



Explorations 01

Seven categories of PPPs distinguished on the basis of their 'change logic'

Observations and issues for discussion and follow-up

A portfolio scan of the Sustainable Water Fund (FDW)

Abstract

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This working document presents an initial analysis of the portfolio of projects approved under the first and second call of the Sustainable Water Fund (FDW), and seeks to get to grips with the basic ‘change logic’ of these projects from a public–private partnership perspective. The main objective of this study is to investigate the types of PPP dynamics that have been created in the FDW portfolio, thereby especially focusing on the engagement of private partners.

The document defines several groups of projects within the overall portfolio. The change logic of each category is described in terms of the type of lead private partner, the other partners engaged, the core focus, the type of projected benefits, and the ongoing business or financial proposition. In addition, specific observations and questions are raised for each category. The document concludes with some overarching insights and questions about the FDW portfolio as a whole.

***Colophon** PPPLab Food & Water is a four-year action research and joint learning initiative (2014-2018) to explore the relevance, effectiveness, and quality of Dutch supported public-private partnerships (PPPs). PPPLab is commissioned by the Dutch Ministry of Foreign Affairs and is driven and implemented by a consortium of the Partnerships Resource Centre (PrC), Aqua for All (A4A), the Centre for Development Innovation at Wageningen UR (CDI), and the SNV Netherlands Development Organization (SNV).*

Comments and updates about this report are welcome. Please send them to: info@ppplab.org. For more information, please visit our website: www.ppplab.org.

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1. Introduction

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In 2012, the Ministry of Foreign Affairs (MoFA) of the Netherlands initiated two new financing instruments that aim to stimulate Public-Private Partnerships (PPPs) for development. The Sustainable Water Fund or FDW (an abbreviation of its Dutch name) focuses on stimulating public-private collaboration in the water sector in order to contribute towards water safety and water reliability in developing countries. The Facility for Sustainable Entrepreneurship and Food Security (FDOV, again after its name in Dutch) focuses on stimulating public-private partnerships within the sphere of food security and private sector development. The creation of these two financing mechanisms is seen as an innovation in Dutch development financing. It is based on the assumption that PPPs can play a role in achieving development objectives, and perhaps do so in different and more effective ways than other instruments used before. The two financing mechanisms are run by the Netherlands Enterprise Agency (RVO).

To learn about the relevance, effectiveness, and quality of Dutch-supported PPPs, in summer 2014 the Ministry decided to fund PPPLab Food and Water, a four-year (2014–2018) action research and knowledge initiative. Its mission is to extract and co-create knowledge and methodological lessons that can be used to improve both implementation and policy.

An initial analysis of the 13 FDW projects under the first call was undertaken in the first half of 2015 to get to grips with the basic ‘change logic’ of these projects from a public-private partnership perspective. It delineated six categories of PPPs within that portfolio. These categories appeared to have clear and distinct profiles on the basis of a) the developmental issues they seek to address and related benefits they seek to produce, and b) the kind of business drivers, business cases, and financial sustainability that propel them. Thus, this portfolio scan created an overview of types of PPPs that the FDW had attracted or funded.

At the end of 2014, an additional 10 projects were approved under FDW's second call. This working document serves as an update to the initial analysis of the change logic of the first 13 projects. It has tested, validated and updated the initial categorization of FDW and presents an updated version of the portfolio scan, now covering a total of 23 projects.¹

The distinction of categories of PPPs in this document can be useful to better understand the overall composition of the PPP portfolio as well as to better address proposals, progress, sustainability and impact dimensions of (groups of) individual PPPs. It may help the actors engaged in PPPs and the broader professional community to locate their own projects within that landscape, to deepen key strategies, to pose questions on the effectiveness of one's own project, or to open up perspectives on alternative strategies or projects. The findings may also be of direct interest to both the funding and supervising agencies (MoFA and RVO) in guiding and monitoring the current projects, in shaping the FDW instrument towards the future and in discussing priorities for future funding.

The findings presented in this working document will also be used by PPPLab for a next series of more specific research and learning questions. The following studies are directly linked to this document, and provide a further analysis:

- A parallel analysis of the FDOV portfolio (expected to be finalized in summer 2016). Where relevant, in this analysis of FDW similarities with the FDOV portfolio are also referred to.
- A Mid-Term Review, initiated by the Dutch Ministry of Foreign Affairs, which has fed the general development of the instrument and the preparations for the third FDW call. The MTR was undertaken in summer/autumn of 2015 and executed by an independent consultancy team.
- While PPPLab does not have an evaluation mandate, it is in line with its objectives to provide input to that MTR. PPPLab's contributions to the MTR were fourfold: this portfolio scan, a

¹ It is important to note that the observations and findings in this document are based on approved projects of the FDW: the 13 projects from the first call and the 10 project from the second call. For an analysis of all proposals, see the broader study on non-approved projects that was undertaken as a contribution to the Mid Term Review of FDW in autumn 2015.

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systematic round of interviews with all ongoing FDW PPPs, an analysis of non-approved project proposals, and an analysis of areas in which FDW only approved low numbers of projects, the so-called 'weakly populated' sub-themes within FDW. These studies were undertaken parallel to the extension of this portfolio scan. Where relevant, the portfolio scan will refer to these studies.

A next batch of PPPLab activities were started in the autumn of 2015, including studies on business models and finance strategies, scaling and system change, the role of public partners in PPPs, and a tool for tracking partnership processes.

- The extent to which projects are sustainable is assessed against the FIETS criteria (financial, institutional, ecological, technological, and social sustainability).
- The project should be financially sustainable but, as a whole, the project or partnership does not need to be based on a business case (i.e. on a revenue model). See further explanation in chapter 2.

Key parameters of the first and second call of FDW

- The first call for FDW projects took place in 2012, leading to the approval of 13 projects. A second batch of 10 projects was approved at the end of 2014.
- For both calls, three FDW subthemes were defined by the Ministry of Foreign Affairs:
 - Improved access to drinking water and sanitation.
 - Efficient and sustainable water use, particularly within agriculture.
 - Safe deltas and improved basin management.
- FDW partnerships must consist of at least one company, one public body, and one nongovernmental organisation (NGO). It may also include research institutions.² At least one of the parties must be based in the Netherlands, and at least one in the country where the project will be implemented. The applicant can be any kind of partner.
- The minimum financial contribution of the partners is 40%.³ With the aim to attract more projects, the own financial contribution for the third subtheme (safe deltas and improved basin management) has been lowered to 30% during the second call (the rest remaining 40%).⁴ At least half of the own contributions should come from private actors.

² The FDW has developed a specific set of definitions of private, public, NGO, and knowledge partners. See the list of definitions of the Ministry of Foreign Affairs at http://english.rvo.nl/sites/default/files/2014/04/Begrippenlijst_Fonds_Duurzaam_Water%202013-2014%20v2.pdf. ³ Although the own financial contribution for the 'Safe deltas and improved basin management' subtheme was lowered from 40% (first call) to 30% (second call), the total number of projects under this subtheme has remained low. Also see the study on 'weakly represented segments of FDW' by PPPLab from autumn 2015. ⁴ All in all, this means that in the FDW the actual private participation in projects can be limited to 15% or 20% (half of the required own contribution) and that this percentage can also be covered by private grants from CSR or foundation sources.

2. The 'change logic' of PPPs, key concepts and research methods

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In this study, the term 'PPP change logic' stands for the key logic through which the PPP seeks to achieve development objectives. It is a combination of two main parameters: the **developmental issue(s)** that the PPP seeks to address; and the **kind of business drivers and models** by which they are propelled. In this report, this change logic of each project is analysed through five specific elements:

- The type of **lead private partner** driving or supporting the project.
- The types of **other partners** engaged.
- The **core focus or intervention** in relation to the water and sanitation value chain.
- The **anticipated (pro-poor) benefits** of the PPP.
- The underlying medium or long-term **business and financial case**.

With these five elements, the analysis does not look at the specific theory of change for the issue concerned (for example, managing an irrigation system in country A or providing sanitary services to households in city B); rather, the interest is on the 'meta Theory-of-Change' level: how is a PPP used to create development results?

To get to grips with these PPP change logics, nine specific questions with sub-questions were asked for each project. On that basis, the key elements of each individual project were described. From the brief project logics extracted, an 'emergent' analytical process of simply listing key common elements and differences between the projects was started. The projects with similar characteristics were grouped together. For the first call of projects, it appeared that a relatively clear grouping of projects along the water and sanitation value chains⁵ with related business logics was possible. During the analysis of the projects of the second call, this grouping turned out to be still applicable and was only slightly adjusted.

In the following chapter, the key elements mentioned above are used to describe the

categories. However, first a few concepts need to be clarified.

The term **lead private partner** is used for the private partner with a key role in the business case or financial sustainability of the project (thus, not necessarily the applicant or the partner that provides the largest financial contribution). According to the broad FDW definition, a private partner or business is *"any kind of entity that pursues economic activities, no matter how the entity is financed. Economic activity involves the supply of goods or services on the economic market. Entities that engage in economic activities on a 'not for profit and not for loss' basis can also qualify as a 'business' in the partnership"*.⁶

Considering this broad definition for businesses, the private contributions to PPPs also vary in nature. In this working document, a distinction is made between four types of private contributions:

- Corporate Social Responsibility or foundation money; contributions of this kind often consist of grant money based on philanthropic motives, for which no return on investment is expected. However, it must be noted that CSR money is increasingly used strategically by companies, for example to improve one's reputation or license to operate.
- Business development and R&D money; contributions used as investments to pilot or develop products/services of the company concerned, with the ultimate purpose of marketing/introducing this product to the market. No direct return on investment is expected, but the investment is made to develop business for the company on a longer-term.
- Investments that cover additional operational costs for staff or for activities that the company is deploying anyhow. Often these are reflected in 'in kind' contributions. These are nevertheless commercially weighed by the companies in terms of their cost/benefit and thus the rationale of indeed putting extra effort in.

⁵ The water value chain is often referred to as a 'water management cycle'. An agricultural value chain is rather linear, bringing and transforming the product from producer via various steps to the consumer. Water management is a more cyclical and interconnected process, in which various types of water use and re-use can follow each other in different sequences. Moreover water flows can be part of diverse natural cycles. ⁶ See the list of definitions of the Ministry of Foreign Affairs at http://english.rvo.nl/sites/default/files/2014/04/Begrippenlijst_Fonds_Duurzaam_Water%202013-2014%20v2.pdf.

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- Financial investments in pursuit of improving the core business of the company. For such commercial investment, a direct return on investment is expected and the private actor runs more financial risk as compared to using CSR/foundation money as a contribution to the project (as for this type of money no return on investment is required).

In this working document, the abovementioned distinction is used when analysing private contributions. Though not a topic for further investigation in this scan, it can be expected that the different types of private contributions have implications for the degree of private engagement, the nature of the business cases and the financial sustainability perspectives of the projects. According to the requirements of the FDW, the projects should be **financially sustainable** but, as a whole, a project or partnership does not need to be based on a **business case** (i.e. on a revenue model). A project is financially sustainable when all activities that are supposed to continue after termination of the PPP can continue without subsidy of foreign donors. Please note that this continuation does not have to be based on commercial money, but can also continue with the help of public funding.⁷

A business case is a specific way of creating financial sustainability in the sense that it is based on a revenue/earning model. A business case therefore usually contains the engagement of a private actor to commence and continue an activity generating a product or a service that creates value and serves the market. The term business case is closely related to, but more detailed than a **business model**. The latter constitutes the overall idea of how an entrepreneur or partnership expects to create value.⁸

In this report, the focus is on an initial scan of the financial feasibility or the business case described in the proposal. A deeper look at these dimensions of projects will be undertaken in a separate PPPLab study that explicitly focuses on business models and financing strategies.

⁷ Please note that the difference between public funding and (indirect) donor funding may be difficult to make. ⁸ See for example the 'Business Model Canvas' invented by Osterwalder. Based on this, PPPLab has created a specific 'PPP Canvas' that can be used to design, review or reorient PPPs.

3. The FDW portfolio: three sub-themes and seven specific categories of PPPs

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To gain an initial sense of the overall playing field, first some general observations on the projects of the first and second call:

The projects:

- There are large **differences in scale** of the projects, ranging from an irrigation project targeting 1,200 sugarcane farmers to improving the water delivery of an area in Santa Cruz, Bolivia with 1 million water consumers.
- The portfolio is clearly investing in **longer-term collective action issues** - for example in water utilities and improved basin management projects.
- There are interesting examples of **private sector contributions to a public good**, such as integrated water resources management.

Representation in the PPPs

- The **private** sector constitutes about 41%⁹ of the total number of partners, while NGOs and research institutions form about 34% of all partners, and public actors about 25%.
- Of the private partners in the FDW some are real commercial players while others are semi-public companies. Some commercial players provide a significant financial contribution. Others participate as paid service providers.
- There is strong **public and semi-public engagement** in water utility and improved basin management projects, but less in the irrigation and sanitation projects.
- In 13 out of the 23 cases, a private actor is the **applicant**.¹⁰ In 6 PPPs the applicant is a NGO, mostly taking up the role of project manager. In 3 cases the applicant is a public actor (of which 2 are local public water authorities) and in 1 case the applicant is a knowledge institute.
- In at least 14 projects, **'service providers'** (whether from commercial, civic, or knowledge backgrounds) have a lead function in initiating and/or managing the PPPs. They have significant own (commercial or non-commercial) 'business' interests in these projects as their participation is (partly) funded from the project budget.

Contribution of partners

- After the contribution of the Ministry of Foreign Affairs, it is the private sector that in almost all cases brings in the **largest financial contribution** to the project. The exceptions are four cases in which local water authorities are responsible for the second largest financial contribution.
- As mentioned before, these private contributions vary in nature (CSR/business development/commercial). Not many real commercial private actors are engaged (whether internationally or within the countries concerned); similarly, there is little **non-grant money** involved.

Differences between the projects of call 1 and projects of call 2

- Overall, **no striking differences** have been found between the portfolio of the first call and the portfolio of the second call. Both calls have mostly attracted projects firstly in the field of water utilities and secondly in the field of irrigation (see the categories on the next page).

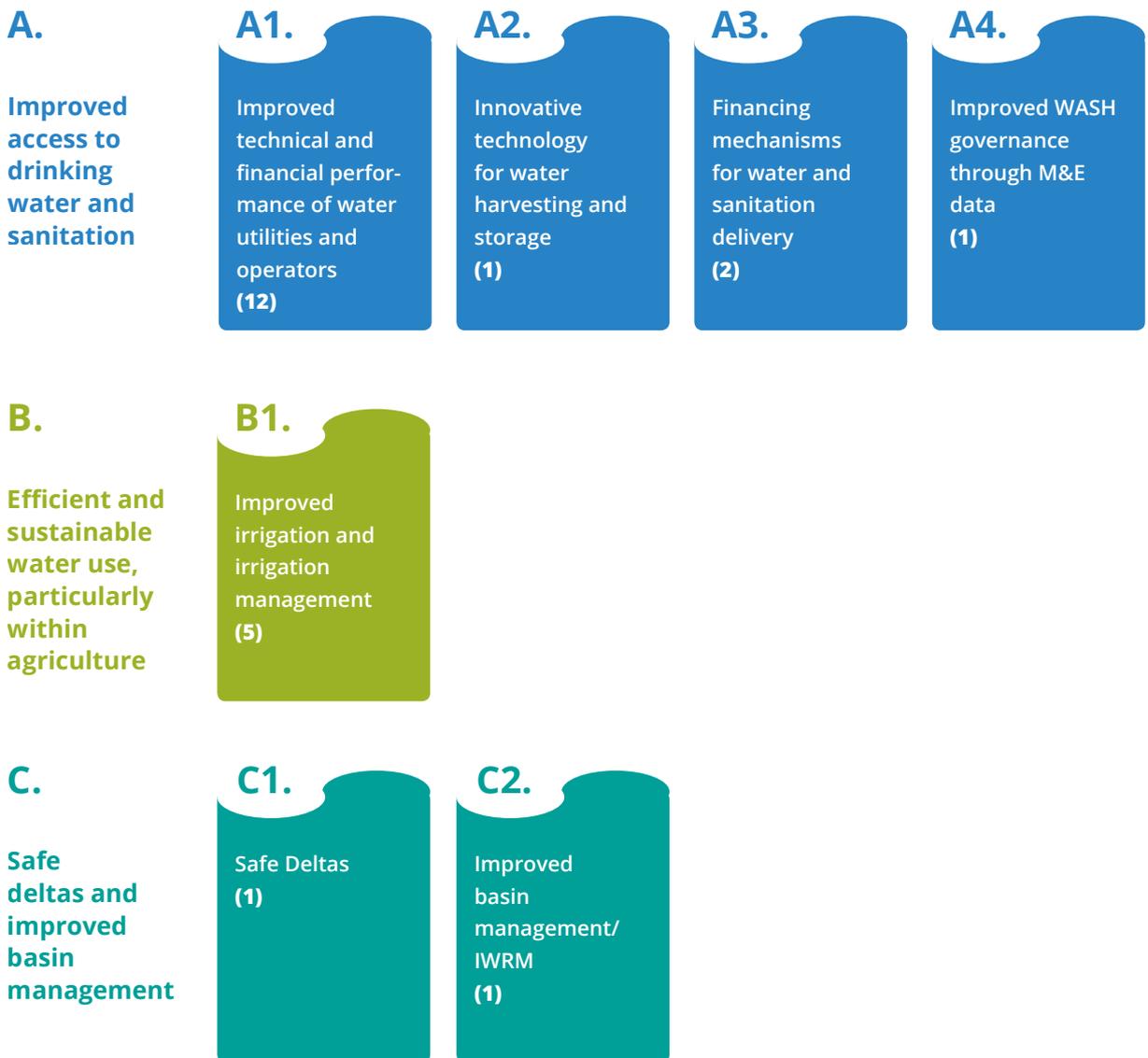
The distribution of projects across the three main sub-themes of the FDW is 16 under *Improved access to drinking water and sanitation* (A), 5 under *Efficient and sustainable water use, particularly within agriculture* (B) and 2 under *Safe deltas and improved basin management* (C).¹¹

In the analysis for this scan a closer look has been taken at the PPP logics of these projects and thus a more precise distinction has been made based on two main parameters: the **developmental issue(s)** that each project seeks to address - or more particularly, their point of intervention in the water cycle; and secondly the kind of **business drivers and models** by which each project is propelled. In this way, within the three themes (and the 23 projects of the 1st and 2nd call) a total of seven categories of PPPs can be distinguished in the portfolio. These seven categories each have their own specific combination of development goal(s) and business/financial driver.

⁹ This percentage reflects the decision to regard the international cooperation branches of Dutch drinking water companies as 'private actors' based on the broad definition discussed in the previous section. If these would not be counted as private, the percentage of private sector partners would be much lower, namely 31%. ¹⁰ It should be noted, however, that the broad definition of 'private' in FDW means that this also includes (semi-)public companies and the (noncommercial) international cooperation wings of these. ¹¹ During the second call, PPPs were allowed to apply for more than one subtheme. However, after approval, one focus subtheme was chosen. Also see http://english.rvo.nl/sites/default/files/2015/01/Overview%20FDW%20projects%20tender%202014_0.pdf.

The seven categories are a more refined distinction than the three subthemes of FDW. This serves to better reflect the fundamental differences in underlying PPP logics and drivers. Given the limited number of PPPs, some of these categories have only one PPP. Nonetheless they do indeed represent a fundamentally different lead business drive and related longer-term business case or financial sustainability perspective.

Figure 1: Categories of projects in the FDW portfolio on basis of their change logic



A. Improved access to drinking water and sanitation

This FDW policy subtheme focuses on providing access to safe drinking water and improved water and sanitation in households, but also in institutions such as schools. In combination with attention to hygiene, it has a significant impact on health, and therefore productivity. It emphasizes the importance of the prevention of failure of systems and to pay attention to water quality at the household level. Wherever possible, water management and environment will be used as the framework for the management of drinking water supply, sanitation (including solid waste), sewage, and drainage.

The projects that this policy subtheme has attracted, fall into four different types of change logic.

A1. Improved technical and financial performance of water utilities and operators

This is the largest category, making up 12 out of the 23 PPPs approved under the first and second call of the FDW. The PPPs are located in Bolivia, Uganda, Malawi, Rwanda, Ethiopia, Kenya, Tanzania, Mozambique, Vietnam, Indonesia and the Philippines. The key characteristics of the projects in this category are:

- For almost all projects, the **lead private partner** is a Dutch drinking-water firm or more in particular its international cooperation branch. Only one project is led by a local water company, but also works in close cooperation with a Dutch drinking water firm.
- **Other partners:** The Dutch lead actors work with a public or semi-public water utility, group of utilities, or authority supervising local utilities. They run the facilities (or supervise them). NGOs are also involved, but usually have smaller roles in the projects (such as providing expertise in working with low-income groups).

- The **core focus** is on improving the efficient management of piped water systems. This may be accompanied by infrastructure development, or an environmental, sanitation or IWRM component. Existing performance will be improved, which in turn is expected to attract more financing or (soft) investments at later stages.
- The **development benefits** of the project are a) increased effectiveness and efficiency of water delivery and b) increased coverage of (poor) populations on that basis.
- The **business case/financial sustainability** underpinning the projects focuses on the medium or long-term improvement of the financial and economic viability of utility operations. There is no direct earning objective.

In reviewing these projects, the following further observations and considerations come to the fore:

The projects:

- Most of these projects are continuations of already existing 'water operator partnerships' (WOPs).
- In general, the assumption is that by saving water and serving new clients, a greater number of poor people will be reached, and the additional areas that will be serviced may also be the areas with poor(er) inhabitants. For most projects, however, pro-poor outreach or targeting has not been specified. There is no mention of efforts to cross-subsidise services for poorer people from the benefits of the increased services to richer consumers or companies.
- The levels of intervention of these projects vary considerably. Some focus on one specific utility or water system, others are oriented towards improving utility management for a wider geographic area (of several utilities, working with umbrella organisations in the water sector). Two projects of this latter group, for example, introduce utility-led benchmarking as a systematic testing and adaptation methodology.¹² The projects introduce this methodology through national water sector organisations, who will in turn support utilities who are responsible for water delivery in regions of over 2 million people.
- Of course, differences in scale have implications

¹² These two benchmarking projects show similarities with category A4, as these projects also focus on improving the collection and use of data to improve efficiency of water delivery. The projects are classified in category A1 however, as they focus on the data collection and use by water utilities instead of by end users (see A4).

for the intervention and the financial and capacity development approaches of the projects concerned.

- Some projects combine the water utility approach with IWRM components. Examples are two projects in Ethiopia that, next to a focus on non-revenue water (NRW), address the threat to water resource availability by bringing together different stakeholders (local public authorities, industrial water consumers, water supply organisations, partners with local knowledge partners) and to increase their capacity in IWRM through an integrated water chain approach. Both are initiated by an international cooperation branch of a Dutch drinking water firm.

Representation in the PPPs:

- While the private engagement in these PPPs is mainly shaped by the international cooperation branches of Dutch drinking-water companies, there are also local water companies involved.
- Local public and semi-public actors are present in all projects and their engagement is quite extensive. In one project, two Dutch water boards are engaged, using their expertise and knowledge in integrated water management.
- NGOs are also involved, being present in 9 of the 12 projects; their engagement mainly centres on programme management and inclusive BoP strategies. Specialised technical support is provided by research institutions (in 7 of the 12 projects) and by Dutch consultancy companies (in 3 cases).

Contributions of partners:

- The lead private sector players in this category are (international collaboration) branches of Dutch drinking-water firms that support their 'colleague' operators in developing countries. They operate on the basis of their corporate social responsibility agenda and the money that they contribute is CSR/grant money¹³ (which means that there is no commercial investment and no return on investment is expected). In this sense, they simply leverage additional public grant money through these PPPs for their own projects.
- The medium and long-term business case in these projects mostly centres on the reduction of

non-revenue water. This is to make the utilities more financially and economically viable, covering their operational expenditure and preferably also an increasing part of their capital expenditures. This, in turn, allows the utilities to a) extend their services and coverage to additional consumers, and b) over time to become more attractive to other investments, such as soft loans from the World Bank or other sources. In general, however, the case for such economic viability is relatively long-term (for example, ten years or more) and not necessarily at the end of the present PPP project duration. The present PPPs are not expected to be able to continue without additional finance after the present project period.

A2. Innovative technology for water harvesting and storage

This category contains one project that focuses on creating a water-harvesting solution for community water supply in a dry region of South Africa. This project and category are unique within the FDW portfolio as it is the only project where technology export and application by Dutch companies is the main driver.

- The **lead private partners** are a combination of four Dutch companies that provide components for the water harvesting and storage solution. They aim to test this under real conditions to show its effectiveness and thus work towards its application on a larger scale with lower costs. The project is unique within the FDW portfolio as the **lead private actors** are (medium-sized) Dutch enterprises with the ambition to develop their business, i.e. piloting a water harvesting system.
- **Other partners:** The Dutch lead actors work with a public water utility responsible for water provision to local communities in the area concerned. Two research institutions support the Dutch companies in developing and installing the technological applications; a South African not-for-profit company (NPC) takes care of embedding the system in the communities. There are no NGOs involved (although the NPC can be seen as such).

¹³ Since 2008, Dutch law allows Dutch drinking water firms to spend 1% of their turnover on international activities related to poverty reduction. This might explain the use of grant money in FDW projects.

- The **core focus** is on developing and testing innovative and affordable technology by installing a new technical water harvesting and storage solution in 20 communities.
- The **development benefits** of the project are improved provision of water to the local community, both in terms of security and quality. In addition, technical facilities include elements like a playground and a class/meeting room.
- In terms of **business case/financial sustainability**, this project seeks to provide the regional public water authority with an alternative water source that is cheaper than the present practice of importing water from other regions. For the lead Dutch companies, the ongoing business case is the export of their technology.

On this project the following further observations can be made:

- The project can be seen as closely linked with the water utility category as it concerns utility operations as well. This project is listed here as a separate category, however, as it has very different lead private partners and thus different business drivers as well.
- The project shows similarities with a number of projects in the 'inputs and technology' category of the FDOV PPPs, where export and marketing by Dutch companies is the main business driver as well.

A3. Financing mechanisms for water and sanitation delivery

Two projects fall under this category; one in Kenya and one in Benin. The project in Kenya is the only project in the portfolio with a central focus on sanitation.

- The **lead business actors** are a commercial bank (provider of financial services) and a manufacturer/supplier of water research equipment, both Dutch.
- **Other partners:** next to these private actors, NGOs and national public actors play significant roles, mostly for local embedding of the project activities.
- The **core focus** of the projects is on setting up financing mechanisms for the supply of safe drinking water and sanitation for now underserved households.
- The **development benefits** of the project relate

to access to safe drinking water and sanitation and strengthening of the supply chain in the water and sanitation domains respectively.

- The **business case/financial sustainability** underpinning the projects is based on setting up financing mechanisms that enable the supply side of the market (entrepreneurs/private services) to offer safe drinking water or sanitation to poor households. Next to this, the sanitation project also focuses on providing micro-finance to the demand side (enabling households to invest in improved sanitation).

Some basic observations and considerations on the project in this category are:

The projects:

- These projects are remarkable within FDW, as both focus on creating a fully sustainable commercial/market driven business logic in a way that most projects in FDW are not capable of doing.
- Although having some principle similarities, the projects are also quite different. What they have in common however is that they work on sustainable financing for services between private service providers and households.
- The drinking water project in Benin starts an investment fund to set up a 'flywheel' for water entrepreneurs who offer safe drinking water to rural households. Part of the income of the water entrepreneurs will flow back into this investment fund to buy new equipment and set up a new generation of entrepreneurs.
- The sanitation project in Kenya focuses more on the demand side as it provides micro-finance and awareness raising campaigns to households to stimulate their investment in sanitation. Stimulating private services by enterprises in sanitation for these users is a second component. Interestingly, this is the only sanitation project in the whole FDW portfolio.
- Thus, next to the fact that one project is in drinking water and the other in sanitation, a main difference between these projects is that one focuses more on the consumers, while the other focuses on finance for the provider.

Representation in the PPP:

- National public actors are heavily involved in both projects. In the project in Kenya, the Ministry of Public Health and Sanitation is involved to support

creating the demand for sanitation and for alignment with public health policy. The National Water Institute of Benin will be responsible for legislative and policy issues around the new structure of water entrepreneurs and acts as a national focal point.

- In both projects, NGOs are also involved: mainly to create demand/local sensitization of the activities among local communities. In the sanitation project, one NGO is involved in attracting investors for the microfinance products.

Contributions of partners:

- Although both projects are focused on creating a market driven business logic, the lead private partners do not commercially invest and are not directly part of the financing mechanisms created. In the drinking water project in Benin the government will eventually manage the investment fund, while in the sanitation project local financial institutions provide the micro loans. The financial contribution of the lead private partners consists of CSR/foundation money to set up the project.

A4. Improved WASH governance through M&E data

This category consists of only one project, in Ghana, focusing on improving the WASH sector in rural areas through an improved monitoring system.

- The project has no clear **lead business actor**. The private sector involved consists of an international cooperation branch of a Dutch company, probably for CSR reasons, and a local phone provider, who will benefit from the project through increased demand for its mobile services. Both cannot be considered lead partners.
- Significant involvement comes from the Ghanaian government, who also financially contributes to the project. **Other partners** involved are a knowledge institute in water (the applicant), and two NGOs.
- The **core focus** of the project is on gathering and making available data on the status of rural water and sanitation systems to improve planning, maintenance and repair.
- The **benefits** of the project lies in improvements in water governance through improved

information systems. These benefits will lead to increased access and maintenance of water and sanitation facilities in certain rural areas of Ghana.

- The overall project does not have an explicit ongoing business case or model for **financial sustainability**, and may thus be expected to require ongoing public finance or subsidy.

The project:

- The key and innovative proposition of the project is to gather information on the status of water and sanitation systems in rural Ghana on a large-scale by using mobile phone technology and uploading the data in a central data base. This will inform government planning, repair and maintenance activities/services and will also be available to other stakeholders, such as municipalities and local services providers.
- The project has attracted considerable support from other donors, but as far as can be seen, has no business case or financing strategy for running the activity more independently, apart from the continued use of public resources. The local phone provider will benefit from increased business because of increased service demand. However, this business case is only a (relatively small) part of the project and the mobile phone provider does not invest in the project itself. The financial contribution of the lead private partner probably consists of CSR money with no return on investment expected.
- As mentioned before, this projects shows some similarities with the benchmarking projects in Bolivia and Kenya under A1, as these also focus on data collection to improve efficient water management. The Ghana project differs, however, in the sense that end-users are the data collectors and that different stakeholders, such as municipalities and (private) service providers as well as national agencies, will use these data. The benchmarking projects under A1 are entirely focused on improving the water utilities themselves and are driven by the ambition to improve the performance of these utilities.

Contributions of partners:

- Financial contributions are coming from the local public sector and a major international private foundation. There are no contributions by commercial firms. In that sense the public-private character of this project is thin.

B. Efficient and sustainable water use, particularly within agriculture

This policy subtheme of FDW focuses on the improvement of water use in irrigated and rain fed agriculture, and to make this more sustainable. Efficient water use will allow for a sustainable increase in the production of food- and production crops. It will ensure the preservation of natural resources and allow for higher resilience of the food supply to the consequences of climate change. Such efficient use is also expected to lead to an improvement in the lives of other small farmers, laborers, fishermen, and people working in animal husbandry.

There is one category of projects that falls under this subtheme.

B1. Improved irrigation and irrigation management

This category contains five projects located in Ghana, Palestine, Sri Lanka, South Africa and India¹⁴. Their key characteristics are:

- The **lead private actors** are private actors in the country concerned (in three cases these are companies; in one case a cooperative users organisation; and in one case a joint venture founded by both smallholders and processing mills) that seek to manage an irrigation system for agriculture.
- **Other partners:** forms of users' organisations are playing a prominent role in four of the five projects. Public agencies, knowledge institutes and NGOs are also participating.
- A **core focus** is on improving and running the infrastructure effectively, and on creating economic drivers to make the irrigation systems more sustainable. In three cases, this is combined with a broader engagement aimed at stimulating agricultural production.
- The **development benefits** of the project are in terms of farmers' access to irrigation water (and services) and in terms of sustainable management of the infrastructure (including

some environmental **benefits**). This, in turn, is expected to lead to farmer's improved production and income increase. In at least two projects, the aspect of improved water foot-print (water used/ volume of crop produced) is also considered a primary benefit.

- The **business case/financial sustainability** underpinning the projects is based on the profitability of irrigated agriculture for farmers in general and of efficient water use in particular. In turn, this feeds the financial sustainability of the infrastructure, its management, and the supply/ turn-over of processing firms/buyers of the farmers' produce.

The following further observations and considerations can be made about these projects:

The projects:

- The business cases centre on irrigated agriculture, the management of irrigation systems and improved productivity for buyers/processors.
- These projects do not provide drinking water to consumers or enterprises - only irrigation water to farmers. In one case, the irrigation project uses wastewater from urban consumption and can thus be considered to be downstream from the utility and drinking-water projects.
- All five projects have environmental elements: sustainable productive use of water in general, more efficient use of water and, in one case, also the reuse of wastewater with productive use of the nutrients contained in it.

Representation in the PPPs:

- In all cases it are both the commercial firms and smallholder farmers that seek to improve the irrigation infrastructure. However, the precise business drivers of the private actors in the various cases are somewhat different. In the Palestinian case, a firm running a town's sewage system will invest in irrigation infrastructure and seeks to operate it on a commercial or full-recovery basis. In the Sri Lankan case, the infrastructure is owned by the farmers' organisations and the PPP centres on a better financing model based on user fees. In the cases

¹⁴ During the time of writing the extension of this portfolio scan, however, the projects in Sri Lanka and Palestine have been put on hold. For more information, see the summary report of the interviews that were undertaken as a contribution to the Mid Term Review of FDW in autumn 2015.

of Ghana, South Africa and India, agricultural firms invest in farmer's use of irrigation infrastructure to expand their production.¹⁵ In the case of Ghana, an agricultural firm develops and manages a nucleus farm and sells inputs and buys produce from the smallholders.

- In these cases, one finds relatively less involvement of the local public sector than in other FDW categories. In Sri Lanka and India, the local public sector is absent from the official partnership, while in Ghana, Palestine and South Africa, the local public sector mainly plays a supporting role. However, engagement of the local public sector in certain cases is vital, for example in stimulating wider (system) change with the help of the interventions.
- In all cases, there is a clear degree of engagement of water users, sometimes supported by NGOs.

Contributions of partners

- This category contains the only projects within FDW in which real commercial operational and financial investments are made by the lead private partners. In three cases, private actors make significant financial investments in irrigation infrastructure, expecting a return on investment through buying the improved production of farmers benefiting from the improved irrigation. In the Palestinian case, a firm seeks to operate irrigation infrastructure on a commercial basis. Only in Sri Lanka the private investment consists of CSR/foundation money.

C. Safe deltas and improved basin management

This FDW policy subtheme is about the sustainable management of river basins, which aims to ensure that all basin management and water using groups (households, fishery, agriculture, industry, safe deltas hydropower, and nature) have enough water and that this water meets the quality standards – while sustaining natural resources. This theme also aims to create a safe living environment by preventing disasters such as large floods. It allows for regulation and mitigating the consequences of climate change.

Two categories of projects can be distinguished under this subtheme on the basis of their change logic.

C1. Safe deltas

One project in Indonesia falls under the Safe Delta category and in that sense is an exception in the portfolio.¹⁶ Its main focus is on building resilience along eroding delta coastlines in Northern Java.

- The **lead actor** is a foundation owned by two Dutch dredging companies. The foundation brings together several Dutch stakeholders to foster new coastal zone management solutions.
- **Other partners** are two Dutch knowledge institutes, one NGO and one engineering company (all Dutch) and two Indonesian Ministries.
- The **core focus** of the project combines civil engineering with mangrove rehabilitation to build safe and adaptive coastlines, while simultaneously introducing sustainable land use.
- The **development benefits** of the project are restored livelihoods of coastal communities through restored ecosystem services (or natural capital) of coastal zones in Northern Java, and land/coast protection.
- The **business case/financial sustainability** underpinning the project is based on investing in the prevention of further coastal erosion, which helps coastal communities to sustain their livelihoods. A proportion of communities' sustained incomes and profits go to a community

¹⁵ In the case of India, a large multinational firm is part of the PPP, although it is not an active partner; it only contributes cash given its interest in the sugarcane sector. ¹⁶ This project was approved under the second call. Although the own financial contribution for the Safe Delta subtheme was lowered from 40% (first call) to 30% (second call), it has only attracted this one project so far.

fund, which in combination with government funds will go to the maintenance of the coastline. There is no business case for the private partners in the conventional sense.

Some additional comments to this project:

The project:

- The project is part of a wider coastal zone management program of the leading foundation. This project is meant as a flagship project to inform and inspire coastal zone managers from government and the private sector.

Representation in the PPP:

- The leading foundation is owned by two dredging companies, but all Dutch partners in this PPP are a member of this foundation. The foundation aims to facilitate collaboration among different stakeholders in coastal zone management.
- One knowledge institute contributes to the technical design of the coastal defense measures; the other knowledge institute and the NGO are responsible for the more socio-economic aspects (such as the aquaculture and mangrove rehabilitation measures) of the project. The NGO also takes up the task of community facilitation and local embedding of the intervention.
- The Indonesian Ministries' role is to align the project with existing programs and policies and to eventually replicate and scale this flagship project.

Contribution of partners:

- The foundation, owned by two Dutch dredging companies, makes the largest financial contribution to the project, even though there is no clear business case. This project however helps the companies to position themselves for future, similar activities; the proposed project is part of a wider coastal zone program that aims to consolidate the experiences and solutions into mainstream use. The private contribution therefore consists of foundation money, but strategically used, as the dredging companies hope that their investment leads to engagement in similar projects.

C2. Improved basin management/ IWRM

The core rationale for the project in this category is built on improving integrated water management in large catchment areas (including the underground aquifers). The only project in this category is in Colombia.¹⁷ However, as mentioned under A1, it must be noted that two water utility projects in Ethiopia also have significant IWRM components; they are however not shared under C2 as their first focus is on (and main budget goes to) reducing NRW.

The key characteristics of the project in Colombia are:

- The **lead actors** are a mix of local (public or private) sector organisations and the international private sector. The two major foreign multinationals engaged are interested in the long-term sustainability of water resources for its own business process.
- **Other partners:** there is significant involvement on the part of the public actors concerned, including in financial contributions. Two research institutions and an NGO are also engaged.
- The **core focus** is on improving integrated water resources management in large catchment areas. The project also includes measures in irrigation, climate change adaptation, etc. at a lower level.
- The **development benefits** of the project are improved water management in the catchment areas and on farms, thus safeguarding (as much as possible) the long-term use of the water for productive and other uses. The project also relates to climate change and environmental issues.
- The **business case/financial sustainability** underpinning the project is a combination of a) long-term macroeconomic advantages of good IWRM with b) improved (cost-) efficiency and sustainability of the specific productive uses. Whether these actually constitute a financial basis for the continuation of the current project and PPP beyond the present funding is not immediately clear.

¹⁷ Note that in this scan this project is placed in another category than is done by RVO/DGIS. They have labeled this under efficient water use. The project however has many more and wider components and its drivers have to do with a much more integrated and basin oriented view on water management. See further details in this section.

In reviewing this project, the following further observations and considerations can be made:

The projects:

- Because of the broad integrated water management ambitions of this project, it is characterised by collaboration with a wide range of stakeholders, and an investment in the improved knowledge of water management practices and technologies.
- While the project aims at clear long-term water-management benefits, the direct business and financing cases for the continuation of the improved IWRM practices stimulated by the project is, however, not been clearly specified. In this sense, sustainability remains unclear.
- Like category C1 (Safe Deltas) the project aims to safeguard the long-term use of natural resources for productive use: however, the Safe Delta project aims at safeguarding water (and aquaculture/land) for maintaining the livelihoods of coastal communities in general, while the project in this category focuses on a particular crop (coffee) in view of the interests of the multinational firm(s) and producers federation engaged.
- As mentioned, two water utility (A1) projects in Ethiopia show similarities with the project in this category; both projects have an IWRM component, focusing on bringing a wide range of stakeholders together to improve their capacity in water resource management. One of these projects even spends almost one third of its budget on IWRM. However, the IWRM component is only one element of these projects, as their core focus is on reducing the NRW for water utilities. Moreover, the project in Colombia differs in the sense that the leading multinational firms are interested in the sustainability of water resources for the production of their core commodity; the projects in Ethiopia are led by a Dutch drinking water firm with CSR motives.

Representation in the PPP:

- The project is not led by the multinational firms. The applicant is a national coffee farmers' organisation.
- A national ministry is seriously engaged, which is also reflected in significant financial contributions. Research institutions are also strongly engaged.
- The major multinational firms engaged are fundamentally interested in the long-term sustainability of supply for their core process. The commercial firms have decided to engage in and invest in what is basically a public good and a related public function: the sustainable availability of water resources and its management in a large catchment area. Clearly, the firms have incentives to invest in such long-term public endeavours, because they see that the sustainability of their supply base is at stake.
- An investment is being made in IWRM to counteract the increasing irregularities in water availability patterns (droughts and floods) for coffee cultivation. The direct engagement of large multinationals is in itself a fairly unique characteristic within the FDW portfolio.¹⁸

Contribution of partners:

- The multinationals are also providing a major financial contribution. This is no commercial investment in a direct business case, but rather money from their social responsibility budget (to be confirmed), strategically used to increase the likelihood of long-term operations and sourcing. As the project also addresses broader water concerns in the regions concerned, it can also be expected to strengthen the 'social and political licence to operate' for this company.

¹⁸ In this sense, this category of projects in FDW has aspects in common with the sourcing category of PPPs in FDOV.

4. Overall observations and issues emerging from this analysis

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4.1 Overall findings on the PPP portfolio

Having distinguished seven PPP categories, some initial overall observations on the FDW portfolio can be made regarding the wider ambitions of the instrument. Has FDW managed to draw private sector engagement? What is the business case of FDW PPPs and what are the indications on their sustainability? And finally, what is the extent of innovation of FDW and is FDW stimulating new approaches in the water sector?¹⁹

PPP Partners: who is involved in FDW?

- Clearly, the international cooperation branches of the Dutch drinking water companies, operating from their CSR agenda, constitute the largest group of lead actors/applicants in the FDW (approximately half of the total projects).²⁰
- In irrigation infrastructure (B1), the technology development for water harvesting (A2) and financing mechanisms for water and sanitation delivery (A3) categories, together a total of 8 projects, one can see the most clear-cut private sector leadership through lead actors and financial contributions.
- **Real commercial engagement** (commercial firms contributing financially in pursuit of directly improving their core business through the PPP) is only present in six of the eight PPPs mentioned above: the sanitation microfinance case in Kenya (where in-country financial institutions are opening a new market), the water-harvesting project in South Africa (where Dutch firms pioneer a new application for their technologies) and the irrigation projects in Ghana, Palestine, India and South Africa (where agricultural firms invest in expanding their production). These projects show that if there is real commercial engagement, there is also strong **private sector leadership** in the PPP collaboration.
- Two FDW categories – the irrigation and infrastructure (B1) and financing mechanisms for water and sanitation delivery (A3) PPPs – have very little **engagement of semi-public and public actors** compared to the other categories. The

financial contributions of national governments and (semi)public agencies are also almost absent in these categories. Engagement of (semi-)public actors is however necessary as public authorities can play an important facilitating role and are often in the position to stimulate wider (system) change.

- Except for the irrigation cases in South Africa and India, **conventional development NGOs** do not have leading roles (e.g. in project management or as applicant) in the PPPs but rather provide specific expertise (for example, in local embedding of the project). The presence of knowledge actors is slightly stronger.

PPP Business Case: indications on sustainability of the FDW PPPs?

- Across the portfolio, we see different types of private contributions made by private actors; financial contributions in the form of CSR/ foundation money, money used for business development and real commercial investments (both operational and in terms of finance) that contribute to improving the core business of a firm. The type of private contribution made has significant implications for the risks, **business cases and financial sustainability** of a PPP.
- The eight PPPs with commercial private sector leadership (B1, A2 and A3) are also the only ones in which a more immediate **case for the self-sustaining continuation of activities** (with less or no public money) is theoretically possible. In six of these the commercial ambitions of the private actors with the PPP means that they have a strong interest in making a real business case work.
- In all other cases, continuation will probably require significant public sector support. This does not mean that the projects are not contributing to a longer-term financial or economic logic or sustainability (this can be seen in the case of the water operators, for example). But the lack of introduction of a major private sector driver or financing makes them look more like conventional aid projects.
- The business cases and financial sustainability of the PPPs in the operator/utility (A1), safe deltas

¹⁹ These questions also come up in the other studies that were undertaken to contribute to the MTR: the study on weakly populated segments, the summary report of the interviews and the study on non-approved projects. ²⁰ There are various explanations for this and it has also provoked several discussions. Please see the MTR and contributions to the MTR, as this will not be discussed further in this factual portfolio scan.

(C1) and improved basin management/IWRM (C2) PPPs are not always clear.²¹

- Generally, a large part of the budgets of FDW projects consists of a **combination of public and private (CSR/foundation) grants** for which no return on investment is expected. This raises questions about the sustainability of the present PPPs and about their perspectives for institutionalisation, moving on, replication, and scaling. It also raises the question if these PPPs really create more market-based sustainability than other, more conventional projects and programs in the water domain.
- The improved basin management/IWRM project in Colombia is remarkable, as **the private sector is contributing significant financial resources to a public good issue**. This is the only case of such direct financial contribution in the FDW portfolio.

Innovation: does FDW stimulate new approaches and Dutch expertise?

- 17 of the 23 FDW PPPs are focusing on drinking-water utilities and irrigation management (categories A1 and B1, the two largest categories in the portfolio). Both constitute fairly well-known domains of infrastructure development and infrastructure and services management. This raises the question of whether the projects under FDW do help push the boundaries in these domains and foster **innovative approaches**. This question cannot be answered on the basis of the present analysis. It must also be noted that activities may be innovative in the particular local context of the project.
- A number of PPPs, especially those involving **Dutch service providers** (both commercial and non-commercial consultants), market, promote, and extend the coverage of Dutch expertise as vested especially in Dutch public water sector (drinking-water companies and water boards) and water and irrigation consultancy firms. However, broader Dutch expertise and businesses are largely absent from improved basin management/IWRM, as well as from the sewage and wastewater treatment domains. The technology development project in South Africa (A2) is the only FDW PPP where a market for Dutch technology is directly promoted.

4.2 Emerging policy issues and questions

The present scan was oriented at distinguishing 'PPP change logics', which means the variations in key logics through which PPPs seek to achieve development objectives. The specific and overall findings were presented in the previous chapter and above. They also point to some interesting policy issues and questions relating to the FDW instrument.

Types of PPPs

- To what degree is FDW actually a portfolio of public-private partnerships? Or in other terms: **what types of PPPs and private sector engagements does one aim for?** This scan indicates that, in terms of funding and engagement, a substantial number of FDW projects has limited engagement of real commercial parties (and related commercial engagement and business drivers). 'Private' is thus indeed broadly defined within FDW and a considerable number of 'private' contributions consist of CSR/foundation money. There seems to be a dilemma between a) the deeper ambitions of the 'aid & trade' agenda to make aid interventions more market driven and sustainable, and b) the 'public good' nature of a significant part of the present portfolio and the little direct commercial engagement that it manages to attract. This dilemma needs further thought in shaping a possible 3rd call and may include looking more precisely to specific sub-sectors within the FDW ambition.

Focus of PPPs

- A related question to the one above concerns the **subthemes that are to be stimulated**.²² The present portfolio focuses on specific parts of the 'Drinking Water and Sanitation' and 'Efficient Water Use' themes. The third FDW subtheme, 'Deltas and Water Basin Management' contains few projects. Other ill-populated domains are sanitation (with only one project) and wastewater treatment and solid waste. A relevant policy question therefore is whether the Dutch government seeks to better cover the domains

²¹ For further comments/views of the PPPs regarding business cases and financial sustainability, see the summary report of the interviews. ²² For further analysis, see the study on weakly populated segments.

(and which ones in particular) that so far have been drawing little projects and how that can be done.

Pro-poorness

- Though all the projects have, of course, been screened against the FIETS criteria, the **specific pro-poorness** of PPPs has on average not been detailed very strongly. For example, disaggregation of the impact against wealth status and cross-subsidising for poor populations are not or hardly found, at least in the proposals. This raises the question how important pro-poorness is vis-à-vis the private sector engagement ambition and how these two objectives can best be combined.

Promoting Dutch expertise

- To what degree has the portfolio been **promoting Dutch technology, knowledge, and products?** At this stage, the portfolio's emphasis from this perspective (in line with the dominant types of PPPs) is mainly on two segments: drinking water expertise and irrigation expertise. Other technical fields and other interests (from technology and export firms to expertise vested in NGOs or in knowledge institutes around IWRM/deltas) are less well represented. This raises the question if using Dutch expertise is something FDW should aim for more prominently, or that it is enough as a desirable "by-catch".

The four larger policy questions raised above require a deeper analysis and discussion of a) the PPP possibilities and limitations of the various subthemes within FDW; and b) the ambitions and priorities of the Dutch government vis à vis the FDW as a whole as well as the specific subthemes and categories.²³

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²³ These questions have been partly addressed during studies undertaken for the Mid-Term Review of FDW in 2015 and expected to be published in summer 2016.

Appendix I: The FDW in context

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The creation of the FDW and FDOV financing mechanisms in 2012 is seen as an important development in the financing strategies of the Ministry. Two main objectives of FDOV and FDW are:

- a. Through these financing mechanisms, the Ministry seeks to engage the private sector more actively and directly with the main development cooperation objectives and themes: water and food & entrepreneurship, respectively. Both offer broad space with several possible subthemes for which project proposals can be submitted. For both, the basic logic is to combine significant private sector contributions with public funding by the Ministry. The underlying rationale is that, by requesting the private sector to engage, a foundation will be laid for economic and financial sustainability and possible scaling up.
- b. While the Ministry has several funding mechanisms for private sector development, and is currently supporting the Dutch private sector in various ways to engage in developing countries, the FDW and FDOV are new in that they explicitly focus on funding mixed consortia of private, civic, knowledge, and public actors to address development challenges. This approach is also referred to as 'the Dutch Diamond'. The approach seeks to use the potential innovation and realisation power of multi-sector collaboration. An underlying assumption is that this can help address more complex, systemic, or collective action challenges in the domains concerned, and may lead to innovative solutions for persistent problems.

Other relevant dimensions of FDOV and FDW are:

- The creation of the two financing mechanisms must be seen in the context of broader changes that are still unfolding in the Dutch development cooperation landscape. In particular:
- The recognition that the economies of many developing countries are growing, and that aid plays a diminishing role and should be used specifically for critical social or breakthrough issues.
- The ambition to make 'aid and trade' more mutually reinforcing, including putting a growing emphasis in Dutch international collaboration

policy on serving the interests of the Dutch private sector and using their engagement for development purposes.

- A reduction in NGO funding and the anticipated replacement of the existing civil society financing mechanism (the so-called Co-financing System or MFS). The facilities thus constitute a space for new collaborations and endeavours.

While both facilities have several key characteristics and elements in common, they also differ from each other in the following ways:

- The minimum requested PPP contribution in FDW is lower (at 40%, and 30% for the subtheme Safe Deltas and Improved Basin Management) than in FDOV (50%). At least half of this contribution must come from the private sector.
- In FDOV, the MoFA as financier is also participating as a formal partner in the projects (often through the Dutch Embassies in the countries concerned).

Appendix II: List of FDW projects by category

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A1. Improving the technical and financial performance of water utilities and operators

FDW12RW01

Country: Rwanda
Title: PPP for increased access to Sustainable Water Services in Rwanda (SusWas)
Lead actor: Vitens Evides International BV

FDW12BD03

Country: Vietnam
Title: Climate Change and Drinking-Water Supply in the Mekong Delta, Vietnam
Lead actor: Vitens Evides International BV

FDW12MW01

Country: Malawi
Title: Malawi: Water Demand Management to Mitigate Water Shortages
Lead actor: Vitens Evides International BV

FDW12ET06

Country: Ethiopia
Title: Source to Tap and Back
Lead actor: Vitens Evides International BV

FDW12TZ02

Country: Tanzania
Title: Networking WASH projects in Mara Region, Nwash
Lead actor: Dunea

FDW12ET03

Country: Ethiopia
Title: Sustainable Water Services in Harar Regional State (SWSH)
Lead actor: Vitens Evides International BV

FDW14BO11

Country: Bolivia
Title: Benchmarking for Water Utilities in Bolivia (Bench-AGUA)
Lead actor: GIZ

FDW14KE13

Country: Kenya
Title: Performance Enhancement of Water Utilities in Kenya (PEWAK)
Lead actor: Aquanet BV

FDW14RI15

Country: Indonesia
Title: PROPOPI - Towards Pro-poor Private Investments in water supply
Lead actor: Perusahaan Daerah Air Mimum (PDAM)

FDW14PH03

Country: Philippines
Title: Sustainable and resilient pro-poor water supply, Cebu
Lead actor: Vitens Evides International BV

FDW14UG43

Country: Uganda
Title: Alternative Approaches and Tools for Improved Water Supply and Sanitation for Towns in Northern Uganda (ATWATSAN)
Lead actor: National Water and Sewerage Corporation (NWSC)

A2. Innovative technology for water harvesting and storage

FDW12SA01

Country: South Africa
Title: Greensource: a Green, Sustainable, and Safe Water Source
Lead actor: Ten Cate Nederland BV

A3. Financing mechanisms for water and sanitation delivery

FDW12KE03

Country: Kenya
 Title: Financial Inclusion Improves Sanitation and Health (FINISH)
 Lead actor: SNS Asset Management

FDW14BJ18

Country: Benin
 Title: Small Water Wells Entrepreneurs (SWWE)
 Lead actor: Stichting the Eijkelpkamp Foundation

A4. Improving WASH governance through M&E data

FDW12GH06

Country: Ghana
 Title: SMARTer WASH
 Lead actor: Community Water and Sanitation Agency (CWSA)

B1. Improving irrigation and irrigation management for better returns

FDW12GH02

Country: Ghana
 Title: Integrated Water Management and Knowledge Transfer in the Sisili Kulpawn Basin, Ghana
 Lead actor: Wienco Ghana Ltd.

FDW12OT01

Country: Palestine
 Title: Jenin Wastewater Reuse Project
 Lead actor: Padico

FDW12SL01

Country: Sri Lanka
 Title: Calling the Kings
 Lead actor: Rabobank Foundation

FDW14SA19

Country: South Africa
 Title: Reducing the water footprint of smallholder sugarcane producers
 Lead actor: Solidaridad Network Southern Africa (SNSA)

FDW14IN20

Country: India
 Title: Increasing water use efficiency in sugarcane growing in India
 Lead actor: Stichting Solidaridad

C1. Safe deltas

FDW14RI14

Country: Indonesia
 Title: Building with Nature Indonesia – Securing eroding delta coastlines
 Lead actor: Stichting Ecoshape

C2. Improved basin management/IWRM

FDW12CO01

Country: Colombia
 Title: Intelligent Water Management: Public-Private Partnership for the Implementation of an Integrated Water Management System towards a Climate Intelligent Coffee Sector in Colombia
 Lead actor: Nestlé

PPP

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