Final Report

SMARTerWASH - Mobile Monitoring for Rural Water and Sanitation Services that Last (FDW/12/GH/06)

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Abbreviations

AM	Area Mechanics
Akvo	Akvo
CWSA	Community Water and Sanitation Agency
DA	District Assembly
DiMES	District Monitoring and Evaluation System
DPs	Development Partners
FAM	FAM
FDW	Sustainable Water Fund
GIDA	Ghana Irrigation and Development Authority
GSS	Ghana Statistical Services
ICT	Information and Communication Technology
IRC	International Reference Centre for Community Water Supply
NPDC	National Development Planning Commission
NGO	Non-governmental organization
OECD	Organisation for Economic Co-operation and Development
PPP	Public Private Partnership
RoI	Return on Investment
RVO	Netherlands Enterprise Agency

SDG	Sustainable Development Goal
TA	Traditional Authority
UNICEF	United Nations International Children's Emergency Fund
WASH	Water sanitation and hygiene
WSMT	Water and Sanitation Management Team

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Introduction

There were two FDW (FDW12 batch) public private partnership projects implemented in Ghana. One focused on the monitoring of safe drinking water and effective sanitation facilities using innovative ICT technology (SMARTerWASH). The other sought to improve use of water in agriculture to increase productivity (Sisili Kupawn (SK) Project). This document focuses on the first project.

Of note is that the final report for the other project included both an impact assessment and institutional assessment. For SMARTerWASH, the evaluation team was asked to perform an institutional assessment only.

This document provides a qualitative assessment of the SMARTerWash public private partnership. Data was collected through a triangulation of sources: semi-structured interviews (interview question for the final report are provided in Annex A), analysis of secondary sources (project documentation) and personal observation (attendance at meetings). All interviews were transcribed, and the results coded[1]. The results of the interviews were complemented by a short questionnaire (questionnaire is provided in Annex B) administered to the partners assessing the perception of the results and the added value of the PPP. The first round of interviews was held in 2015 for the baseline study, followed up by intermediate and short follow-up interviews in 2016 and 2017, and a final round in 2018. The team executed a document review in the baseline and follow up phases. The final semi-structured interviews were held with all of the contractual partners, for a total of 18 interviews in 2018. This small *n* approach was used to probe more deeply into the contextual issues, the processes and the interaction in the PPP, and the values, motivations and aspirations of the partners in the PPP[2].

[1] Please note that the all references to the comments of the respondents and quotes are treated as anonymous. On the quotes reference is made to the sector from which the respondent came. When referring to 'respondents' in the text, the information came from multiple sources.

[2] This small *n* approach was specifically chosen. As the objective of the assessment was to analyse the relationship between partners and it contribution to outcomes, the decision was made to focus on understanding the relationship and the partnership from the perspective of the partners, the parties with intimate knowledge of the partnership. Discussions with external parties revealed less knowledge of the nature of the partnership; this also pertains to the understanding of the governance structure and relations as detailed later in this document.

The objective of this final institutional assessment is to evaluate the (formation of the) relationship between the partners (over time), to analyse the contribution of this relationship to the outcomes of the project, and to ascertain the added value of the PPP. The focus of the assessment is on the 'relational aspects' of the PPP, and therefore on the *perception* of the partners of the outcomes and added value.

It is important to make one distinction: this is an assessment of the partnership relationship and NOT of the project. Though this document provides some analysis of the outcomes of the project (its effectiveness, in most cases), this is done as a means to assess the outcomes from the perspective of the partners involved in the relationship (also did the partners achieve their objectives?) and to ultimately to gain insight into their perceptions of the manner in which the partnership contributed to these outcomes. This also implies a certain dependency on the results of the interviews, verified in documents and during observation.

Of particular importance is the focus in this document on the added value of the PPP, from the perspective of the partners. In essence the key questions for discussion were: '*Could you have produced the same results working alone? What was the partnership able to produce that the partners could not have working alone*?' Literature on the added value of PPPs argues that partnerships can result in increased innovation, improved collaboration and cooperation, additional investments of resources than anticipated, as well as a reduction in risk. These factors are argued to reduce transaction costs. On the other hand, working together is also argued to lead to additional time spent in making decisions, and therefore additional transactions costs (Pennink 2017). These are the added value discussed in the interviews.

The project itself hired an external evaluator to do an end of project evaluation[3]. This report, using OECD evaluation criteria, assessed the relevance, effectiveness, efficiency, impact and sustainability of the project. The report provided some interesting conclusions on the strengths and weaknesses of the project design, scope and performance, some review of the relationships, early signs of impact and sustainability and lessons/recommendation for the future. At the time of writing this report, the end of project evaluation had already been produced and was used extensively by RVO in its final assessment of the project. The added value of this institutional assessment is therefore any added lessons on the benefits of the working together and aspects of relationship building.

This report is structured as follows: it provides key information on the background of the partnership and the objectives of the project, the setup (the allocation of roles and responsibilities and governance structure) and how these have changed over the length of the project. It outlines any challenges and risks as perceived by the partners and how partners have overcome these. Finally, it reflects on the perceptions on the part of the partners of the outcomes, as well as the added value of the partnership. It then concludes with some reflections on lessons learned and possible recommendations.

[3] SMARTerWASH End of the Project Evaluation, Partnerships in Practice, April 2017.

Background to the project

IRC International Water and Sanitation Centre has been working with the Community Water and Sanitation Agency (CWSA) of Ghana for some time. In 2009, IRC supported CWSA on the Triple S (Sustainable Services at Scale) project[4] in the development of monitoring tools in the form of sustainability and service level indicators. The project piloted these using Akvo's FLOW technology in three pilot areas[5]. The partners (IRC, CWSA and Akvo) decided to work together again to scale up the project and to combine the skills of the different partners in the SMARTerWash project. SkyFox came on board as a partner to introduce a handheld (USSD/SMS) technologytechnology to report breakdowns (on handheld phones) and to order spare parts. IRC was the lead in managing the SMARTerWash program.

The project comprised the following partners.

Table 1: SMARTERWASH - Mobile Monitoring for Rural Water and Sanitation Services that Last

Partner	Sector	Description applicant
IRC International Water and Sanitation Centre, the Netherlands and Ghana	Private	A non-profit foundation knowledge centre on water and sanitation
Community Water and Sanitation Agency (CWSA), Ghana	Public	A national government agency with the delegated responsibility to facilitate the provision of safe drinking water and sanitation services to rural communities and small towns in Ghana.
Akvo, the Netherlands	Private	A non-profit foundation that builds open source tools for the web and mobile generations emerging rapidly in every community.
SkyFox, Ghana	Private	Ghanaian private company specialised in internet and mobile phone based payments, transaction portals and database systems. SkyFox has expertise in web based and mobile based systems design and development, and in translating its systems to solve WASH problems.

Rationale for and aims of the project

In the provision of water supply and sanitation, infrastructure breakdowns are common. These have for a long time not been sufficiently addressed in the water and sanitation management practices in the rural areas of Ghana. The malfunctioning of water facilities relates to limited access to spare parts and lack of (funds for) maintenance on the part of communities when breakdowns occur.

This project sought "*to scale up and consolidate WASH sector monitoring in rural and small towns of Ghana*"[6]. The project planned to focus on "*upgrading and developing systems and tools for nationwide, long-term monitoring of services in rural communities. Using smart phones and other new technology, the programme aim(ed) to reduce down time and increase the functionality of WASH services*."[7]The project set as priority the continuous tracking of the state of facilities and

[4] Triple S: http://www.waterservicesthatlast.org/countries/ghana_triple_s_initiative
[5] Taken from SMARTerWash Project Plan: Appendix I, 2012: 4
[6] Ibid: Appendix I, 2012:2
[7] IRC contracts

actions to ensure that service levels improved. The project developed and applied the latest IT and aimed to strengthen private sector investment to do so.

Objectives of the partners

The Project Plan (please refer to section 1.2; pg. 4 - 5)[8] defines the objectives of the partners in the PPP. These objectives are important when discussing the perceived outcomes of the PPP and the benefits of working together, and charting whether these objectives have been met.

IRC's objective was to build on the successes of the Triple S project and with this project and the PPP to *'strengthen the impact of its Ghana country programme and its thematic expertise on sector monitoring, which fits into its vision on improving sustainable WASH service delivery worldwide*'. In effect, to achieve impact, IRC's focus was on scaling up their monitoring activities.

CWSA's objective was '*to ensure that data on existing and new water and sanitation facilities is up to date and useful for ensuring WASH services that last'*. This objective linked to its mandate as public partner to set out '*sector guidelines and a monitoring system for these WASH services'*.

Akvo's objective, as a private partner, was to update the FLOW tool to a version that '*can scale and facilitate collection and analysis of sector information'*. Again, the tool was intended to be instrumental in scaling-up sector monitoring. It was also Akvo's objective to build markets in the region and to make the tool '*available to users worldwide'*.

SkyFox, the other private sector partner, had developed a '*customized transaction portal for the water sector which allows remote communities to use their mobile phones to report hand pump breakdowns by SMS and to order spare parts electronically*.' 'It was SkyFox's objective to '*deploy its SMS platfrom to improve the spare parts distribution chain and support routine monitoring of functionality of water facilities*'. SkyFox was interested to explore a potential market in the WASH sector.

Geographic scope and finance of the project

The project was executed in the period 1 April 2013 – 31 March 2016[9]. In the original design, it was to be implemented in three regions (53 districts), however additional funding from the World Bank (the matching funding for CWSA required as part of the FDW project), gave the opportunity for the project to expand its scope to 6 regions (119 districts). Additional funding from UNICEF and Conrad Hilton for baseline studies during the project implementation period implied that the project worked in 13 additional districts as well. The bundling of finance and the increase in scope was a demonstration of the ability of the project to attract attention and additional funding. At the end of the project period, the partners requested a budget neutral extension of a year which RVO granted

[8] Project Plan (2012): 4 -5

[9] Various project documentation, also internal evaluation documentation RVO, 31 -01 2018

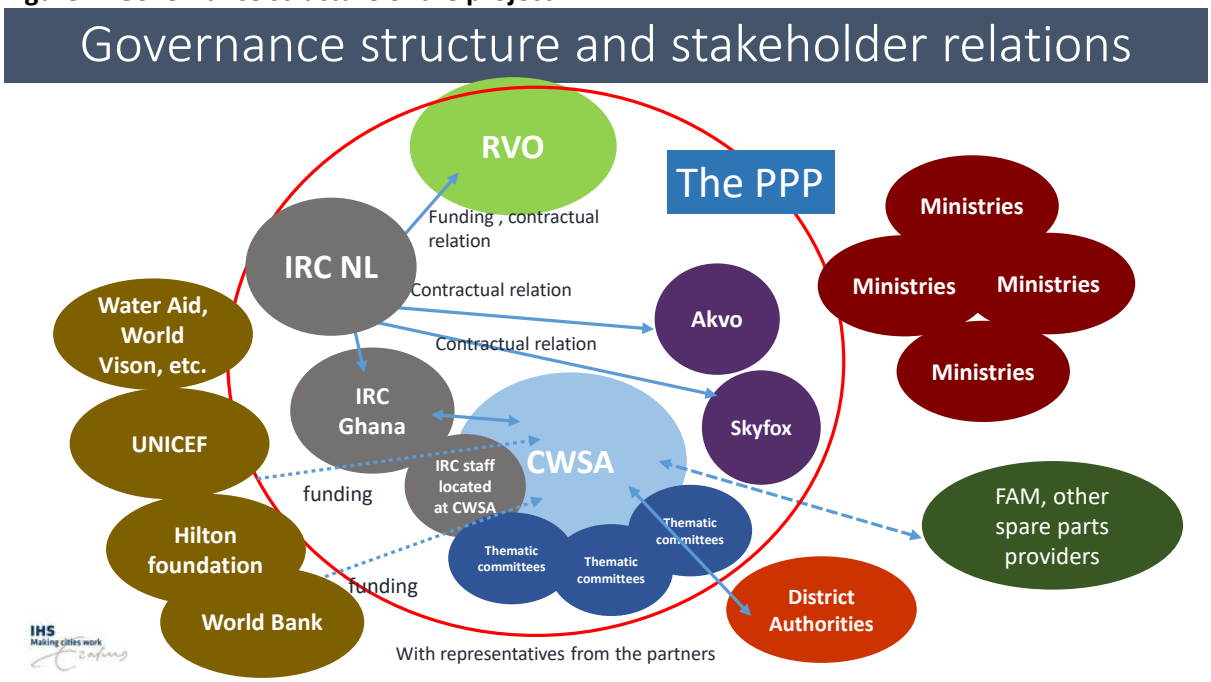
till 31 December 2016. The end of project financial information indicates that the total project budget (eligible) was €3,764,124.00 of which RVO[10] provide 58.22% (€2,191,473.00)[11].

The project set up, roles and responsibilities (governance structure)

The figure below shows the governance structure of the partnership; this set up did not alter from project inception to completion. Of note, however is the expansion in the number of institutions allied to and working with the partnership over the time of project implementation.

The contractual partners are contained within the red circle. Of note is the fact that IRC Netherlands has an office in Ghana: this local presence implies that IRC Ghana had day to day contact with the local partners over the length of the project. IRC Ghana also seconded a staff member to CWSA, the public partner, to aid in coordination and communication.

Figure 1: Governance structure of the project



There were several ministries and other government agencies with ties to and influence on the project (Ministry of Water Resources, Works and Housing, the Ghana Water Company Ltd., The Ministry of Local Government and Rural Development, to name a few); these were external to the PPP. The CWSA took a primary role in coordinating activities with them (also through a steering group in the Ministry of Water Resources).

The partnership worked with the National Development Planning Commission (NPDC) to set indicators of the national planning framework. It spent time trying to build bridges to the Ghana

[10] Please note: this document refers to RVO as the major contact, recognizing that the contract party is actually the Dutch Ministry of Foreign Affairs.
[11] Documentation RVO and IRC (undated but received December 2018)

Statistical Services, an institution that was working with another donor. Relationships seemed 'cordial' though in the long run coordination of activities did not occur.

The project also benefitted from matching funding from the World Bank and support from the Conrad Hilton Foundation; these two are also included in the figure. Over the length of the project, the number of external partners and funders expanded. UNICEF became an increasingly important partner, as did Water Aid, World Vision, Safe Water Network, etc. These relationships are also provided in the figure.

Though IRC was the main applicant for funding, CWSA was in the 'driver's seat' on the project, and therefore positioned centrally in the figure. CWSA had the overall responsibility for the in-country, day to day coordination, with support of IRC Ghana. This '*includes coordination, operations and progress reporting*'. CWSA was also responsible for activating local networks and key stakeholders as well as ensuring political ownership. Internally in CWSA, there was a country coordination committee in place that has the responsibility of the '*integration and alignment*' of different work streams, implementation of work plans and reporting on/ monitoring of progress[12].

Also of note is the division of labour between IRC Netherlands and IRC Ghana and their role in the partnership. IRC Netherlands (the project within IRC was managed by a programme director) managed the project, had overall responsibility for partner relations and manages client relations with RVO (coordination, communications and reporting); IRC Ghana functioned as a coordination and communication link between all partners. IRC Ghana organised all partners meeting and all inputs partners made to the required reports. IRC Ghana also had an important function as intermediary: in situations of conflict, to intervene on behalf of CWSA when requested, to facilitate communications and negotiations (see examples below). IRC perceived its role as a facilitator[13], ensuring that the project ran smoothly.

Respondents justified this role by putting it in perspective: as this project constituted only 1% of what CWSA is doing, the organisation was faced with many competing demands. IRC stepped in where necessary to make sure there continued to be movement in the project and all interests were aligned.

The partners formed thematic sub-committees made up members of the partner organisations to guarantee communication and coordination between all partners: the Management and Strategy, Communications and ICT committees. They met on regular basis to plan, make strategy and coordinate on activities. The ICT, for instance, met to discuss the inter-operability between the three different types of software being used on the project (DiMES, FLOW and SkyFox's handheld technology, see challenges below).

[12] Final Project Plan (2012), pg. 11

[13] Sometimes called a 'boundary spanner'

Challenges in the interaction / risks faced and coping mechanisms

This section looks at the challenges / risks partners faced in the project and in the interaction, as well as the coping mechanisms they used. The information below was taken from project documentation (Project Plan, progress reports, etc.) and from transcriptions of the structured interviews held in June 2015, 2016, 2017, and 2018 with project partners. Looking at challenges and risks and how they were dealt with helped in understanding the nature of the interaction and the development of the relationship between partners.

There were a number of serious challenges / risks in this project. It appeared that the partners were able to deal with a number of these, though certain aspects caused serious delays in implementation.

Challenge 1: Interoperability: the coordination, collaboration, skills and cultural adjustments needed to solve the issue.

Interoperability was an issue, getting the 3 systems to feed into each other and writing the codes to allow for this. Up to the point of working together on this project, DiMES, Akvo FLOW and the SkyFox SMS based system had been developed to be used independently. The partners were now working with 3 different platforms with 3 different languages and had to understand the languages of the different systems so they could communicate with each other. Respondents noted that this might have been simpler to deal with had they been developing a system from scratch.

The implication of this for the project was that partners spent a great deal of time on technical issues, to the expense of other elements of the project. Activities had to be delayed, rescheduled and implemented out of sequence. The interoperability issues was settled close to the end of the project, and only at this point were partners able to focus on the issue of building the capacity of the districts, continuing with the application and use of the system at the local level. The external and final report reflected this issue, that the time was too short for the project to do everything: collect data, build capacity, etc. (time and sequencing of activities, see also negative outcomes below).

In addition, the different parties were geographically separated, and communication was sometimes difficult. This was already an issue at the time of the baseline evaluation. With the need to find a solution and to improve responsiveness, the parties had to develop systems for communicating on and coordinating activities. In the end, they resorted to a simple work plan, with defined roles and deadlines/milestones. They increased the amount of face to face interaction to the extent possible and frequent coordination by Skype. The task of being more present fell to Akvo; the organisation attempted to be present as much as possible, flying in staff from nearby countries.

Respondents commented on challenges related to learning and compromise. One example given related to the different skills of staff. In addition, to make the system work they had to share proprietary data and codes, a risk to each of the organisations. This made working at the beginning awkward; at the outset the expectation on the part of the Ghanaian IT staff was that the Dutch partner would come in with superior skills. In some cases, this was true, but this perception changed

relatively quickly. Resolving problems also required the IT staff to share skills and coach each other to make the system work.

Respondents indicated that, in the end, solving the interoperability issues became a mutual learning process. To make the project work, they had to help each other improve their systems. They developed a way of working together, providing feedback, updating each other and sharing challenges and solutions. A number of respondents mentioned, for instance, when the IT staff at CWSA had to persuade Akvo in the Netherlands to use a 'cascading feature', which was not in the programme. This took time, but ultimately made Akvo's Flow more robust.

Respondents saw the dependency on the interoperability as a huge risk, the entire project was dependent on resolving this issue. IT staff reported feeling that the problems were at times too much for them, but that the alternative was worse. They admitted putting much more energy into solving the issues than the project paid for.

Finally, as mentioned before, challenges for the IT staff in Ghana related to the availability of Akvo staff. Not only was geography an issue but also the substantial staff turnover at Akvo, amongst the younger more technically oriented staff. The staff with which CWSA staff had to work kept changing, each had different skills, and there was no continuity. This added to the time and to the transaction costs. Akvo tried to solve this by having people in from Burkina Faso, and other countries to come over to help, thereby increasing face to face time. From Akvo's perspective, being present was also a financial issue, constant presence did not fit into the budget.

From SkyFox's perspective they faced the challenge of being dependent on Akvo Flow to collect data and making their system work. With delays in interoperability, SkyFox felt this dependency In particular, and were forced, when unable to wait, to collect information on their own.

These challenges underlined a number of points. For one, the dependency of the partners on each other to make the technology work. This was truly a case of being required to work together to achieve the results sought. Of interest is that partners did not give up and fought with good will to make interoperability work. Second, is the difficulties faced when a partners were not geographically close and present, and the efforts that were made to remedy this, using different means. Respondents underlined the real coordination benefits from face to face interaction, but being present, unless planned for, had serious financial consequences for the distant partners, and the viability of the venture. Third, was a change in the perception on the Ghanaian side of Akvo coming with superior skills; the interaction over time was based on equality and learning, as well as a sharing of knowledge and resources.

Challenge 2: Managing relationships

SkyFox, the newcomer to the PPP, had some teething problems. There were some very clear communications problems with CWSA, and negative perceptions that could potentially have harmed the PPP and the project. The relationship between the two was not always easy.

Respondents reported that the perception, on the part of SkyFox, was that CWSA did not value their input and was not available when SkyFox needed and asked for help; and on the part of CWSA that SkyFox was not available when asked to come to meet. The reasons cited were that, at a point in the project, CWSA was busy focusing on the data collection portion of the project and coordination with the private sector was not a priority. From SkyFox's perspective, its staff had put a lot of effort in getting things up and running, but when they ran into some problems in the field, and were running substantial risk, no one was available at CWSA to help. At the point that CWSA was ready to talk, SkyFox was busy in the field and juggling a number of different projects trying to keep the firm afloat.

Prior to the partners' meeting (June 2015), CWSA expressed concern and asked IRC to intervene, to look at the bottlenecks. Respondents mentioned that CWSA and IRC felt it was of essence to deal with these issues prior to the partners meeting, to meet to resolve any differences, and to bring any final decisions to the partners' meeting.

IRC hired in a consultant to conduct an independent assessment of the SkyFox system, its status and the issues being faced. The assessment looked at the economic viability of the system, also beyond the scope of project. This was used as a basis for discussion during the meeting; the report gave a clear picture of the status of the activities, and reduced the emotional aspects of the meeting. The meeting gave the partners a chance to give full updates on what they were doing and to look for areas of convergence, ways to improve on linkages (between activities) and to agree on the way forward.

When asked whether the issues and perceptions were serious, whether they had gotten to an emotional point, one IRC respondent answered "*No, but I could sense that that we should do something quickly, before the perceptions became strong opinions. Before the meeting, there were a lot of behind the scenes calls, issues, managing, calls with (SkyFox) . . . I also had meetings with (CWSA) to try to understand their concerns and to develop an agenda (for the meeting)*". "How can you characterise the meeting?" "*We were honest about the issues. Each (at the end) thought they needed the other . . . there was a common interest, and a desire to make things work. This was brought to the table . . . (SkyFox) realised he needed government, he was happy that IRC could intervene. (He came to) appreciate the role of government*" (NGO respondent).

This situation underlines a key aspect of this partnership. IRC played a key role in managing relationships, and intervening prior to issues being faced becoming key stumbling blocks in the relationship.

Challenge 3: initial lack of understanding of mutual benefits, difference in expectations

Partners confirmed an initial lack of understanding of (the benefits of) what other partners could provide, as well as a mismatch of expectations. Partners worked through these hurdles, and in the end were conscious of the value of the contribution of others. For instance, the process of coming to an understanding of what SkyFox's technology could provide took time and interaction.

Prior to the meeting, I was really convinced that people did not understand what we are doing; appreciate what we are really bringing on board, the reality of it. . . you expect that people will understand what kind of changes technology can bring from what you have described. But a lot of people cannot picture what you have to offer. (During the meeting), it was the first time that people came to appreciate it. The ICT committee was also at the meeting, and it was the first time that the ICT committee was able to pin point that this variable or this variable should go into DiMES (inter-operability)*. They thought it should be kept separate. It is more of undervaluing what the technology can provide. (Staff of) CWSA plainly said that they did not understand what SkyFox is doing or see the benefit . . . we thought that everyone understood what we were doing. Some people thought we were doing something completely different; there was a mismatch of expectations (Laughing) (private sector respondent).*

Partners discussed this and agreed to step up communications, openness on the discussion of issues and (informal) reporting on progress.

Differences in culture were substantial and noted by many respondents, referring in particular to the differences as perceived by all partners outside of the public sector.

"Challenges? Working with the public sector as project staff, with all its nuances. The culture of the public sector is completely different than our environment where people apply themselves. You need to draw out people, to motivate them, make people feel like they can do it. The right training, the right information has helped. Their status quo has challenged, they have to do something different, there is some resistance, but this is to be expected. We had to demonstrate continuously how this was going to work" (NGO respondent).

The same respondent also referred to the particular challenges that Akvo, as an international partner, faced in adjusting to working with a public body in the Ghanaian context, understanding the procedures and bureaucracies. A respondent from Akvo confirmed this, mentioning that the perception of what their role should be changed over time, as well as the role they took.

One private respondent mentioned expectations that partners had of their roles within the partnership and the evolution necessary to realise that partners were mutually dependant. The respondent indicated:

In the framing of project, goals, there were expected outcomes. Every partner is responsible for their own results and targets. But partners are also dependant on the completion of results by others. Ultimately the results are to be achieved by all, they are a joint responsibility . . . (Partners) seem to be territorial and to control their areas . . . it is about the process . . . it has to inform how we deal with the future (Private sector respondent).

Teething problems, cultural differences, differences in expectations and interests, negotiation of these differences, consistent communication and listening, frequent interaction on issues, training and capacity building: these were all terms used by partners as elements of the partnership and aspects that led to the building of the relationship. The interaction brought about acceptance of the mutual benefits of others and adjustments to expectations and ways of working. Essentially, it took

time to work on how partners would interact, and to develop an internal work culture, understanding and appreciation of mutual roles.

Challenge 4: the market for products and services (the business model)

The intention of the SkyFox SMS system was to facilitate reports by the community of breakdowns of the WASH system, and to reduce the system downtime, the time for the provision of spare parts and repairs. The challenges faced related to the market SkyFox was entering on both the demand and supply side. This challenge put in question the SMARTerWash business model.

SkyFox is a small Ghanaian firm that ran substantial risk in this project. As a partner in the project, the organisation was attempting to access the spare parts market in the WASH sector; at the outset of the project, there was no competition in the market for their product (one monopolist provider). The smart phone technology it offered allowed the districts to report breakdowns, which should then led to the purchase of spare parts for the water points in rural areas. The supply of these parts came in the early days from a company named FAM (not part of the PPP, see governance structure); it had a monopoly position, and was asking inflated prices above what the districts could pay. SkyFox role was to supply the parts to the communities at an acceptable price.

On the demand side of the market, there was an additional problem: there was no effective demand for the product. The users and the districts were (and at the end of the project) unable to pay for the spare parts.

The perception of some of the partners (theories on PPP support this[14]), including SkyFox, is that a monopoly market with prices that abuses the end user calls for public sector intervention to either intervene on pricing (on behalf of SkyFox on the shorter term) or to ease entry into the market for other suppliers (in the longer term). Of note is that the only organisation that FAM was willing to listen to was CWSA on the negotiations on price.

SkyFox expressed the willingness to take part in the project and to take this risk, aiming to get return on investment (RoI) within 5 years. However, at the time of the partners' meeting in June 2015, the partners were discussing the need to adjust the SkyFox's business model[15]. RoI was dependent on the prices at which parts were sold and the payment mechanisms devised (whether the consumer had choice, the prices were competitive, and whether the end user could pay)[16]. The organisation stood to lose a great deal of money if this project did not pan out. SkyFox was at the outset dependent on current subsidies and on CWSA to exert influence on FAM. IRC commissioned a study in 2015 to look closely at the market for spare parts and other potential markets[17].

[14] Batley, R., 1996. Public-private relationships and performance in service provision. *Urban Studies*, 33(4-5), pp. 723-751. Available at: http://usj.sagepub.com/content/33/4-5/723.full.pdf+html [Accessed 29-10-2015].
[15] SkyFox Business Assessment for the Strengthening Local Government Capacity Project, Nicolas Dickinson, WASHNote, IRC Associate, August 2015
[16] Taken from discussion during the partners meeting and subsequent interviews.
[17] Ibid

In the follow up interviews, private respondents agreed that the relationship with FAM, the single parts supplier was problematic and a risk to the project. It was clear, however that the private partner had, over the years, been able to access spare parts from alternative suppliers, sometimes outside of Ghana, breaking FAM's monopoly position. Prices from the supplier in Kumasi, for instance, were more competitive and SkyFox was able to order parts in bulk, if necessary. In addition, this supplier was geographically closer to SkyFox's clients in the north; where most of the orders originated, bringing down the delivery costs and the overall cost to the end user. This situation created competition (putting pressure on the price). This risk was then mitigated.

Over the length of the project, SkyFox began to adjust its business model, diversifying to cover its investment, and finding other markets in the area (solar chargers, sale of school books, for instance). However, at the end of the project, SkyFox's return on investments and the financial model were still an issue. First, as stated before, was the ability of the consumer to pay. It often took 2 weeks to a month to collect the tariff, once the borehole was fixed. In the absence of funds to pay, communities often ignored breakdowns entirely until all boreholes were non-functional and they were forced to call in or text the breakdown. When ordering parts, SkyFox was required to do 'pay as you fetch', so in some cases bore a lot of the risk.

A second concern for SkyFox was whether the organisation would be able to achieve the scale necessary to bring in sufficient revenues. This was linked to the number of communities subscribing to the SkyFox mobile services (up to 2000 enrolled by the end of the project, 50% of originally targeted), and the density of the orders. The financial consultants hired by the project attempted to gauge the scope of the potential market, against the expenditures that SkyFox was bearing. The study showed that the orders were still highly dispersed, making potential collection costs, if physical presence was necessary, quite high.

The financial consultants also looked at potential payment schemes to help with this problem, coming up with two models. One model required the communities pay a block rate into an account towards future breakdowns ('competition insurance'), the second was a micro finance scheme. Neither of the two models were in place by the end of the project.

There was a general agreement amongst respondents that that the demand risk in this project was too much for SkyFox to bear, as a small private sector firm. They also generally recognised that CWSA should have been helping to bear this risk, by intervening. The number and ability of the consumers to pay (demand risk) in the case of new and fragile market, should not be something the private sector should be expected to bear. This implies a potential misallocation of risk in the project. At the end of the project, respondents mentioned this as an omission or a mistake in the project design. Respondents also mentioned not being aware at the beginning of the project of the vulnerability of SkyFox to this risk, and the disproportionate allocation of risk. It took some time before IRC and CWSA stepped in to help with discussions and studies on the business model. The project and the relationship managed to highlight this issue.

These challenges underlined a few points. SkyFox had an innovation that was essential for the project. However, the organisation and the partners entered into an adverse market situation that was of a scale that was beyond what this small private sector firm would be expected to manage. The partnership was late in in understanding the scale of the risk, but managed to react: IRC commissioning studies on the business model and on financial forecasting. These acted as a basis for discussions between CWSA, IRC and SkyFox on ways forward, as well as between partners in partners meetings. More importantly, was the realisation that the partners should share in this risk, to offset this risk to one partner alone.

Challenge 5: matching funding from the World Bank and the donor timelines

One of the conditions of the project was that the CWSA obtain matching funding. To ensure this, the CWSA entered into negotiations with the World Bank to fund a portion of the project. In the long run, the parties were able to reach an agreement but the interaction took 6 months and was described as 'frustrating'.

With the additional funding from the World Bank; the project added three regions to the project and changed the scale of the programme. This was in some ways positive and some ways negative. On the positive side, respondents admitted that if they had not had the collaboration, they would never have been able to do the project as the World Bank provided CWSA with the counterpart funding it needed. The World Bank resources went into the capacity building of the DAs to do data collection.

On the negative side, the project had to scale up from 3 to 6 regions, increasing the scale of the project substantially. This was an unanticipated change and greatly influenced the original planning of the use of resources in the project by partners. Additionally, the timelines of the two donors (FDW and World Bank) differed: the World Bank imposed condition that required changing the sequencing of the project. This implied a great deal of re-alignment: frontloading the training, the data collection before the interoperability was settled. The adaptation was also to the expectations of the two funders. RVO had its own reporting requirements which changed over time, and caused delays in the payments at project close down. When the project received the match funding, the WB wanted results NOW NOW NOW. And to complicate this even further, CWSA used its own resources to fund the project, and the institution has its own regulations and requirements, adding another layer of conditions to be met.

This raised a number of points for project partners. Though the project benefitted from the bundling of finance and increased the scale (and possible the impact) of the project, it brought with it triple the donor requirements and the bureaucracy that comes with meeting these requirements. Respondents posed question such as: 1) how much flexibility does a project and its management have to make decisions when dealing with conflicting interests and requirements on the part of the donors? 2) Whose interests dominate? Dealing with this posed an additional risk. The take home lesson from this was that, for the IRC in particular, management of the project required not only managing the partners, but also the donors (and their conflicting expectations).

In addition, with reference to the need to adjust the project and take on additional tasks, the responsibility for adjusting project planning and changing logistics lay with IRC, in close coordination with CWSA. These changes also required discussions with partners and staff so that they could understand the benefits of the changes and come on board with motivation and commitment. This was a challenge and the subject of much discussion informally and in partners' meetings.

Perceptions of Outcomes

During the semi-structured interviews, the respondents were asked to comment on their perceptions of the outcomes of the project and the PPP, and the contribution of the partnership to achieving these. Responses revolved around two streams of thought:

1. The perception on the part of the partners of the outcomes (positive or negative) of the project and in looking at these outcomes, the extent to which the project goals and objective of partners were achieved. These perceptions are given in this section.
2. The added value of the PPP. The perceptions related to this 2nd point are in the following section below.

The respondents responded to a short questionnaire (please refer to Table 1 on page 19 for the results), in which both of the points above were addressed. Related to point one, respondents were asked 1) if they were satisfied with the results of the project and the collaboration (3.8 out of 5.0, 5 being the highest rating), and 2) if the goals of their organisation were met by the partnership (4.39 out of 5). Interestingly, on the whole, partners responded positively to whether the goals and objectives of their individual organisation had been met. Looking at the individual partner objectives as stated in the Project Plan, and comparing these to the results of the partnership, it appears that the partnership was, to a great extent, able achieve these objectives (see more detail below).

On the other hand, the somewhat lower rating on satisfaction resulted from the disappointment in the inability of the project (and partnership) to achieve all of the intended results: the testing of the system at the local level and the execution of continuous monitoring as had originally been planned.

The section below looks at the partners' objectives and outcomes and the whether the **project** and the **partnership** contributed to achieving the objectives of the partners (and wider stakeholder groups) and the outcomes sought. This is by no means exhaustive, as the end of the project evaluation provides a great deal of the analysis of the outcomes of **the project.** For this assessment, respondents were asked to reflect on the outcomes as a result of the **partnership**. In many cases, it was somewhat difficult for them to differentiate. Therefore, when discussing their perception of the outcomes below, an indication is made when the **project** or the **partnership** had a role in achieved these.

IRC's objective was to scale up its Ghana country programme and it monitoring activities. With the data collected from 6 regions, monitoring increased substantially in scale. The **project** achieved sufficient scale and scope '*that the partners and the WASH community became aware of how well*

the system was working and the water sector was performing. *With this the importance of monitoring became visible to the WASH community*.'

The results of the **project** '*stimulated a broader policy dialogue in the country on whether the model developed by the project was effective and sustainable. More importantly, (it stimulated dialogue) on the management and performance of the water sector*'. The different sector institutions involved began to ask some crucial questions. Does what they have been doing for the last 20 years make sense? Or do we need to stop? One of the discussions for instance, was on tariffs and the ability to pay. IRC played an important part in this dialogue, as part of its country programme, IRC Ghana engaged in and was a member of many development partner activities and bodies.

CWSA's objectives were to ensure that data on existing and new WASH facilities was up to date and useful for WASH services. In fact, with the system developed by the **partnership**, CWSA was able to provide quality and reliable baseline data on a periodic (baseline done annually, updated monthly) basis. The question for the future is whether this trend can continue.

At a broader level**, the partnership** and the combination of activities of the partners '*gave CWSA the chance to implement what it had always hoped it might*'. CWSA was able to tackle some of the shortcomings or gaps in the sector. The partnership allowed the partners to respond to questions like: *'How to deal with the gaps they had identified? How to report on functionality? How to get real time data? How to get spare parts to the community?'* In addition, the outputs of the **project** gave CWSA 'position' in the WASH community; with the data that was made available, in interactions with external actors, staff could talk with confidence on issues faced in the WASH sector.

One additional benefit to CWSA (and other levels of government) of the **project** was that the cost of providing the service became visible. In the beginning of the project, '*with the capital investment, the costs were high. Over time the costs began to drop and the project was able to make this price visible. This trend would have continued as we rolled out.*'

Akvo's objective was to update the Akvo FLOW tool to a version that could scale and facilitate collection and analysis of sector information. Akvo was interested in expanding its markets. The **project** and the **partnership** (the interaction on interoperability) allowed Akvo to achieve this objective. When asked whether Akvo objectives had been met, one respondent indicated '*we were a partner in the project and CWSA was the lead in the project, it is about their services. So (our objectives) were interlinked. Our tool was provided, we participated in the project, to shape it, provide it, and manage it*.' The respondent referred more to the objectives and outcomes of the project as a whole, instead of Akvo's individual objectives. The perception was that Akvo provided a key service to the system: the tool was a technology that was important for achieving the model in its entirety.

SkyFox' objective was to use its SMS technology and platform to improve the spare parts distribution chain and support routine monitoring of the functionality of water facilities. One respondent remarked on the distribution chain: '*SkyFox has become a leader in the sector in getting*

spare parts to communities. The beauty of the SkyFox system is as follows: even though there are depots at the national, regional and local levels that provide spare parts, there is no IT to link them via text. The AMs now send a text to see how much the part costs, and then inform the community, the part is put on the bus, and the AM picks it up and makes repairs. Then they send the payment transfer with a mobile to the shop.' The **partnership** allowed the private sector to work on its business model, markets its products, with the government and IRC behind it facilitating.

The SkyFox system was able to provide real time data: it could provide information on a borehole at any time as well as the measure of downtime. This is important as it could be used to measure trends in downtime, but also overall performance. It raised such questions as: '*downtime is often 5 days, is this acceptable*?'

National level organisations

The end of the year evaluation confirmed that Government officials demonstrated interest in the data and saw the importance of WASH data for other development activities, such as in health, education, etc. [18] The **project** and it **partners** were able to advocate for this.

District Assemblies: Through the combined system of the **partnership**, CWSA could provide, in DiMES, data that could be used for planning and programming. The DAs came to see the importance of the data and being able to use it to make their own plans and programmes. In some cases, the completion of data collection as part of the project coincided with when the DAs were doing their planning.

The community: The **project** ensured that the economic price of water became clear to the consumer: '*the value of water and what they were paying for became clear to end user. The project, partners and the government could measure and know consumption and attach a value to it.'* In addition, the community became aware that a system was in place that could deliver spare parts quickly and at a more competitive price, resulting in improved functionality.

Other development partners: At the point that **the project** sent data to the districts, other development partners began to institutionalize the system and use the data in their programmes: i.e. World Bank, World Vision, and UNICEF. SMARTerWash shared its data with UNICEF as an input to measuring a Sustainable Development Goad (SDG) target. In addition, discussion were underway on feeding the data from the monitoring system into the national Sector Information System (SIS) under development by the Ministry of Sanitation and Water Resources (Ministry of Water Resources, Works and Housing).[19]

One interesting comment, repeated by a number of respondents. '*This project provided a chance for the public and private sector to work together, to implement a PPP and to do so successfully. This was an opportunity to see what the public and private sector could do together, the solutions and*

[18] End of Project Evaluation, Partnerships in Practice, April 2017.

[19] Final report Annex 3C, 14 April 2017, RVO documentation, interviews

innovations they could come up with, in a sector that one might argue is public and merit good and the responsibility of the public sector.' Another respondent mentioned: '*The project brought the partners in the government closer together (horizontal and vertical relations). This project was not only CWSA's project.'* The respondent referred further to the lack of real experience in Ghana with PPPs and with successful PPPs, and the role of this **partnership** in bringing in important experience on PPPs to Ghana. This experience was a point of discussion in meetings with external bodies.

The added value of the PPP

Questions posed during the semi-structured interviews checked the perception of the partners of the benefits of the involvements of the partners, and the added value of the PPP. In addition, as mentioned above, the team executed a short questionnaire to verify the results. In line with theory on PPPs, the expectation was that responses would revolve around certain benefits. PPPs are often argued to bring about:

- Sharing of key expertise or resources that otherwise would not be available otherwise;
- Additional investments, beyond what was planned.
- Increased innovation (ideas or solutions);
- Improved risk allocation;
- Improved cooperation and coordination;
- Reduced transaction costs.[20]

On the other hand, PPPs are also argued to ADD to transaction costs, stemming from the additional time spent negotiating between partners, dealing with differences in interest and coming to a conclusion that is amenable to all. The questionnaire tested the perception of the partners of the added value of the PPP, using the statements below (Q1 and 2 were referred to in the section above, Q 3 -9 tested for added value). The table below shows the results of the questionnaire (ratings: 1 – 5, 5 being the highest:

Table 2: Outcomes and added value of the PPP

	Added Value	
1	I am satisfied with the results of the collaboration/project	3.80
2	The goals of my organisation were met by the partnership	4.39
3	The partnership led to additional investments than would not have occurred if my organisation had worked alone	4.60
4	The collaboration created a number of innovative ideas, concepts and plans	4.40
5	Working together reduced the amount of risk borne by each of the partners	4.50
6	Working closely together led to improved cooperation between partners	4.90
7	Working closely together led to improved coordination of project elements	4.70
8	Working in partnership led to long processes of decision making and additional costs	3.00
9	Could you have achieved the results on your own, without the PPP?	No

N=18

[20] Batley, R., 1996. Public-private relationships and performance in service provision. *Urban Studies*, 33(4-5), pp. 723-751. Available at: http://usj.sagepub.com/content/33/4-5/723.full.pdf+html [Accessed 29-10-2015]. Pennink, (2017) the Trust Cycle, trust and it influence on risk and outcomes in PPPs.

The original project document argued that the added value of the partnership is that "*the partners are very complementary and have a cooperation history. They also have the knowledge and experience to deal with Ghana specific sector challenges. Together this makes an excellent fit of skills, knowledge, mandates and interests*"[21]. Further the document argues:

> CWSA adds legitimacy because supporting MMDAs in monitoring is within its mandate. It also brings the networks at regional and district level and the operational logistics. CWSA needs the overall knowledge of IRC on monitoring and on sustainable WASH service delivery and IRC's overall support through the Triple-S team in the CWSA. CWSA and IRC also need the technical knowledge and ownership of FLOW and ICT in general that Akvo has. Together the CWSA and IRC are part of the most important sector networks and dialogues in Ghana. IRC's goal of impact at sustainable services always needs strong cooperation with implementing agencies such as the CWSA. Akvo FLOW needs public partners and knowledge institutes like CWSA and IRC to make their ICT relevant to a specific context. All partners need the private sector to add a profit-making and thus sustainability component to the public monitoring of WASH. The private partner needs a national scale initiative to link to and the support from the CWSA in setting up its business. WSA has a strong and politically endorsed Pan-African network which is needed to share the Ghana lessons and results. Water For People will advocate the work of SMARTerWASH in particular to other (American) NGOs; SMARTerWASH will be an excellent model for its 'Everyone, Forever' campaign

The document argued that the complementarity of and inter-dependence between partners would provide benefit and added value. The argument was that the project and the PPP could not be done without the input of all of the partners.

When respondents were asked if the project could have been executed without the partnership and the knowledge and skills of each of the partners (see question number 9 in the table), the resounding answer from all was NO! (100% response rate). All agreed that the project could not have been achieved by partners working individually. This is an excellent indicator of the added value of the PPP. Respondents mentioned that the PPP provided skills that a project would not normally have had. The different skills-sets also helped to minimise mistakes that would have added time and costs. Also mentioned was the learning that came from working together and the attempts they made to look for different ways of doing things better.

There was consensus on the fact that the project could not have been accomplished without the close interaction in the PPP. Arguing that they did more with the PPP than could have done if the partners worked separately, one respondent referred to the ability to scale up:

> *". . . Yes, scaling up. This is what the government wanted to do. They have had too many 'pilots'; they wanted a big project . . . (Commenting on the outcomes of Triple S and issues that came up) . . . We collected information, once we got the results, the next step was to address the issues repair and spare parts. This was a major issues affecting functionality. We felt that this was a major part of the puzzle missing . . . We were searching for someone. We found SkyFox, trying to develop this system . . . this is not only about monitoring, you monitor to then take action, you cannot take action without SkyFox (NGO respondent).*

[21] SMARTerWash project plan: Appendix I, 2012: 12

Through the partnership you have a system that allows the updating of the data, through the SMS. The SMS could have taken data to that scale, but it would never have happened without accessibility to the activities of the other partners (private sector respondent).

Several respondents reflected that it would have been possible to work separately, but that the project would not have achieved the same outcomes and the process would have been less focused on quality.

Yes, we could have approached Akvo. It would have cost something; the discussion would have been on the price. But in this case, the discussion was on 'how do we make what we are going better? More customised, more open?'. . . We are all in this together, like a family, we can always get what we want. We do not have to make appointments (with each other). If we had worked individually, this would not have been possible (NGO respondent).

A respondent from private sector mentioned the need for government intervention to achieve *private* objectives in the PPP and the essential involvement of CWSA as a governmental institution to open up markets for the private sector in water and sanitation. As stated before, especially for a small IT start-up as SkyFox, access to markets would be impossible without the support of CWSA, and the working relations in the PPP have been fundamental in this. Further, the cooperation with CWSA made it possible to rollout the business model in a large scale in rural areas. In addition, SkyFox's cooperation with Akvo guaranteed knowledge transfer in the IT business.

On the willingness of partners to invest more than originally planned (4.6 out of 5), respondents responded in the affirmative:

". . . when people see the benefits, they are willing to add (resources). For SkyFox it is a project of 3 years, but they are willing to make an investment of 10 years. Also in our case, this was not a last minute proposal, we had history. We did not hurriedly come together. This is not the only initiative that we have done and here will be more than SMARTerWash. 3 years is nothing".

Several respondents mentioned that working together resulted in more innovation (Q4: 4.4 out of 5) *". . . there were more people around the table. The government, Akvo with its tools, examples from other countries. SkyFox also came with ideas. IRC pulled in its Ethiopia example"* (public respondent). The reference was in fact to the stimulation of ideas via the interaction.

There were, however, some negative aspects of this innovation, namely related to the absorption capacity of some of the players and the difficulties of application in Ghana.

" . . . Sometimes there were also disadvantages. There were too many 'professors', too many ideas, too many IT people. (At the beginning) Akvo was too far ahead. We did not know how to consume the ideas, we might not be able to keep up. We were sometimes frustrated; the ideas could not be picked up. There were lots of discussions about open data (for instance). There are fewer problems with open data in other places, but in Ghana it has to be in line with national standards" (NGO respondent).

Respondents underlined the ability of the partnership to deal with the novelty and the scale of the project, but also the enormous risks that came with this. They also underlined the benefit of sharing that risk (Q 5: 4.5 of 5). For one, having the resources, also human, of the government, as well as the powers of the government, helped to reduce risks. IRC had a key role as a broker, in solving bottlenecks, coming with ideas, contributions and solutions, how to create outputs. CWSA was exercising its public powers. SkyFox was influential in changing the role of the AMs. The perception was that everyone went the extra mile and shared information, and that coordination was better with the PPP.

Most respondents mentioned that the interaction improved the cooperation and coordination between partners in the PPP (Qs 6 and 7: 4.9 and 4.6 respectively) and that this led, in their perception, to the streamlining of activities (and therefore a reduction in transaction costs), as well as improved quality of the outputs. Some did however, comment on Q8, admitting that the PPP did, in some cases, involve long processes of decision making (Q 8: 3.00), and additional costs.

> *" . . . There were different interests around the table. Decision making could be long and winding. It was frustrating if your idea was not picked up . . . IRC Netherlands asked IRC Ghana to intervene to get CWSA to understand. (IRC Ghana) understood both sides and suggested that they allow CWSA to persuade the IT people of its perspective, let them work it out themselves (the choice not to intervene, but to leave it alone, give it more time) . . . Ideas are good, but there are multiple realities, this is problem. Some things may be beautiful, but some things may not be realistic" (NGO respondent).*

The same respondent then went on to mention the (unexpected) skills needed to deal with situations of this sort, arguing that partners were required to develop these skills to make the PPPs work and to build trust.

> *"This was a good opportunity to bring people together, to put the human face on the application. It looks nice, and then you try to use it . . . this is beyond tool development, you are engaging in real life context and getting feedback. . . this is beyond technical, you need emotional intelligence and to build trust. A lot is based on trust and minimising suspicion . . . (NGO respondent)."*

In the long run, the consensus was that the added value of the PPP was that it was NOT based on purely financial interests and gain only, that partners were in it to achieve something that had never been done, to innovate, to go beyond the status quo. There was collective will to ensure that something big could be done in the sector. The relationship was therefore more sustainable: they did not disperse at the end of the project, as occurs in many cases, but continued to work together, in some form.

The glue that held them together, according to multiple respondents was the common vision that the partners were building a system for rural water monitoring over the long term. They quickly realised that they needed each other to succeed. There was a collective determination and desire to do more than was originally expected. The IT staff were absolutely committed to see the system work, as were the M and E staff. The challenges faced with the interoperability brought about (healthy) competition amongst the IT people to see who could come with the best solution. When

there was a problem, the partners were highly responsive and issues were dealt with quickly. The relationship became informal and highly interactive, characterised by trust, different from the normal arm's length relationship with the government. In the long run and through long term interaction, the staff began to understand each other better. The network of people involved began to function better.

Comments and reflections on the PPP

This assignment included assessing 5 PPPs (2 in Ethiopia, 2 in Ghana and 1 in Colombia). In discussion within the team on the similarities and the differences between the cases, the question arose as to whether the relationships actually constituted a Public Private Partnership. Using the 5 criteria of developmental PPPs as defined by the IOB (2013:17), this relationship appears to have met, to a great extent, the criteria cited. The partnership had both public and private partners (criterion 1), there was a clear agreement on the goals of the PPP (criterion 2), the project was financed by a mix of public and private funds (criterion 3), there was a clear agreement on the sharing of resources and tasks (criterion 4), and there was a distribution of risks between the public and private partners (criterion 5).[22] In effect, in the conceptualisation and design of the project, these aspects were taken into account and from the perception of the partners, were essential in making the project work. The argument was that through the sharing of skills and resources, as well as risks, the partners were able to achieve more than if they worked alone. 2 + 2 = 5, the synergy between partners provided added value.

It was commonly recognised (by partners, RVO, in the end of the project evaluation) that the project was over-ambitious (at the scale to which it grew), the timeframe was too short to achieve what SMARTerWash had intended, and that the project ended with certain aspects unfinished. On the other hand, there is a general 'pride' amongst partners in what was achieved. In addition, there was a consensus that what was achieved could not have been without the partnership. If one of the key questions is related to the extent to which the partnerships contributed to outcomes, this consensus on the value added of the PPP is an important one. The consensus was that this was a PPP characterised by the 'normal teething problems' but a PPP that was able to deal with challenges that in an effective manner. In addition, responses to the added value of the PPP in the questionnaire were on the whole quite high (above 4.4 out of 5). As PPPs go, the manner in which the partnership was conceptualised and the nature of the interaction can be characterised as a 'best (learning) practice'.

This was a tightly knit PPP, meaning that the partners worked closely together as a 'team'. The interaction was positive and productive[23]. The partners joked with and teased each other (also a Ghanaian habit). Partners put issues on the table and discussed solutions. Discussions took place with a high level of professionalism. There was a perception on the part of the partners that the team would find a solution to problems. The successes that the project realised gave the partners confidence. There was a common perception that the partners are there for a common purpose,

[22] Public-Private Partnerships in Developing countries. A systematic literature review. IOB Study no. 378. Ministry of Foreign Affairs of the Netherlands. April 2013.
[23] Gleaned from observation of the interactions: partner meetings, focus group discussions

that the project was of importance and of value, and that each partner had a clear and important role in the process[24]. There was clear interdependence in this PPP.

There were several factors that contributed to the positive nature of the PPP and the belief on the part of the partners that the PPP had added value:

1. The end of the project evaluation makes the following statements: *the programme logic and rationale for the approach are clear and sensible and the partners involved bring the right skills and influence at least for these initial stages* and *the partners work well together and recognise each other's contribution and role* (pg. 4). Given the challenges of the project, different timelines and reporting requirements, partners managed these challenges with little tension and a positive attitude. This was common amongst all partners.
2. Most of the partners (excluding SkyFox) worked together before and 'grew into' this PPP. The working relationship became natural and there was a substantial level of trust. *That synergy existed already and it really helped the partnership. Because we sincerely believed that there was value added because of the partners (NGO respondent, similar others).*
3. In the project design there was a clear linkage and rationale for the involvement of the partners, SkyFox for instance, completed the value chain.
4. IRC, both in the Netherland and in Ghana, invested a great deal of time (and money) in building relations. IRC had an office in the Ministry/CWSA for a number of years and the local presence, also in the form of IRC Ghana, played an important role in making contacts and being present at crucial moments. The strength of IRC Ghana was/is its sensitivity to the local culture and ways.
5. IRC put as a priority that this should be a government-driven PPP, with CWSA at the helm (this is one of their key principles). So even though IRC was the lead partner as relates to RVO, and all contracts were signed by IRC and the various partners, CWSA was given and took over the ownership of the project. CWSA was 'firmly in the driver's seat'. Given the fact that this was only one of CWSA's many projects (1% of its budget), the attention it received was a positive sign.
6. This role for CWSA was essential: the PPP could not have worked without the involvement and intervention of the public sector. This points to the fact, that in a PPP, there are some things only the public sector can do, with its mandate and public powers.
7. IRC, mainly IRC Ghana, took on an interesting role, and that was to make sure the project happened and worked well (one respondent called IRC the 'midwife', another term is 'boundary spanner'), and that the "*broad goals of the project were met*". Again, the existence of the local office was essential in achieving this. The institution and it experienced staff was always present, making sure all of the administrative issues of the project were taken care of. This approach ensured that CWSA could focus on content issues, while IRC took care of the administrative issues, as well as facilitating interaction between partners. IRC was/is well staffed and had/has good professionals on the job.
8. In addition, IRC took on a key role to facilitate the process. This involved:

[24] Note: many of these points are from interviews, and were also observed. These points were mentioned consistently.

- An IRC staff member was actually seconded to CWSA to work closely with CWSA staff members. He was there to provide support when needed, but was also seen as a member of the CWSA team.
- Linking knowledge transfer to execution: building capacity of the staff of the CWSA and district staff to monitor services (collection of data, cleaning of data, etc.) and providing support when needed in the execution of activities. Slowly tasks were being transferred to the CWSA. This was in contrast to previous years and projects with CWSA when IRC actually acted more as consultants for CWSA.
- Facilitating communication between partners and dealing with key issues when they arose. IRC recognised the importance of dealing with potential cultural differences have developed mechanisms to deal with these. "*We had to adjust our communication style, you cannot impose on government, you have to guide*." (NGO respondent).

6. There is a common belief amongst the partners, as a result of the PPP, that the success of interaction was dependent on a substantial investment in relationship building (links to the last point). *Leadership is important. Also you need to pay attention to the relationship. And nurturing the relationship so that partners feel like they are valued; that they bring something to the table, that feeling of belongingness. So this is not just a collection of people just for the sake of accessing funding from the Dutch government. Really, we have things that we bring on board to improve the process. This became evident when we were dealing with SkyFox. They thought: 'CWSA needs us, we should make ourselves available to contribute to the process' (NGO respondent, similar others).*
7. Linked to the last point, success came from the fact that the relationship between the partners was given a change to evolve. Discussion were no longer positional, partners put things on the table and resolved them without the feeling that they need to defend themselves.

Sustainability

The end of the project evaluation comments on some unresolved issues related sustainability, namely the institutional relations to take the project forward, the financial sustainability of the venture and options for integrating the system and software into other national monitoring programmes in the future[25]. The report also has a long list of recommendations on the actions that could be taken to ensure and improve the sustainability of the project.

Comments on the sustainability of the partnership

At the time of this institutional assessment, there was a strong likelihood, that with a continuation of funding (still unsettled), the partnership would continue, most probably in its current form, with a roll out of the project strategy and activities as planned. Partners were committed to this. Again, this is a strong indicator of the added value of the partnership; that partners were planning to commit to working together beyond the scope of the FDW funding.

[25] End of Project Evaluation, Partnerships in Practice, April 2017.

Comments on the sustainability of the project

As stated before, there was serious disappointment that the timeline of the project was too short to achieve all that SMARTerWash had intended. The disappointment was in not being able to see the business model through, to see if it could work. There were real concerns on the financially sustainability of the business model, namely stemming from the (in)ability of the end user to pay, and to provide revenues to make the venture viable of the longer term or, in absence of this, from the budgets provided by the government. This situation did not improve by the end of the project.

As some of the partners indicated: It is all about the funding. At project completion, CWSA needed to upgrade DiMES to a web-based system to make the 3 platforms completely interoperable. Distance in coordinating the platforms was a funding issue. Visiting the DAs to provide support was funding issue. Doing baselines in the districts that have not been treated was a funding issue. Continuous monitoring was a funding issue. The capacity and willingness was there, but the funding was not. Dependency on donor funding remained. This put in question the sustainability of the project.

Institutionally, the relationship between the organisations involved was strong: the project ended but the relationships did not. The governance structure appeared to be embedded in national and local institutions and processes (partners of the project, key ministries and local government and development partners). The CWSA took and continues to take a strong role, however, its remit extends to the regional, not to the local level. The end of the project evaluation commented that the partnership would have benefited from strengthening its relationship with the Ministry of Local Government, and thereby ties in to the DAs, as a key strategy to roll out the system locally, thereby strengthening sustainability.

Some respondents perceived the FDW project as seed funding for other activities and leveraging of relationships with other partners: At the time of this assessment, Akvo was still providing an after service. Akvo became involved in another PPP with UNICEF. UNICEF came in to support CWSA to build on existing data in their districts, looking at water quality. IRC was working with Conrad Hilton, World Vision, Safer Water Network on the implementation of plans in different districts. SkyFox was also working on proposals for other initiatives: for one, the monitoring of borehole functionality and spare parts funded by the Dutch Government, under a civil society programmes. SkyFox continued to work with its partners, in particular with Akvo, in Benin. It was also in contact with Ghana Water, and looking at the application of the software in the urban sector.

Technology was an essential aspect of the design of the project, and appeared acceptable in the Ghanaian context. The capacity and skills to use the technology over the longer term seem to be present. However, this technology needed to be used at the local level, by the DAs and the end users, and this had yet to be worked on. This also related to social sustainability; there was still a question on the extent to which project beneficiaries, DAs and communities have ownership of the tools and the data, feel they are relevant and can use these in sustainable manner.

Annex A: Interview questions

Institutional Level

General information on composition and governance:

1. Has the composition of the partnership changed in the past year? If so how?
2. Has your role changed? If so, how and why?
3. Please described how the interaction between partners has evolved (for instance, evolution in who does what, intensity of interaction between partners)
4. What is your experience with the governance of the PPP? Please explain and give your opinion.

Resources, risks and rewards

5. Have the share between partners in investments changed? If so how and why?
6. Has the manner in which risks and returns are shared between partners changed? If so how and why?

Bottlenecks, challenges faced and how these have been deal with

7. What risks or challenges have you faced so far and how has the partnership dealt with these?
8. What challenges can you see in the future for the partnership?
9. How do you see challenges being dealt with in terms of the Partnership decision-making process?

Outcomes and added value

10. Please comment on your satisfaction with the interaction between partners
11. Are the objectives of your organisation being met by the partnership? If yes, how? If no, why not?
12. What have been the key (positive and negative) outcomes of the partnership?
13. Please give an indication of the profit or losses of the partnership
14. What do you perceive as the value added of being in the Partnership?

Annex B: Questionnaire on outcomes and added value of the partnership

Please indicate in the following table your perception of the outcome, so far, of the partnership

	Outcomes	**Please tick one**	**Comments**
1	I am satisfied with the results, so far, of the collaboration/project	☐ Strongly Agree ☐ Agree ☐ Uncertain ☐ Disagree ☐ Strongly disagree	
2	The goals of my organisation are being met by the partnership	☐ Strongly Agree ☐ Agree ☐ Uncertain ☐ Disagree ☐ Strongly disagree	
3	The partnership has led to additional investments than would not have occurred if my organisation had worked alone	☐ Strongly Agree ☐ Agree ☐ Uncertain ☐ Disagree ☐ Strongly disagree	
4	The collaboration has created a number of innovative ideas, concepts and plans	☐ Strongly Agree ☐ Agree ☐ Uncertain ☐ Disagree ☐ Strongly disagree	
5	Working together has reduced the amount of risk borne by each of the partners	☐ Strongly Agree ☐ Agree ☐ Uncertain ☐ Disagree ☐ Strongly disagree	
6	Working closely together has led to improved cooperation between partners	☐ Strongly Agree ☐ Agree ☐ Uncertain ☐ Disagree ☐ Strongly disagree	
7	Working closely together has led to improved coordination of project elements	☐ Strongly Agree ☐ Agree ☐ Uncertain ☐ Disagree ☐ Strongly disagree	
8	Working in partnership has led to long processes of decision making and additional costs	☐ Strongly Agree ☐ Agree ☐ Uncertain ☐ Disagree ☐ Strongly disagree	

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