division, under UNDP supervision. Focused on local communities, it aims to improve living conditions of 3 million poor and extremely poor people, in urban areas, including women and girls. UNDP/UPPRP engages

⁵ Department for International Development, UK Ministerial Department

communities by creating Community Development Committees and invests in water access and sanitation infrastructures. A 7-years development plan was implemented in Dhaka. In 2011 a partnership agreement was signed with SJP, appointing SJP as the organisation in charge of water network construction and water distribution in Bhashantek.

Bhashantek community organisations

Vorer Alo: Bhashantek is divided into 15 Community Development Committees gathered in one network named Vorer Alo. This network made up exclusively of women was created at the instigation of UNDP/UPPRP. Each committee is made of 15 subgroups, and these subgroups are composed of 20 households. In 2012, Vorer Alo, SJP, UNDP/UPPRP, DWASA and DCC signed a 15 years partnership agreement, allowing amendments once every 5 years. This agreement focuses on “water access, environment and sanitation improvement, fire-fighting and hygiene trainings, and other related services for Bhashantek population benefits”.

Slum Development Committees: the community created 2 committees which gather about 80 members. They are deeply involved in the Programme implementation.

Development of partners’ network

SJP and W&L carried on partnership development. Swisscontact Foundation contributes to a solid waste management pilot project. CASC-APPUI organisation brings technical and material support to the fire-fighting programme.

Swisscontact

Swisscontact is a Swiss foundation for technical cooperation. “Value for Waste” (VfW) is a 4 years development project, financed by Swisscontact, Zürich City and Swiss cooperation. It aims to lower waste environmental impact by developing recycling sector. The project includes households’ awareness and training.



On October 2013, W&L signed a cooperative agreement with Swisscontact to conduct a preparatory study in Bhashantek. The waste management project is implemented through regular working meetings and thanks to the complementarity of W&L and VfW teams. On December 2014, an agreement was signed between SwissContact and SJP for the implementation of a primary collection service in 2015. W&L and SwissContact will ensure the follow-up of this pilot project.

INGO Urban Forum meeting

W&L joined several meetings in the framework of INGO Urban Forum, a platform bringing together most of NGOs operating in Dhaka (ACF, World Vision, DSK, Islamic Relief, Habitat for Humanity, Concern Worldwide, Swisscontact, Solidarités international...). This new forum aims to share experience and skills.

CACS-APPUI

This solidarity organisation of the Rhône region Fire and Rescue Department is dedicated to rescue disaster-stricken populations and train firemen in developing countries. A partnership was created in 2014 and led to the first mission with 2 firemen on November. A partnership agreement is under negotiation to expend the project in Bangladesh, the Philippines then in Ivory Coast. It covers the following points: fire-fighting technical support, donation of material to complete current equipment and training of volunteer fire-fighters.

Audits

Year 2014 was marked by two external audits: Aquassistance brought its expertise in water access, waste collection and sanitation projects in Bhashantek and HydroConseil assessed SJP economic model and water network.

Aquassistance

E&V project was selected by Aquassistance (international aid organisation of the SUEZ Environnement Group staff) and a partnership agreement was signed between Aquassistance and E&V to provide technical assistance in water, waste management and sanitation projects in Bangladesh. Three consultants travelled to Dhaka on late September. Aquassistance highlighted E&V successful connection of numerous households to a running water network (1,300 households in less than one year), as well as smooth operation of provided services and adoption of the project by the local population. Recommendations were formulated to improve the water network and to implement sanitation and waste management services.

HydroConseil

Trafigura Foundation mandated an external audit of E&V projects and its economic model. For this purpose, two auditors from HydroConseil (consulting firm specialised in water and sanitation issues in developing countries) visited the Philippines and Bangladesh in October. The audit results offered valuable lessons and provided the opportunity to examine and approve the E&V approach, and provided insights for improvements to future development programs and financial sustainability schemes.

4. Project sustainability

Viability of W&L and SJP organisations

a) Human resources

The year 2014 was marked by a change of programme manager and engineer in SJP, the recruitment of an agency manager and an additional employee in SJP Bhashantek. In W&L, a French civic service volunteer joined the team to provide communication support to W&L programme manager. SJP/W&L driver was hired as a regular employee. This position is necessary due to security issues in Dhaka. SJP/W&L organised a two-days “team building” session. Brainstorming workshops and sport activities offered the opportunity to enhance team building.

On end of 2014, SJP and W&L have a very cohesive and skilled team, able to face future challenges: 3 managers, 2 supervisors, 13 local employees, including 7 employees from intervention areas, 3 expatriates, including one SJP programme manager and one W&L programme manager assisted by a communication executive.

b) Material and technical resources

Technical and material resources are listed in appendix.

Institutional viability of W&L and SJP

After 2 years of waiting and efforts, W&L obtained its international NGO certification in 2013. This status facilitates necessary undertakings with local and international authorities. This recognition is an important achievement in Bangladesh difficult context, and helps to clearly define respective tasks and accounts of the local NGO and the social business.

After 4 years of existence, SJP nearly achieved institutional viability. It was a great challenge in this country with very complex administrative rules. Last elements of legal documentation should be finalised in 2015.

Financial viability of W&L and SJP

The social business SJP aims to reach financial viability by 2017. The network initially subsidised by UNDP will be completed thanks to two investment subsidies to complete the coverage of the slum and increase volumes.

In its report, HydroConseil notes that SJP economic model is far from financial viability, as less than 30% of expenses (amortisation excluded) are covered by incomes. It considers that scaling up in existing conditions would put the business at risk. The allocation of new public subsidies would be the only way to perpetuate the approach.

Following the assessment of HydroConseil and E&V co-director's mission in October, it was decided that the second phase of Bhashantek network construction work would be subject to SJP ability to reach financial sustainability. Like any company, SJP must make profits to ensure the sustainability of services, network maintenance and operation, payment collection, water quality supervision and suppliers payment. Without profits, there will be no fund available to cover for expenses and to finance future investments. SJP financial sustainability is a shared concern: for the supplier, all partners and beneficiaries. As a result, in early 2015, SJP will initiate negotiations with all project partners to pull all possible levers. Initial success was reached thanks to cooperation of all, so will its viability, following the same spirit of cooperation. In Chittagong, water pricing structure must enable SJP to create a sufficient margin and cover its operational expenses, while decreasing the water price currently paid by final customers to water resellers.

W&L activities are also financed by subsidies, which are mainly granted by European partners. Communication tools dedicated to local fund raising were finalised in 2014 and will allow W&L to increase it in 2015. Local partners already bring their support to activities. DETTOL, for instance, offers soap for hygiene awareness sessions and Oryx contributed to the Global hand-washing day by supplying T-shirts. Supporting and consulting missions such as the ones conducted by Aquassistance and CACS APPUI contribute as well to the development of activities.

5. Conclusion and prospects for 2015

Despite the very challenging context, E&V projects in Bangladesh considerably developed in 2014, with Bhashantek network extension. In parallel with construction work, W&L continue to provide hygiene training and improve its fire-fighting programme, while developing other activities including a waste management pilot project which will start in 2015. To accompany this development, W&L and SJP teams were strengthened and a new management tool was deployed. Furthermore, two external organisations, Aquassistance and HydroConseil, conducted audits. Both missions are generated very encouraging results in an operational point of view. They also highlighted possible points of improvement.

Prospects are opening up in 2015. SJP will finalise Bhashantek network under the right conditions and will launch a new project in country's second largest city, Chittagong, where an agency is expected to open in 2015. W&L will finalise the installation of Bhashantek fire hydrants, will develop fire brigades, as well as provide for their equipment and materials. Hygiene awareness actions will continue targeting women and children and new training modules will be created. Thematic committees will be organised. Following Aquassistance recommendations, a sanitation plan will be implemented for existing latrines and sewerage improvement. The implementation of a waste collection pilot project with Swisscontact and Dhaka City will outline E&V social entrepreneurship expertise and its understanding of slums. It will include residents' sensitisation to waste recycling and the creation of SJP second department, specifically dedicated to waste collection.



E&V evolution in France

1. Earlier achievements

After 4 years of field operations, E&V constituted and organised its headquarters which is now based in Nantes. The headquarter mission is to develop and supervise projects, develop management and follow-up tools and search and manage technical and financial partnerships. Thus, numerous partnerships were built with diverse foundations, companies and institutions willing to participate in project implementation and E&V development. A three-year development plan (strategic plan) was written for Bangladesh. Water sales management software was developed using Access and was installed in E&V agencies. The headquarters strengthened its human resources to support and supervise Philippines and Bangladesh project development. An assessment of needs was conducted in Ivory Coast.

2. 2014 achievements

2.1 Assessment of E&V approach

On Trafigura Foundation initiative, **HydroConseil**, project oriented consulting firm, specialised in water and sanitation issues in developing countries, carried out **an assessment of E&V economic model and projects** in Philippines and in Bangladesh. The results of the mission confirmed the following points:

- **Water access services created by SJP and TPA (which were created by E&V) answer the needs expressed by local populations and authorities**, reaching a 50% coverage rate in less than one year and a payment collection rate above 95%.
- **E&V must keep developing its services** in both countries of intervention (the Philippines and Bangladesh) due to important needs (including numerous and overcrowded slums and limited development of public services).
- **The financial viability of the agencies will be reached** thanks to an increase of sales volume, economies of scale on operating costs and price increase in Bangladesh.

On its side, **Aquassistance**, international aid organisation of the SUEZ Environnement Group staff, praised **the integrated approach** developed by E&V, from water access to waste management.

Moreover, the Fonds Suez Environnement Initiatives asked E&V to present its approach during King Hassan II Great World Water Prize in the framework of 2015 World Water Forum, regarding "Innovation in water access, energy and sanitation, in a context of global change". E&V nomination was sponsored by Fonds Suez Environnement Initiatives and United Nations Development Programme (UNDP) in Bangladesh and supported by World Bank, Dhaka city, Filipino water operator Maynilad Water Services Inc. and Roshan Shrestha, former head of UNDP in Dhaka.

Both external missions combined to E&V nomination to King Hassan II Great Water World Prize strengthened the determination of E&V team. Recommendations formulated by each of these experts were implemented as soon as the end of the year.

2.2 Projects follow-up

Several follow-up missions were conducted along the year. A mission in Ivory Coast gave the opportunity to create local organisation Eau et Vie Côte d'Ivoire and strengthened relations with

main partners. These ones reiterated their will to start a pilot project. A mission held in Philippines enabled to report on W&L activities and on water sales management software. A mission in Bangladesh was dedicated to SJP viability, the implementation of new partnerships and the development of the waste management pilot project.

At the same time, three years development plans in Ivory Coast and Philippines were written.

In terms of information and management system, a scoreboard detailing the follow-up of water agencies activities was developed and its production was automatized on sales water management software. Field installation was conducted on end of year.

2.3 Prospecion in Ivory Coast

The last prospective mission was conducted on March 2014. It fully confirmed residents' needs and political will and as well as support from several actors to find sustainable solutions and improve living conditions in depressed areas.

ONEP (National Office of Drinking Water) and **MIE** (Ministry of Economic Infrastructures) are wholly in favour of a pilot project in depressed areas managed by E&V in partnership with SODECI (Ivory Coast Water Distribution Company). Indeed, government is in search of solutions to supply Abidjan population with potable water and it wishes to adopt alternative solutions to stand posts managed by agents, solution favoured until today. An agreement between E&V and ONEP is under negotiation. **SODECI**, on its side, reaches a payment collection rate below 70% in Abidjan slums and is looking forward this project to manage relations with one single client and decrease network piracy.

Local organisation "Eau et Vie Côte d'Ivoire" was created, including seven Ivoirians and one French to its Board of Directors. Registration file was submitted to the Prefecture and police investigations are currently conducted on the President and the Treasurer of the organisation, prior to Eau et Vie Côte d'Ivoire registration to DGAT (Directorate-General of Territorial Administration).

Consequently, a three years programme (2015-2017) was developed. It aims to prove living conditions of 600 families (about 4,800 people) living in Yopougon slum (Abidjan), thanks to sustainable access to running water, fire-fighting, sanitation and waste management. This is the first phase of a global programme to improve living conditions within the district, scheduled on a 10 years period, and aiming to provide these services to the whole district population. All needs and will of local authorities taken into account the project should be extended to other depressed areas of Abidjan at the end of the 2nd year.

The programme was submitted to several potential partners. In November, **Pays de la Loire Regional Council** confirmed its support to the programme.

Yopougon Mayor (Yopougon is the largest municipality in Abidjan), and President of Union of Ivorian Cities and Municipalities was met during his travel to Paris on July. He was very interested in the project and mentioned it during a TV interview broadcasted on Radiodiffusion Télévision Ivoirienne (RTI).

2.4 Partnerships and networks

A partnership was signed with Aquassistance, international aid organisation of the SUEZ Environnement Group staff, to provide their expertise on projects conducted by E&V.

E&V anchoring in Pays de la Loire region is strengthened thanks to its participation to the "water" committee of Maison des Citoyens du Monde de Nantes (a collective of organisations for human rights and international solidarity). E&V also joined the International Solidarity Week and made an intervention in Gabriel Deshayes High school in Saint Gildas des Bois, in the framework of "Water Control and Management" BTS (vocational training certificate).

2.5 Communication

In 2014, E&V redesigned its Internet website (www.eauetvie.fr/en), which now includes on-line donation functionalities. A Facebook profile was created (www.facebook.com/eauetvie.org), providing weekly updates on on-going projects, and a newsletter was published on end of year.

3 organisations published an article and a video on E&V, broadcasted on Internet.

2.6 Human resources

During the year, E&V co-founder came and strengthened headquarters team, and a second project officer was recruited. At the end of year, 4 people are working in the headquarters: 2 co-directors, 1 project officer and 1 administrative and financial executive. For project follow-up and management purposes, geographic divisions were implemented (Philippines, Bangladesh and Ivory Coast). E&V entrusted an external consultant with computer expertise and a volunteer sanitation expert intervenes in support to projects. E&V headquarters regularly welcomes interns.

In addition to Nantes headquarters, 2 branches were created: the first one in Versailles and the second one in Lyon.

The partnership with La Guilde was re-conducted. This organisation recruits E&V expatriates. A partnership agreement was signed with Passerelles & Compétences, a skills-based volunteering organisation.

A Board meeting and a general assembly took place during the year. E&V Board was renewed, its status was reviewed and headquarters relocation was approved.

3. Conclusion and prospects 2015

Positive feedbacks from HydroConseil and Aquassistance on E&V projects and approach constitute a main step for the organisation. This integrated approach, where complementary responsibilities of the social business and organisation are clearly defined to allow water access, sanitation, waste management and fire-fighting in depressed areas of developing countries, is increasingly recognised. Headquarters team was strengthened by co-founder taking the position as co-director, the recruitment a new project officer. Management tools were reinforced. It will enable E&V to keep developing its activities in Philippines and Bangladesh and launch its new pilot project in Ivory Coast in 2015.

The redesign of E&V website was a major achievement in 2014. It presents E&V actions and approach by country and by topic.

In 2015, E&V will reinforce its anchoring in Nantes, where its headquarters is located, as well as in Lyon and Versailles, where two of its employees are based, through the organisation of volunteers committees, local partnership development with authorities and organisations, and participation in local activities and events.

Conclusion

On end of 2014, 12,740 poor people living in Cavite, Cebu and Bhashantek slums had access to running water at home. 1,400 users of public places had a water connection to SJP or TPA networks in these districts. Payment collection rate was above 95% after due date. Agencies improved their financial, operational and institutional viability. At the same time, W&L NGOs developed their activities. In total, 184 volunteer fire-fighters were trained and equipped all districts taken together. 1,360 people were sensitised to hygiene. Two innovative pilot projects were developed: a project of household waste management in Bhashantek slum; a project of public toilets installation in Pugad Ibon slum.

Two external missions consolidated E&V approach, combining potable water access through a social business and sanitation and fire-fighting services through an NGO.

The economic model selected by E&V is adapted to provide sustainable access to water in depressed areas, with a selling price suitable with balanced accounts and still affordable by beneficiaries. Conditions of financial viability are clearly defined. They will influence the selection of future intervention areas.

In 2015, E&V will scale up. Activities will be developed in current operating areas. Furthermore, projects will be launched in 4 new cities: Chittagong in Bangladesh, Tacloban and Iloilo in Philippines and Abidjan in Ivory Coast.



Appendix

1. Location of conducted actions

Philippines



Bangladesh



Ivory Coast



2. Resources

Philippines

Human resources

TPA headquarters	W&L Philippines headquarters
<ul style="list-style-type: none"> - 1 country manager (ISV expatriate) : Stéphane - 2 engineers : Billy / David (ISV expatriate) - 1 plumber : Yonie - 1 regular plumber assistant: Benedict 	<ul style="list-style-type: none"> - 1 W&L Philippines programme manager (ISV expatriate): Sébastien - 1 financial manager : Romeo - 1 financial assistant: Christine - 1 communication executive: Marie-Gabrielle (Civic service) - Daily prospection surveys person
TPA Cavite	W&L Cavite
<ul style="list-style-type: none"> - 1 agency manager: Czarina - 1 administrative assistant: Catherine - 1 coordinator: Tony - 1 encoder: Joan - 4 collectors : Evelyn, Susan, Lilibeth et Gloria 	<ul style="list-style-type: none"> - 1 community coordinator: Angie - Daily prospection surveys person
TPA Cebu	W&L Cebu
<ul style="list-style-type: none"> - 1 agency manager: Manuel - 1 administration executive: Demosthenes - 1 encoder: Lorna - 3 collectors : Judith, Raoul, Jenifer - 4 daily workers in charge of network construction 	<ul style="list-style-type: none"> - 1 community coordinator: Psyfill - Daily prospection surveys person



W&L Cebu team



TPA Cebu team



TPA and W&L Cavite team

Material resources

	TPA/W&L mutualised material resources	TPA	W&L
Headquarters	<ul style="list-style-type: none"> - 1 main office in Mandaue (rental) - 1 fixe phone line + WIFI Internet access - Fax - Office equipment - 1 printer / scanner 	<ul style="list-style-type: none"> - 2 laptops - 1 personal computer - GPS 	<ul style="list-style-type: none"> - 2 laptops - 1 personal computer
Cavite	<ul style="list-style-type: none"> - 1 main office in Bacoor (rental) - 1 office (storage) in Manggahan, Kawit - 1 fixe phone line + WIFI Internet access - Office equipment - 1 scooter - 2 printer / scanner - Video-projector + screen 	<ul style="list-style-type: none"> - 2 laptops - 4 personal computers - Construction tools 	<ul style="list-style-type: none"> - 1 laptop
Cebu	<ul style="list-style-type: none"> - 1 office in LTHAI main district (rental) - 1 fixe phone line + WIFI Internet access - Office equipment - 2 printers laser / ink-jet - 1 projector + screen + speakers 	<ul style="list-style-type: none"> - 1 personal computer - 7 laptops - Construction tools 	<ul style="list-style-type: none"> - 1 laptop - 1 printer / scanner

Bangladesh

Human resources

SJP	W&L Bangladesh
<ul style="list-style-type: none"> - 1 programme manager (ISV expatriate) : Irvina - 1 agency manager: Ariful - 1 encoder : Md. Jalal - 1 chief plumber: Abdul - 2 plumbers : Panir et Rumon - 3 collectors : Selina, Arif et Srabony - 1 field coordinator: Md. Sha - Daily workers 	<ul style="list-style-type: none"> - 1 financial and administrative manager: Subhash - 1 financial and administrative executive : Nabi - 1 driver : Mofazzal - 1 programme manager (ISV expatriate): Pauline - 1 communication executive: Louis (Civic services) - 1 trainings and studies executive: Sabyasachi - 1 training and studies assistant: Aper - 1 project engineer: Rafiqul - 1 community facilitator: Shopna



SJP and W&L Bangladesh teams



Material resources

SJP	W&L Bangladesh
<ul style="list-style-type: none">- 1 office (including storage) in Bhashantek (rental)- Office equipment- 4 laptops- 1 personal computer- 1 printer- Communication tools: suitcase with promotion material (screen)- Building material- 1 GPS- Internet modem- 1 WagTech kit (water analysis suitcase)	<ul style="list-style-type: none">- 1 office (3 rooms + 2 reception areas) in Mirpur 10 (rental)- Office equipment- Internet modem- 5 laptops- 2 personal computers- 2 printers- 1 car (rental)- 1 camera

France

Human resources	Material resources
<ul style="list-style-type: none">- 2 co-directors- 2 project officers- 1 consultant- 1 trainee	<ul style="list-style-type: none">- 1 office- 3 computers- 2 printers

3. E&V partners and board of directors

2014 partners

- Aquassistance organization (Bangladesh)
- CapsLuxe Company (Philippines)
- ESPRIMM Company (Philippines)
- Fondation AnBer (Philippines)
- Fondation Avenir Finance (Bangladesh)
- Fondation Brageac Solidarité (Philippines)
- Fondation Lord Michelham of Hellingly (Philippines and Bangladesh)
- Fonds Suez Environnement Initiatives (Bangladesh)
- Rotary Club Paris Académies (Bangladesh)
- Trafigura Foundation (Philippines and Bangladesh)
- United Nations Development Programme (UNDP) (Bangladesh)
- Numerous individuals, organisations and companies

In each country of intervention, E&V develops local fundraising. Several companies provide a financial or technical support to activities implementation.

E&V would like to thank all its partners.

Board of directors

E&V Board of Directors works in defining objectives and strategies, participate in fundraising and control of funds use. Members of the Board of Directors are men and women from diverse backgrounds: company, development, organisation...

Nelly de Varine: **President**
Nicolas Jourdier: **Treasurer**
Agnès de Roux: **Secretary**
Stéphane Buthaud

Hortense Brault
Guy Fourneret
Vincent Faber
Eugène Omosolo

