A tale of clean cities:

Insights for planning urban sanitation from San Fernando, the Philippines

Key learning points

- At the turn of the century San Fernando's mayor initiated a long-term effort that has laid the foundations for providing city-wide sanitation services.
- Through multiple projects, in collaboration with development partners, the city innovated on ways to provide services along the sanitation chain and in challenging areas.
- However, bottomless pits remain prevalent, affecting sanitation service provision and posing serious health risks.
- Progressive legislation and delegation of services to the private sector have been important elements of success.
- The sanitation evolution, although grounded in a vision of a healthy and environmentally friendly city, was rather opportunistic and unplanned.
- Past sanitation planning exercises had limited impact, but efforts are underway in 2016 to put in place a more strategic sanitation planning process.

Case study prepared for WaterAid by Partnerships in Practice

Contents

Research project

This case study is part of a research project by Partnerships in Practice for WaterAid to learn from sanitation planning processes of cities in developing countries that are making good progress in provision of sanitation services to all. The team focused on key drivers affecting progress, the role external agencies played in supporting this process, and the extent to which slums were included and the most vulnerable affected.

San Fernando in the Philippines, Visakhapatnam in India, and Kumasi in Ghana were studied. The specific insights captured in this report are also integrated in a broader synthesis report combining the case study learning with findings from literature and conversations with urban WASH experts. The three case studies and the synthesis report are available at www.wateraid.org/ATaleOfCleanCities

Acknowledgements

This report was written by Jacques-Edouard Tiberghien with support from Ricardo Marfiga Jr. and Andrés Hueso.

We would like to thank all the key informants and workshop participants for their contributions, and Penny Dutton, Ken Caplan, Tracey Keatman, Rémi Kaupp, Alejandro Jiménez, Rebecca Heald, Hannah Offlands and Lotten Hubendick for their input.

This document should be cited as WaterAid (2016) *A tale of clean cities: Insights for planning urban sanitation from San Fernando, the Philippines (Case Study).* London: WaterAid.

Front image: San Fernando scape. Dodong Flores.

Summary

The City of San Fernando, La Union, in the Philippines, population 115,000, has built a strong reputation as a dynamic city, putting forward strategies and policies that reflect a progressive development agenda, in which improving sanitation has been a crucial pillar. Since the late 1990s, the city has gone through a phase of experimentation and learning, through multiple efforts to address sanitation at various scales – for example, ecological toilets for a hilly water-scarce area, small-scale sewers discharging into biodigestors for coastal areas, a centralised faecal sludge treatment plant with an associated experimental desludging service, and two small wastewater treatment plants. These efforts were complemented by changes in local legislation and public awareness. Building on progress in this period, a more strategic phase is now starting, with a city-wide approach to sanitation. The biggest challenge is that 95% of households use flush toilets connected to tanks with a leaching bottom, which not only pollutes the shallow groundwater table, but also affects the viability of the desludging service.

Much of the city's progress is credited to its mayor, who, between 1998 and 2007, developed a very progressive agenda emphasising environmentally friendly urban development. This generated interest among development agencies, leading to partnerships for financial and technical support. With environment and public health as key drivers, the objective for sanitation was to reach universal service coverage.

The process so far has been project-based and opportunistic, although responding to a vision and a development agenda. The only sanitation plan developed focused on decentralised systems (Ecosan and decentralised water treatment) and became irrelevant as the process unfolded and more centralised options were favoured. The innovations pioneered by San Fernando were recognised through numerous awards in national and international competitions. However, there is low ownership and capitalisation on the lessons from the experimental phase, with inadequate documentation and sharing of performance.

1. Context

The City of San Fernando, La Union, on the west coast of Luzon Island in the Philippines, is the financial, industrial and political centre of the province of La Union and of the region of Ilocos. With an estimated population of 115,000 (2010), the city has been growing slowly (1.2% from 2000–2010) compared with regional and national trends. The city has a land area of 10,272 hectares and comprises 59 'barangays', which represent the smallest administrative division in the Philippines. Most residents and establishments are concentrated in coastal areas and along major roads in the congested western part of the city. Urban development now proceeds eastwards, towards the hills. Informal settlements are very few and small, although data on them were not available.

Around 28% of the population live in rural barangays. The local economy is principally built on agricultural production (i.e. rice, corn, legumes and tobacco). Manufacturing, commerce and tourism are other key economic activities. The beaches, a main attraction for tourists, are strategic assets for the city's economic development. Fishing often contributes significantly to livelihoods in coastal and seashore areas.

The local climate is characterised by two pronounced seasons. During the dry season from December to April water scarcity is frequent, particularly impacting on eastern barangays, where abstraction of water is difficult because of a challenging natural environment. The wet season, from June to October, coincides with the typhoon season, frequently bringing floods, which expose people in low-lying areas to health risks associated with unimproved sanitation.

This report analyses progress on sanitation in the city since 2000. The past 15 years have been a phase of experimentation and learning through experiences addressing sanitation issues at various scales. A second phase has begun in 2016, heralding a more strategic city-wide approach to sanitation services.

The findings presented here draw from a review of the literature (see References) and from a set of site visits and interviews with key informants (see Annex 1) in March 2016. A stakeholder feedback meeting enabled validation and refining of the preliminary findings (see the list of participants in Annex 2).

2. Sanitation progress and gap areas

2.1. Current status of sanitation services

a) Containment

In 2015, the City of San Fernando officially comprised 27,689 households. Table 1 shows household access to toilets (the 'excreta containment' segment of the sanitation chain of services). Most households use flush toilets – 71.8% have pour-flush toilets (requiring users to pour water) and 24.6% use flush toilets.

Table 1: Distribution of infrastructure used to receive excreta (%)[1]

Flush toilet	Pour-flush toilet	Sanitary pit	Open pit	Public toilet	Ecosan toilet	Community toilet	No toilet
24.6%	**71.8%**	2.7% (749)	0.08% (22)	0.08% (21)	0.40% (112)	0.05% (14)	0.30% (74)

Public and community toilets are not significant in number. Open defecation is rare – only 74 households, mostly in poor coastal or upland barangays, have no toilet and either use their neighbours' toilet or resort to open defecation.[2] Use of ecological sanitation toilets (i.e. composting, urine-diversion toilets, also known as Ecosan), albeit marginal in terms of coverage, is very relevant in specific locations. In Nagyubuyuban, a hilly barangay with 1,300 inhabitants, the alternate use of Ecosan and pour-flush toilets helps the community adapt to water use restrictions during the dry season. The 450 inhabitants of the Fishermen's Village exclusively use Ecosan toilets, which allows the community to reduce its environmental impact on the beach. These types of toilets were promoted in this settlement to cope with a high water table and to protect the beach by reducing domestic effluents.

Fishermen's Village, where Ecosan toilets are used.

b) Collection

According to the City Health Office, more than 90% of the toilets in operation have bottomless pits and tanks, and thus let their contents continually seep into the ground. Large-scale chronic faecal contamination of the shallow groundwater results, which explains the prevalence of faecal coliform detected in 56 of 59 wells tested, endangering large sectors of the city. The water was found to be free of such contamination in only three of 59 barangays.[3] This is a significant public health concern for a population who rely on three types of water sources: the city water supply system (which serves 15% of all 27,000 households); small community piped water supply schemes (coverage unknown); and independent water points such as boreholes, wells and springs. Waterborne diseases are relatively common in the city.[4]

Another consequence of the prevalence of bottomless pits and tanks is that these containment cells hardly ever fill up. The thick solid content cannot be easily removed by the pump of vacuum trucks, so manual emptying is required. A policy enacted by the city in 2006 imposes the three-chamber sealed septic tank as the new standard. In theory, all buildings constructed since then comply with this norm. Discussions with various informants concur that the controls in place to enforce this legal provision (e.g. approval of plans to issue building permits and an inspection visit before an occupancy permit is issued) do not ensure full compliance. A key challenge for the city reportedly consists of converting all the bottomless septic pits into water tight cells, which can be serviced by vacuum trucks in the short term and potentially connected to a sewer system in the long term. Incentives are lacking for landlords to undertake such costly works, which would result in more frequent desludging.

c) Transport

Except for two coastal barangays equipped with small-scale, small-bore sewer networks discharging into Ecotanks (fibreglass-made medium-scale biodigestors), the city does not have a sewerage system. Long-term scenarios could include construction of such centralised sanitation infrastructure starting from the city centre. As noted by the Asian Development Bank,[5] the high investment and operating costs of sewerage systems have limited their development in the Philippines, and faecal sludge management systems are being promoted as a cheaper alternative. In 2010 San Fernando thus opted for construction of a faecal sludge treatment plant and organisation of a desludging service with vacuum trucks. The local company McKleene has been providing this service since 2012 under a memorandum of understanding with the city for a four-year demonstration period.

Since 2010, a sanitation tax has been levied with the property tax, which entitles households to get their septic tank emptied once every five years. Preliminary studies had estimated the presence of 10,000 septic tanks, requiring construction of a plant with

a treatment capacity of 30m^3 per day.[a] A marked gap is observed between the daily volume of sludge collected by McKleene (5–10m^3) and the minimum amount calculated to ensure optimal operation of the treatment plant. The authorities blame McKleene for its failure to increase its capacity (buying new trucks) to comply with a schedule planning to service all septic tanks, one barangay after another; yet the prevalence of bottomless septic pits (not factored in initially) strongly complicates mechanised desludging and reduces the likelihood that households will need servicing every five years. Demand is very low; the city, which channels customer demand to the company, only receives an average of three requests for emptying per day.

d) Treatment and reuse

As noted, most of the faecal sludge generated in the city seeps into the ground and degrades slowly in the tanks and pits. As noted above, the faecal sludge treatment plant operates far below its design capacity, and fails to provide the level of treatment sought; the successive lagoons are not filled sufficiently and the plant is not designed to treat the thick sludge collected from bottomless pits. There is barely any reuse of treated sludge.

Faecal sludge treatment plant for the whole city.

Medium-scale biodigestors treat the wastewater generated by households in environmentally sensitive areas, such as the riverside informal settlements in Catbangen and Poro, and beach sheds for recreational use on the oceanfront in San Francisco barangay. The city manages these community treatment plants since their installation in 2010. The microbiological activity took time before reaching adequate

[a] This conflicts with the City Health Office's statement, according to which 90% of all toilets have bottomless pits.

performance and clogging issues temporarily affected the operation of one unit. Monitoring of the effluent suggests these units now perform at adequate levels.

Two small conventional wastewater treatment plants were constructed to treat the effluent of the city public market and the slaughterhouse. The former, installed to serve 700–900 stalls, is operated by market staff. However, its performance is affected by the high density of the effluent, and rehabilitation is needed.

Where Ecosan toilets are still in use (devastated by the cyclone in one barangay, they were later replaced by pour-flush toilets), they provide a solution for treatment. In the Fishermen's Village, a truck from the city general services collects the bagged manure from households every week and dumps it in the sanitary landfill site. Sourcing ash to properly operate Ecosan was a crucial issue, which the city has now solved by regularly supplying the village from a reliable source. Ecosan toilets in upland barangays generate compost used as soil amendment.

e) Solid waste management

A sanitary landfill site has been operational since 2007, where the six trucks of the city and those managed by barangay administrations dump solid waste produced by the entire city. Collection of solid waste is effective, although less frequent in upland barangays. Segregation at source, introduced during the 1990s, has proven difficult. The city manages operation of the landfill site, and introduced exemplary practices such as vermicomposting, separate management of polystyrene for recycling, and handling of hazardous waste.

2.2. Steps towards city-wide sanitation

a) Phase I: Accumulation of experiences

The past two decades have seen experimentation and learning through an accumulation of experiences addressing sanitation issues at various scales.

Among these experiences, construction of wastewater treatment plants at the slaughterhouse and the market place (2005), and the Ecosan (2004–2006) and Ecotank (2010) initiatives, stand out. Conversations with public health officials and health post workers confirm findings from KOICA, UNEP and CAPS,[6] which suggest a significant, albeit very localised, impact of these projects on health and the environment. They manifest the willingness of the city to find solutions tailored to very specific needs.

Various technologies were tested to match local constraints and their replicability was often a determining factor.

Ecotank for riverside communities.

These achievements have granted the city much visibility at national and international levels, drawing the attention of development agencies. Stemming from the same vision and boosted by these successes, larger-scale projects have emerged, fostering the intention to address sanitation at city-wide scale. The sanitary landfill site (2007) and the faecal sludge treatment plant (2011), both intended to serve all residential and commercial buildings of the city, demonstrate this intention.

In 2006, the city updated its sanitation code and passed the Sanitation Strategic Plan 2006–2015 calling for the construction of another 1,000 Ecosan toilets by 2010.[6] The Strategic Sanitation Plan was developed with the support of external development partners keen to promote Ecosan and decentralised sewerage approaches, and, as such, projects were being piloted. The plan gradually lost relevance as the strategy evolved towards faecal sludge management services.

Box 1. Sanitation tax

The ordinance mandates regular desludging of septic tanks and establishes a sanitation fee of PHP 600 per year for residential buildings, PHP 1000 (US$21) for commercial establishments, PHP 1500 for malls and institutions, and PHP 2000 for industrial establishments.

This tax is raised simultaneously to the property tax but not incorporated into it. Contested during a public hearing, this fee was justified by the City Council as a necessity to fund the faecal sludge management service and improve the water quality, health and economy of the city.

The building of a critical mass of sanitation projects was accompanied by progress in the legislation. At national level the Ecological Solid Waste Management Act (2000) paved the way for the sanitary landfill site project of the city, and the new standards for the design of septic

tanks (2010) provided a legal basis to incorporate faecal sludge management as a relevant part of sanitation services delivery. This was reinforced at city level, with an ordinance passed in 2010 that included a guideline on septic tank construction for new buildings and houses, as well as the levy of a faecal sludge management fee with the property tax (see Box 1).

b) Phase II – Consolidation and expansion

A second phase has recently begun which signals a more strategic city-wide approach to sanitation services. Sanitation has not yet become a popular theme and priority for people, but the combination of successes on the ground, continuous external support, and supportive legislation at national and local levels have increased the visibility and meaningfulness of this agenda to the population and decision makers. The latter have gradually become more aware that the city Health and Wellness agenda captured under the 2020 Development Strategy[b,7] requires investing in public health and environmental protection through sanitation and hygiene.

A public–private partnership (PPP) was signed in March 2016 between the city of San Fernando, Metro San Fernando Water District (MSFWD), and the private company Prime Water. The agreement specifies that, in addition to the supply of water (carried out since 1975), Prime Water will be responsible for provision of faecal sludge management services. The faecal sludge treatment plant will be handed over to MSFWD. The ordinance on faecal sludge management passed by the city in 2010 provides a legal basis for the provision of faecal sludge management services, and has been a determining factor in justifying why such services are confined to San Fernando and not the four other municipalities covered by MSFWD. The stars are thus aligned to envision a more comprehensive, systematic approach to mainstream sanitation across the city. The PPP is likely to play a pivotal role in this. The city can still rely on its existing relationships and its potential to forge new partnerships. The Cities Development Initiative for Asia is helping to develop a sanitation strategy with short, medium and long-term plans. Many Phase I experiences are likely to be consolidated and replicated during Phase II.

[b] San Fernando becomes Northern Luzon's Center for Health and Wellness – a culture of health and wellness is institutionalised among residents and the city is positioned as the ideal business location for health and wellness enterprises.

2.3. Unpacking success

a) A successful city

The past 15 years have seen San Fernando win numerous awards, crowning its persistent efforts towards environmentally friendly urban development.[c] Progress on sanitation can be assessed from various perspectives. One is the above-described development and operation of the many small-scale and large-scale facilities. Positive impacts on public health and the environment are tangible: projects in a few low-income settlements have almost eliminated open-defecation; local health offices report fewer diarrhoea cases; discharge of raw sewage to the sea has been reduced in places; dumping of faecal sludge in the natural environment almost belongs to the past; working conditions in the market and the slaughterhouse are more hygienic; and the city is visually clean thanks to improved solid waste management.

Much progress has also been achieved in changing mindsets. This report tells the story of a city venturing into areas largely uncharted at national level and forging its own sanitation path. Pioneering technologies that are innovative in the region, it has been proactive, pre-empting or accompanying changes in policies on unpopular development themes instead of belatedly responding to regulatory pressure. According to a provincial administrator, this dynamic has had a ripple effect in the region, contributing more or less directly to the development of other Ecosan and DEWATS (Decentralised Wastewater Treatment) projects. The achievement in building public awareness needs to be highlighted too – albeit not very significant yet in terms of actual service coverage, a major part of the progress has been to position San Fernando among the Philippines' leading cities for sanitation.

b) Inclusive and pro-poor sanitation development

The city stands out for its capacity to conduct stakeholder engagement processes, which are generally confined to the sharing of information and effective awareness raising campaigns aimed at explaining how projects contribute to the broader vision for development of the city. There is no stakeholder engagement policy, which could ensure a systematic and structured participation of key stakeholders, including users, throughout the project cycle. "It is not legally required, but proves strategically useful," explains a city official, who notes the great benefits derived from deeper-than-usual engagement of the community in the Ecosan project. The remarkable sustainability of this project in the Fishermen's Village certainly reflects the high level of community participation throughout the project. Arguably, such a level of community engagement, often fostered by external partners, proves less relevant in projects involving publicly operated centralised sanitation services (e.g. Ecotank, faecal sludge treatment plan).

[c] These include: Cleanest and Greenest City finalist in 2003, Clean and Green City Regional finalist in 2006, Cleanest Greenest and Safest City regional finalist in 2007, Best Zero Waste Management Project Implementer on Zero-Basura in 2010, and Best Local Government Unit in Region 1 in 2011.

The objective of the city regarding sanitation services is to reach universal coverage. The drivers primarily appear to be environmental protection and public health concerns. Poverty reduction seems to be a secondary aspiration. Informal settlements are very few and small in size, which accounts for the absence of a formal pro-poor approach to sanitation development. The Ecosan projects carried out in Nagyubuyuban barangay, San Agustin barangay and Fishermen's Village targeted around 3,650 people, most of whom lived below the poverty line, had no toilet, and used to practice open defecation.[5] However, projects include provisions ensuring the relevance of the approach to each context of intervention, and special technologies and models (e.g. Ecosan, Ecotank) have been adopted for low-income barangays and informal settlements.

Likewise, measures were taken to address affordability issues. For instance, in the Fishermen's Village where poor people previously living in an informal settlement were resettled, payment for the Ecosan toilet is made in instalments and is still ongoing as part of the payment for the houses, which the city pre-financed. The desludging services coordinated by the city are heavily subsidised[d] and can be paid in instalments, but this measure is not targeted at the most vulnerable households.

Under the recent PPP arrangement faecal sludge management services will be provided to households connected to the water grid, the number of which will increase following the expansion of the water supply network (universal coverage is planned to be reached within the next five years). In the meantime, a different fee will apply to households not connected to the grid. People living in informal settlements may be connected late in the process and might need to pay higher fees.

c) Sustainability

Beyond the strengths and gaps noted in section 2.1 and which relate to specific segments of the sanitation chain, a few general observations can be made on the overall sustainability of the progress made in the past two decades. The foundations are in place for city-wide sanitation services based on a model combining a large-scale faecal sludge management system and decentralised wastewater treatment systems. This model is well adapted to current needs, provides flexibility and can be conveniently upgraded to a centralised sewered sanitation approach when the conditions are met.

Success hinges on the city's capacity to catalyse the upgrading of all bottomless septic pits. The likely rise in water consumption accompanying expansion of the water grid may exacerbate the faecal contamination of groundwater if the city fails to consistently enforce this upgrading. In this new phase of consolidation and expansion, the city will thus need to more effectively fulfil its regulatory function.

[d] Households pay an annual fee/tax of PHP 600 and are entitled to a service every five years. The accumulated fee over five years (PHP 3,000) is far below the market price for such services, which ranges from PHP 5,000–8,000.

3. Driving factors

3.1. Success factors

a) Sanitation champion and political continuity

Much of the progress described needs to be credited to the political champion who triggered and fuelled this dynamic around sanitation in the past 20 years – Mary Jane Ortega, who served as mayor between 1998 and 2007, deserves much recognition. Before her this office, as an NGO worker she promoted zero waste management and implemented sanitation programmes. During her mandate, her resolve to champion sanitation resulted in real breakthroughs. The vision Mary Jane Ortega developed and proposed to the population as the way forward was a very progressive, holistic development agenda centred on environmentally friendly urban development. This dynamic drew a lot of attention, putting the city on the map of NGOs, and bilateral and multilateral development agencies. As mayor she was an active networker, developed a myriad of relationships with national and international partners willing to accompany the city on an ambitious development path.

However, such a progressive agenda was not always popular locally. Investing public resources in sanitation projects, creating a botanical garden from scratch, precipitating the phasing out of two-stroke engine motorbikes, and other such 'green' measures were politically risky. Communication campaigns helped mitigate these risks, and support from the mayor's family has been a key determinant. The Ortega family is politically active at all levels of the government, and their strong presence locally has been a major source of political continuity and ongoing support to the sanitation agenda since 1998.[e] As a result, continuation of initiatives launched from the previous administration up to now is remarkable compared with the usual scenario in the country, whereby political rivalry leads new political leaders to abandon initiatives of the previous administration. This political support also favours longer mandates; serving as mayor for a three consecutive three-year terms allowed Mary Jane Ortega to launch significant initiatives, such as the sanitary landfill site project.

The dynamic set by Mary Jane Ortega since 1998 around sanitation coincided with a change of administrative status of San Fernando, which 'graduated' from municipality to city level, resulting in a quadrupling of its externally generated revenues in the following year. The mayor built on this favourable financial context to take up sizeable loans to finance crucial projects, including the landfill site.[f] This pragmatic attitude towards borrowing at critical junctures in urban development contrasts with the timid attitude of budget officers and city councils, which tends to delay crucial investments in many other cities in the Philippines.

[e] Mary Jane Ortega is the wife of the Victor Ortega (current congressman) who is the brother of Pablo Ortega (current mayor). Mary Jane and Pablo Ortega's visions were slightly different but shared an emphasis on developing San Fernando as a clean and green city. Mary Jane lost in the recent elections.
[f] According to the budget officer met, the loan taken for the sanitary landfill is finally about to be repaid.

b) Environmental protection as a chief driver

As noted, environmental protection and public health concerns have catalysed sanitation development in San Fernando during the past two decades. On one hand there is the need to address the chronic contamination of water bodies and to manage solid waste properly; on the other hand, the risks associated with faecal contamination of water sources and those resulting from flooding events, combined with improper sanitation and ineffective drainage, need to be mitigated. The beaches – a main attraction for tourists – are strategic assets for the economic development of the city. Awareness has grown that preserving the integrity of the natural environment is becoming imperative in order to compete with the neighbouring city of San Juan, where beautiful beaches and surfing waves are boosting development. Sanitation initially found its place in a political agenda geared towards an environmentally friendly urban development.[g] With hygiene, sanitation remains a priority area to address under the current Health and Wellness 2020 vision.

Environmental protection is also a key concern for Metro San Fernando Water District, now closely partnering with the city on sanitation – the increasing contamination (faecal and agricultural) of surface and groundwater resources they exploit already affects their activities. Groundwater salinisation and seawater rises are further concerns.

c) A competitive city

According to local representatives of the International Council for Local Environmental Initiatives (ICLEI), the greater progress achieved by San Fernando on sanitation than in most cities in the country also reflects a competitive spirit, nurtured by political leaders. Its proactive engagement in national and international contests, challenges and other competition schemes has earned the city numerous awards. The awards, proudly showcased on the city's website,[8] witness a quest for excellence on key areas ranging from environmentally friendly development to good governance, accountability and transparency. The engagement of the city in a broad process of certification[h] also reflects this pursuit of excellence and has direct implications for sanitation – the ongoing certification of all barangays to the ISO 14001 (Environmental Management Systems) stimulates efforts to ensure universal coverage of sanitation services.

Significant efforts are made to build awareness, educate and strengthen capacities to ensure that the vision and objectives for the city are shared by the population, and that everyone contributes to the city's performance, starting with the city officials. The

[g] 1998–2003 Vision: 'The Botanical Garden City of the North – a healthy city and the springboard for regional progress'. 2004–2007 Vision: 'The City of San Fernando will be a safe, healthy and walkable city of God-loving, hardworking and disciplined citizens enjoying adequate and accessible basic needs and services and city developments in harmony with nature brought about by enhanced revenue generation.' Marie Jane Ortega (2007). San Fernando meets the challenge of urbanisation. Presentation.

[h] The city has received the certifications ISO9001 (Quality management systems), ISO14001 (Environmental management system), and ISO18001 (Occupational health and safety accreditation system)

website put in place to raise public awareness on sanitation and faecal sludge management[9] is a good example. The city's capacity to organise information-sharing seminars on sanitation (e.g. regarding the city ordinance), and provide tailored guidance through advisors and inspectors stands out. Its capacity to enforce the law is also a strength, which has resulted in very substantial changes in people's behaviour with regard to dropping litter, jaywalking, and smoking in public spaces. By reporting ill conduct to officials, the citizens themselves effectively strengthen law enforcement, supporting city officials and barangay security staff.

3.2. Hindrances

a) National context

Despite its rise on the political agenda, sanitation remains a low priority for most local government units (LGU). The Philippine Water Supply Sector Roadmap[9] identifies the lack of an effective national sanitation policy and regulatory framework as critical bottlenecks in the sector.[10] The Water Supply and Sanitation Sector Assessment, Strategy, and Road Map carried out by the Asian Development Bank in 2013 stressed the absence of national targets and strategy to eradicate open defecation, the lack of strategy to support sanitation planning and budgeting at local level, and the insufficient level of funding.

The work from the Asian Development Bank also draws attention to the fragmented and obsolete nature of many sanitation-related laws and standards, recommending a clarification of the sanitation mandates. Finally, it underlines how lack of capacity, technical knowledge, and funds has prevented most local governments and water districts from taking much action since the Clean Water Act (2004), which requires them to create faecal sludge management programmes in areas without sewerage systems.[4] In this context, San Fernando's progress is particularly significant.

b) Continuity

Mayor Mary Jane Ortega played a unique role in shaping and fuelling the progress made on sanitation in the city. A strong political leader willing to champion sanitation constitutes first and foremost a chance for any city. Resources and people can be mobilised and a dynamic set in motion for several years as a result. To keep the momentum going and continue service expansion, strengthening capacities within the city administration is required. There is a need to build champions among heads of department who can own the process, take pride in the achievements and further lead development regardless of election cycles and the changes of priorities that every new mayor brings. Its unusually stable political environment has granted the city a rare level of continuity on the sanitation agenda. There is, however, much scope to strengthen key departments such as the City Environment and Natural Resources Office and the City Health Office, to support champions within them, and to improve coordination so they jointly put forward a sanitation strategy and plan, which they can own and support without overlapping roles.

c) Learning and knowledge capitalisation

Much of the strengthening of San Fernando's services could arguably have occurred internally through the learning and knowledge capitalisation processes built into the wealth of projects implemented during the past 15 years. Gaps have been noted at this level – e.g. the demonstration phase, which was meant to enable the city and the company McKleene to jointly learn about the challenges related to the desludging of pits, instead provides a good illustration of this deficit in learning. After four years, this phase is coming to an end. But little information has been shared and documented on this experience. This probably results from lower priority placed on what was initially framed to external project partners as a structured learning process intended to ensure an optimal scaling up of activities. It could in reality have been the consequence of a bidding process and memorandum of understanding, designed for the selection and hiring of the cheapest service provider, rather than for the identification and engagement of the best learning partner.[i]

In other projects, learning was often produced and documented as a result of joint efforts between the city and its partners. The project documentation on Ecosan, Ecotank and faecal sludge treatment plant provides valuable insights into the success factors and underlying causes of the challenges met. The level of ownership of this project-based knowledge and the extent to which it is shared internally and built upon, can improve. There is a need for post-project documentation of the performance of new services, and for dissemination of such information critically reflecting on the successes and challenges met. Better and more regular monitoring is also needed.

Sharing of critical, transparent and updated sanitation-related information can provide value for the country, the city and its departments from. Producing such an effort is essential if the city wishes to maintain its status of sanitation pioneer and sustain the dynamic that has helped forge fertile partnerships and raise public buy-in.

3.3. The influence of city sanitation planning

Although cities in the Philippines have the obligation to produce a sanitation plan, many of them have not yet formulated it, or treat it as a mere formality. Progress on the sanitation agenda is highly dependent on support of the local political leader. It is generally less the consequence of a legal obligation of the city than the expression of its willingness to showcase a capacity to address a tough challenge. Such proactive cities typically seek external financial partners to help them do this.

Until 2016 San Fernando's progress was project-based and opportunistic. Although it responded to a vision and development agenda, it was not informed by a city sanitation plan. As noted, in 2006 the city updated its Sanitation Code and passed the Sanitation Strategic Plan 2006–2015 calling for the construction of another 1,000 Ecosan toilets by

[i] The contract was granted to the lowest bidder as per the Government Procurement Reform Act (RA 9184).

2010.[6] The Strategic Sanitation Plan was developed with the support of external development partners keen to promote Ecosan and decentralised sewerage approaches, and, as such, projects were piloted. The plan gradually lost relevance as the strategy evolved towards more centralised faecal sludge management services.

The city is still growing but remains manageable in size, notes a city official, who spots a window of opportunity – there is still time to integrate a revised sanitation plan into the city master plan, which is currently under development. The signing of the PPP agreement with MSFWD and Prime Water heralds a new phase entailing a much more rationalised approach to sanitation services. City-wide sanitation planning will become more relevant than ever. The current support from the City Development Initiative for Asia[j] on sanitation planning is timely. This might allow for the development of a city sanitation plan to be successfully integrated into preparations for a city master plan, underway at the time of this research.

3.4. The contribution of development partners

The sanitation achievements described in this report are the product of a series of successful partnerships. With a strong sanitation champion, clear values put forward, tangible efforts towards good governance, and an agenda aligned with the MDG/SDG framework, San Fernando had a profile that is attractive to development partners. The city's competiveness, manifested in the mayors' strategic moves to engage in dynamic networks and forge relationships with relevant partners, enabled realisation of many of the emerging partnership opportunities.[k]

The initial work around Ecosan (2004–2006) resulted from a collaboration with local and international NGOs such as the Center for Advanced Philippine Studies, WASTE, the Solid Waste Management Association of the Philippines, Foundation for a Sustainable Society, and the Institute for Development of Educational and Ecological Alternatives, Inc.

Collaboration with bilateral and multi-lateral partners followed – the World Bank supported the sanitary landfill project in 2005, and USAID helped the city build its market wastewater treatment plant in 2005. In 2010, partnerships with USAID-Rotary International and UNITAR-Citynet allowed the city to experiment with Ecotank technology. The partnership with USAID-RI culminated with the faecal sludge treatment plant project (2011).[9] As noted, the Cities Development Initiative for Asia is currently

[j] The Cities Development Initiative for Asia is a partnership initiative launched by the Asian Development Bank and German Federal Ministry for Economic Cooperation and Development (BMZ), with additional core funding support from the governments of Austria, Sweden, Switzerland and the Shanghai Municipal Government. It provides assistance to medium-sized Asian cities to bridge the gap between their development plans and the implementation of their infrastructure investments.

[k] The city has developed ties with Ansan City (South Korea), Langley (Canada), Hezhou (China), Kashiwara (Japan), and Coatzacoalcos (Mexico). It is also a member of United Nations Advisory Committee of Local Authorities, Cities Alliance and Citynet.

providing technical support (socio-economic and marketing studies, and sanitation planning) to the city.

The contribution of these partners has been essential on many grounds. They have provided technical assistance to the city to pioneer new technologies and approaches. Their financial support has of course been pivotal. Collectively, partners have enabled Mary Jane Ortega, her successor and the city administration to start solidifying the vision of universal sanitation services. They have helped accumulate a critical mass of projects, which has precipitated implementation of the faecal sludge treatment plant and the promulgation of the city ordinance on sanitation. This has opened the way for a new phase of sanitation development, where development agencies are expected to bring more substantial financial and technical support.

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Annexes

1. Key informants

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Ms Annjanette E. Dimaculangan, City Administrator
Ms Cleopatra A. Noces, City Budget Officer
Ms Katherine Iona S. Muller, Environmental Management Specialist II / CENRO
Engineer Candy C. Miguel, Environmental Management Specialist I / CENRO
Mr Valmar M. Valdez, City ENRO
Engineer. Renante C. Rivera, Project Evaluator III / CPDO
Ms Norma N. Tolentino, Sanitary Inspector / CHO
Mary Jane Ortega, Mayor (1998-2007)
Dr Eduardo Posadas, City Health Officer / CHO
Mr Eduardo Villagracia, City Engineer's Office
Ms Sally C. Matoza, City Social Welfare Officer
Engineer Benjamin Q. Galvan, Jr. OIC-General Manager / Metro San Fernando Water District
Ms Ma. Luz A. Rullan, Manager McKleene
Resident of barangay Catbangen
Resident of Fishermen's Village

2. Participants in the stakeholder feedback meeting

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