

# 2nd Mid Term Review of the Sustainable Water Fund (FDW)

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Final Evaluation report





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# Management summary

This second mid-term evaluation of the FDW programme was commissioned in the summer of 2022. This document presents the final evaluation report, including overall conclusions and recommendations, as well as the underlying analyses.

The main objective of this second mid-term evaluation (MTR) is to independently review the ongoing work of the FDW programme and projects. This is the second MTR; the first mid-term evaluation was completed in 2016. Complementing previous evaluations, this second MTR is meant to focus on the long-term results and sustainability of the FDW programme. These results are expected to be achieved through direct effects and systemic changes resulting from the PPP interventions of FDW projects.

## About the FDW programme

The Sustainable Water Fund programme (FDW) is a Public-Private Partnership (PPP) facility that aims to contribute to water safety and water security in developing countries. The FDW programme is designed by the Dutch Ministry of Foreign Affairs and is being implemented by Netherlands Enterprise Agency (RVO) since its start in 2012. FDW has used its budget of EUR 150 million to support 42 public-private collaboration projects in 24 countries. Some projects that started in 2012 (first tender) or 2014 (second tender) have been completed. Other projects, mainly from the 2016-2017 (third) tender are still in implementation and continued until 2025-2026.

The figure below depicts that the FDW programme provides donor funding to public-private partnerships. These partnerships typically comprise organisations from the private sector, organisations from the public sector, NGOs and/or organisations from academia. The interplay of activities by these organisations through the partnerships and with guidance and support from RVO is intended to generate benefits that are sustained beyond the period in which RVO offers donor support.



Each of these types of organisations plays an important role within the partnerships, and an archetypical division of roles can be observed. Naturally, the allocation of roles and responsibilities within each partnership is tailored to specific details of the project they implement. Overall, we identify the following archetypical roles:



**Private-sector organisations** – These members of the partnerships implement cost-efficient solutions to real-world problems at large scale (e.g. hardware, infrastructure, facilities).



**NGOs** – Within the partnerships NGOs typically mobilising local communities and stakeholders, and generate the deeply needed trust and cooperation.



**Academia** – Universities, research institutes and other organisations in academia provide the partnerships with state-of-the-art knowledge and insights on long-term solutions.



**Public-sector institutions** – The role of organisations from the public sector is typically to strengthening the enabling environment for projects to thrive.

## Overall conclusions

The MTR has a clear learning ambition and should lead to 1) strategic policy lessons for NL-MFA on PPP and market-based approaches in development cooperation and 2) lessons at project level to improve the effective operation of ongoing projects and the programme as a whole. The timing of the study also aligns with broader initiatives of MFA and RVO to reflect on the use of PPPs as integrated intervention strategy.

### Effectiveness of the Sustainable Water Fund

Our evaluation shows that the FDW programme is effective in getting public-private partnerships off the ground and that these partnerships conduct the activities to which they agreed. The programme is also effective in the sense that these activities produce the tangible results they were expected to deliver.

Our analysis shows that in this regard WASH PPPs are generally more effective than IWRM and WEA PPPs, while private PPPs are more effective than mixed PPPs.



The WASH infrastructure established by the PPPs is typically working well.



WEA projects are effective in increasing knowledge of water/climate proof practices. They also succeed in establishing drip irrigation and wastewater re-use systems, though on a rather small scale.



While not all targeted beneficiaries are reached by the projects, case-study level analyses demonstrates that the beneficiaries who are reached are generally satisfied with the activities carried out by the project and feel involved with the project.

However, the positive outcomes that are expected to occur as a consequence of these results are a more challenging aspect to FDW effectiveness.

- FDW project partners typically succeed in implementing the activities foreseen in their project plans. They conduct trainings, design and implement infrastructure, contribute to capacity building, perform activities that aim to leverage additional financial investments, and attempt to devise inclusive business models to sustain project benefits.
- In many cases, FDW projects are effective in generating tangible results at output level. Infrastructure is put in place, stakeholders and communities are consulted, technical solutions are tailored to local challenges, and water systems such as drip irrigation are provided to project beneficiaries.
- Noticeable change at outcome level yet remains challenging for project partners to achieve. Implemented WASH infrastructure does not always result in increases in affordable and reliable water, and associated services are not always maintained. IWRM projects typically do not yet result in alignment across institutional borders or in the development of integrated plans. Subsequently, further investments are not (yet) mobilized and decision making is not (yet) more inclusive in nature or more informed compared to the period before the project started. WEA projects do not always result in increased cohesion of water use practices or better regulations in terms of water and land rights, nor do we observe a consistent widespread application of water-saving techniques.

Three aspects appear to be important causes for the desired changes not (yet) coming to the fore:

1. Maintenance of WASH infrastructure requires funding that in FDW projects typically is foreseen to come from revenue streams from users of the infrastructure (e.g. households that use clean water). Generally, the poor segment of these users is not well positioned to pay for their water use to the extent needed for the infrastructure operators to break even on maintenance. As such, the water provided is typically not affordable for the bottom of the pyramid, and maintenance of the infrastructure remains dependent on external funding.
2. Government actors at the ministerial level are generally not involved enough to remove bottlenecks to project effectiveness and to improve the enabling environment that would allow the project to thrive. Organizing alignment across institutional borders may require a strong stance from national-level government actors. Water affordability and the viability of business cases may require state-level interventions in country- or district-wide water tariffs or alignment with development programs that aim to increase purchasing power of local households. Water and land rights are typically subject to legislation at the national level, just as certification and registration processes are overseen by national-level bureaucracies.

3. For some projects, sustainability of project benefits rests on successful handover of tasks and responsibilities to local communities. These local communities are not always in a position to effectively conduct these tasks and take on these responsibilities, e.g. in terms of building financial resources, and scheduling, coordinating and overseeing maintenance work.

### Impact of the Sustainable Water Fund

Our analysis shows that the FDW rationale at programme level is highly relevant to water safety and water security in developing countries, and that also individual project-level interventions are relevant in their design. Also, in our analysis, the support provided by the FDW programme to the public-private partnerships to conduct project-level activities is additional to the activities they would have otherwise undertaken. As such, the FDW programme appears to hold great potential for long-term impact.

Still, achieving significant impact is a challenge for FDW projects. Project partners find it hard to realise noticeable change at the outcome level of the Theory of Change. As these outcome-level project results are not always in reach, it is difficult for FDW projects to contribute to standard of living for target groups in terms of health, water access, food production or income generation – i.e., to make development impact. Moreover, the market-based approach makes it challenging for PPPs to combine the intention to develop commercially viable business cases with the intention to reach the most vulnerable groups.

Also, as a result from project-level challenges at the outcome level, systemic change in the local water sectors is still difficult to achieve. Lasting professionalization of local water markets and structural improvements of the institutional framework of local water sectors will benefit from demonstrable success of FDW projects at the outcome level, with noticeable long-term changes for the targeted communities and vulnerable groups. Furthermore, project benefits could be sustained through commercially viable business cases, successful handovers of project activities to local communities, or multi-year commitments from local public-sector institutions.

At project level, FDW projects contribute to improving access to drinking water and water productivity, yet increasing yield or income appears to be more difficult. For IWRM projects, limited direct impact can be observed. Indeed, part of the projects did lead to improved access to water, better hygiene, or increased income. Yet, the interplay of local challenges is often not properly identified beforehand. As a result, projects often do not contribute substantially to the standard of living, or only on a relatively small scale. Also, reaching women and vulnerable groups is confirmed to be challenging and in need of more effective approaches. PPPs could pay more attention to a clear identification of their ultimate beneficiaries. Furthermore, allowing for more flexibility in the programme could strengthen its impact.

Several projects have the potential to bring about systemic change in the institutional framework and the lasting professionalization of the local water sector/market. To contribute to systemic change, acquired knowledge should be institutionalized and local knowledge and governmental institutes could be more actively involved in PPPs. Finally, FDW generally induced few unintended effects.

### Efficiency of the Sustainable Water Fund

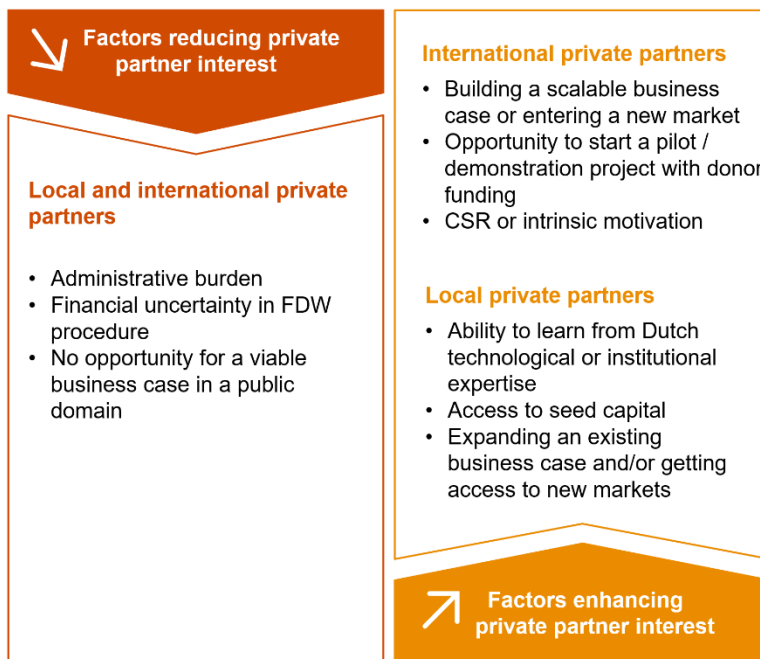
The great differences between FDW projects in theme, type of intervention, and local context, make it difficult to evaluate the efficiency of FDW at programme level. Additionally, the link between projects and the number of direct beneficiaries is not always clear, especially for IWRM and WEA projects. For WASH, general cost estimations can be made. On average, EUR 26 per beneficiary is spent, which is fairly congruent with spending on WASH interventions at other programs or institutions.

### Relevance and additionality of the Sustainable Water Fund

FDW projects predominantly focus on essential issues in the local water sector, and in their design they have high development relevance. Preliminary knowledge and analysis of the local context is a key determinant of both subsequent success and failure of projects. The PPP requirements of FDW may, but do not necessarily increase local relevance. Despite their best efforts, FDW interventions may not always be capable of effectively addressing problems. Problems in the water sector are complex and often interlinked with other development challenges, thereby increasing the need for a holistic approach and strategic cooperation. Linking FDW projects to other water related or livelihood funding instruments can enhance the influence and possible impact of FDW projects.

Actively engaging private partners within FDW PPPs for the long term and at strategic levels remains challenging, as the profitability of the water sector in developing countries is low, especially in a pro-poor context. To strengthen private partner involvement, it is important to build on solid existing business cases, and,

include partners that, for example, want to expand their market. In addition, the following factors are found to have the most significant influence on the interest of private partners in FDW PPPs:



FDW funding was essential for the projects to occur; hence the contribution of the programme is considered additional. Typically, private-sector partners in the PPPs would not have undertaken their project activities without the donor support from the FDW programme. FDW funding reduces the level of investment risks for project partners and FDW projects offer a platform for cooperation. Yet, FDW funding does not by default guarantee that commercially viable business cases are developed around FDW projects. Business cases that have been observed are often fragile, hence these projects are generally still reliant on donor funding after project completion.

#### The multi-stakeholder approach to solve constraints and open new opportunities for development goals

The complementary multi-stakeholder approach in the PPPs and the FDW programme contributed modestly to solving constraints and opening new opportunities for development goals in the water sector. FDW has surely been effective in establishing new partnerships and strengthening existing ones, yet ambitious FDW calls in which many different requirements were demanded may have evoked partners to overpromise on project goals, while time-boundedness restricts importance of a thorough problem analysis in the inception phase. Indeed, only a few projects fully met their project goals, or initial project goals are revised downwards during project implementation.

Nonetheless, the portfolio analysis shows that private-led PPPs are generally more effective and efficient compared to mixed PPPs. Furthermore, WASH PPPs are generally more effective than IWRM and WEA PPPs. Stronger involvement of the private sector in water sector projects could thus certainly have a positive impact on achieving project goals, yet the type of water project seems to be an essential element to consider in this regard. For IWRM projects, which are executed in a typical public-sector domain, a PPP approach is generally not instrumental to achieve development goals. For WEA projects, this applies to some extent as well.

Although projects do not always reach all targeted beneficiaries, the beneficiaries reached are generally satisfied with the project activities and feel involved with the project as well. Yet, projects often take place in a difficult context with large and complex local challenges. As a result, most projects only contribute to the standard of living on a relatively small scale. Hence, projects often do not meet the impact goals they have set.

#### The multi-stakeholder approach and increased private sector involvement/investment

Despite the PPP approach of FDW, engaging strong business driven commercial partners remains difficult. As the profitability of the water sector in developing countries is low, private partners do not always play an important role in the sector, especially in a pro-poor context. Hence, many projects find it challenging to develop a commercially viable business case that fits well with both the interests of a (local) private partner and the bottom of the pyramid. Projects often remain dependent on public funding. For WASH and WEA projects,

this evaluation highlights the importance of including private partners that can build on existing business cases and for example want to extend their market. Funding then reduces level of investment risks for project partners and offers a platform for cooperation. As many IWRM activities take place in the public domain, the PPP approach of FDW is not effectively resulting in increased local private-sector investments.

On the other hand, FDW funding was surely essential for most projects to occur, so the contribution of the programme is considered additional. Furthermore, most projects have high development relevance and address essential issues in the local water sector. Preliminary knowledge and analysis of the local sector is a key determinant of both success and failure. Investing in an upfront analysis of the local context can pay off in terms of efficiency by helping mitigate risks during the project. The PPP requirements of FDW may, but do not necessarily increase local relevance. If local private parties consistently and actively participate in addressing the water-related issues, this certainly strengthens the development relevance of the projects, but so far this has not often been the case. By linking FDW to other water related funding instruments, the involvement of the private sector could be enhanced.

#### The multi-stakeholder approach and the continuity of interventions and approaches after projects end

Continuity of interventions and impact is yet achieved in only a few projects. To date, the ability and/or willingness of both local and Dutch partners to continue project activities is often limited. Also, in the long term, projects are not always backed well by the local government and private parties. Transferring local responsibility is generally challenging, due to perceptions amongst local communities that 'water is a right'. Aside from poverty, this compromises the willingness to pay. Thus, to enhance sustainability and upscaling, PPPs could be set up to align with local developments, while local partners could have stronger presence in the partnership. By institutionalising knowledge of and capacity for the interventions at local partners, this may help induce systemic change as well.

Furthermore, despite the requirement of including private partners within PPPs, revenue generation is not central or even relevant in a number of FDW interventions. Hence, these PPPs did not achieve a financially sustainable business model at the end of the project period. Moreover, projects often lack an exit strategy. Upfront risk analyses regarding both the financial and institutional sustainability of the PPPs can be conducted more extensively. Post-project financing opportunities or demands are essential elements for the exit strategy, thus should be taken into account at the early stages of the project.

#### The combination of public and private sector contributions to reach FDW objectives

To date, the combination of public and private sector contributions has not been convincingly instrumental to reach FDW objectives. In most PPPs, partners had complementary roles and the intention of working towards a shared goal. However, initial expectations of partners' roles were not always met during the project. This especially holds for the contribution of public partners. In some cases, projects did not include public partners at the needed levels, i.e. with the necessary mandate to play a decisive role in the local water sector. PPPs could align interventions more systematically with other public sector activities and initiatives, yet are challenged by ambiguities in institutional responsibilities, staff rotations, and limitations to public budget expenditure. In addition, the role of the private sector in a pro-poor context is not always as evident as could be expected. Establishing a sustainable business case in this context is challenging. The most successful business cases (for WASH and WEA) are built by aligning project objectives to an existing business case of a local partner – yet these business cases are still fragile.

For IWRM projects, private sector contributions are particularly difficult as the potential for a business case in this institutional context is limited, as the foreseen project benefits of IWRM interventions are typically non-rival and non-excludable in nature. Moreover, private-sector provision of such benefits may result in underprovision. If private technical expertise is needed, contracts can be made between government institutions and private-sector organisations, yet this is different from trying to sustain project benefits through a commercially viable business case. As such, IWRM projects primarily rely on public-sector contributions and the role of public sector institutions as custodian of the project. While the PPP structure has potential to contribute to reaching FDW objectives in WASH and WEA domains, the structure does not seem to bring clear benefits to IWRM interventions.

This evaluation also highlights the importance of including strong local lead partners within the PPPs. An upfront problem analysis is essential to determine which partner(s) are capable and willing of locally embedding the interventions at the institutional level, and if the intervention could bring long-term benefits. As the water sector is strongly affected by the public sector, it is crucial to set clear expectations on the roles and responsibilities of local public partners within the PPP. Finally, FDW projects do not seem to make use of strategic collaborations with other international, national or local development instruments. Embedding projects

in national development programmes or linking projects to existing programmes could significantly increase the influence of FDW projects.

## Recommendations at project level

The analysis presented in this evaluation report has provided the following general learnings and recommendations. We distinguish between recommendations 1) for current FDW projects and 2) for future projects.

### Recommendations for current FDW projects:

- **Continue a strong presence and commitment of local partners** – Maintain relations between partners by sharing project learnings during project meetings. Make sure there is a clear agreement on the roles and level of involvement of partners after project completion.
- **Design exit strategies to transfer responsibility to local communities and partners** – Exit strategies should include all activities that are needed to ensure a continuation of project results. This includes ensuring the sustainability of the business case and/or transferring responsibility to local communities or local partners. For instance, building the capacity of local communities or organisations to maintain the established infrastructure or making arrangements with public-sector partners to include continuation of project activities as part of their mandate. When still possible, include a 2-3 year transition phase at the end of the project. Carefully monitor the project-specific maturity level of communities or organisations to ensure long-term success after project completion. This also includes a period of follow-up monitoring and evaluation post-project (at least annually).

### Recommendations for future projects:

- **Ensure strong presence and commitment of local partners** – Because the water sector is still mainly a public-sector domain, commitment from public-sector partners is key. This includes collaboration at the local, regional or district and national level. Finding a suitable private-sector partner can be challenging. Look for a partner that has a clear interest in the partnership (e.g. because of alignment with existing business activities) and has the capacity to take on a large role. To get local communities engaged in the project, an established NGO with an extension network is essential. A track-record in the particular region in which the project is active can help the project by acting on a trusted relationship.
- **Allow time to carefully prepare in the inception phase** – Allow time to understand the local context and test key assumptions prior to the start of a project. This may increase alignment with the local context, increase project relevance, and increase the likelihood of success. The upfront problem analysis should include a needs-based assessment (involving local beneficiaries), an institutional / stakeholder analysis to find the right public-sector partners, and risk analysis and contingency plans to mitigate anticipated risks. Allow time before setting KPIs until the inception phase is finished. Ensure the design of a suitable exit strategy should also be included in the inception phase. To ensure the successful transfer of responsibility to local communities/public-sector partners, include a 2–3-year transition phase at the end of the projects where this will be the case.
- **Build a strong relationship amongst partners** – Make sure to include the most suitable organisations in the partnerships. Find partners with complementary expertise, specify the role of each partner, set the right expectations, and assess commitment of the organisations before the start of the project. Work together based on a trusted relationship and on equal footing. A defined governance structure is helpful to ease decision-making (especially in challenging circumstances).
- **Ensure partners have a shared goal and are committed at the start of the project** – This also encourages partners to feel shared ownership and responsibility for delivering project results. These shared goals should be mindful of the local context and aligned with the national development strategy. In most areas, there are multiple other (donor) programmes who work towards a similar goal. Opportunities should be explored to link the shared goals other likeminded stakeholders and programmes, e.g. by collaboration across programmes and exchanging learnings. This could also improve sustainability and increase scaling potential of individual projects.
- **Focus on continuous monitoring, evaluation and learning (MEL)** – Embed a continuous monitoring, evaluation and learning framework in the project design and collaboration with partners. Focus on



outcomes instead of outputs when conducting monitoring & evaluation. When collected and structured properly, the M&E data can facilitate intermediate learning. Furthermore, gather feedback from end beneficiaries. This is a valuable source of information to assess the effectiveness and impact of the project.

- **Adopt an agile approach throughout the project** – The project should have a well-defined outcome and goal in mind, yet should allow for flexibility to adapt to contextual changes. Regular collaboration and consultation with RVO can help to explore the best or additional opportunities to make impact.

Figure 1 below summarizes the 6 pillars of project success for the FDW programme. Factors in black are *existing* success factors, factors in orange require more attention.

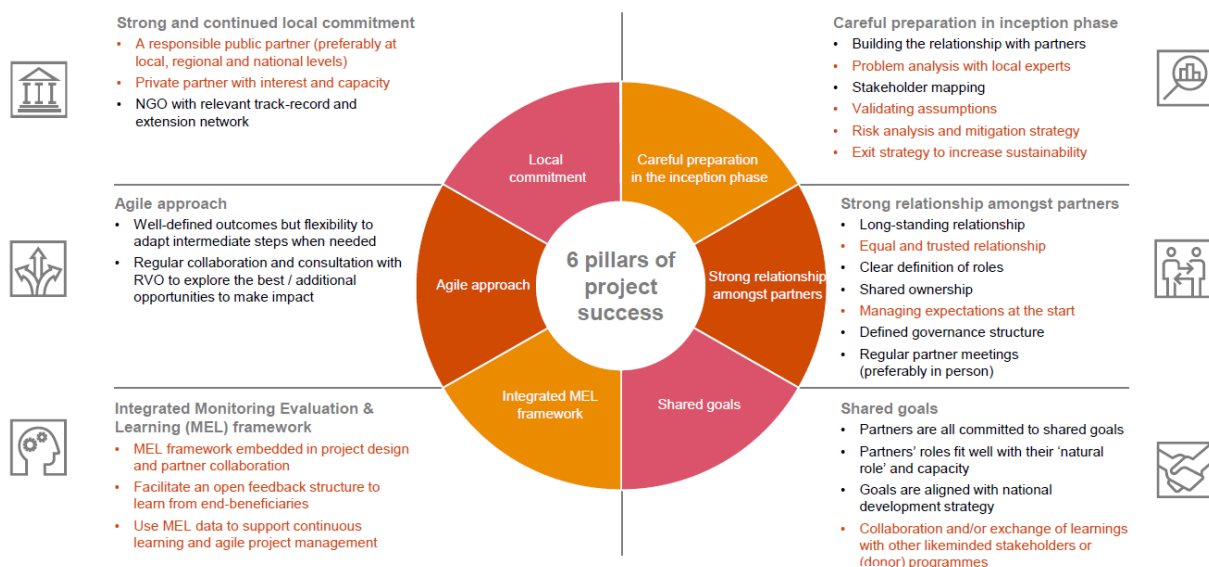


Figure 1: Pillars of FDW project success

## Recommendations at programme level

The following recommendations can help improve the effectiveness of future policies and programmes.

### Recommendations for current FDW programme-level activities:

- **Support partners in formulating an exit strategy** – Focus on embedding the project in the local context and on how project benefits can best be sustained. Ensure RVO is timely consulted and informed of the project's exit strategy. Provide support where needed (e.g. by providing examples or by helping projects find access to potential sources of finance).
- **Support partners with the institutionalisation of acquired knowledge** – Establish best practices with project partners on the continued availability of individual project staff and the institutionalisation of project knowledge. Also pay attention to partners' willingness to transfer knowledge and technology.
- **Facilitate targeted exchange of knowledge and experience amongst project partners and similar RVO programmes** – Provide various platforms (in addition to the FDW inspire sessions) to share knowledge and project learnings not only amongst FDW projects but also with similar (water or PPP) programmes.

### Recommendations for future FDW programme-level activities:

- **Extend the inception phase to at least one year** to facilitate a thorough problem analysis and thereby increase the likelihood of project success and sustainability. The inception phase proves critical to building a trusted relationship between partners, determining if the partnership is set for success, and whether project designs optimally align with the context. This recommendation adds to those mentioned in earlier studies (e.g. Caplan et al., 2022).

- **Support partners with setting up a monitoring, evaluation and learning (MEL) framework and generate a data system to keep track of portfolio impact** – Make sure to focus the M&E system on development impact and sustainability, rather than on project outputs only. Simplify the reporting requirements, yet at the same time do more serious checks on the quality of the data provided. Ensure partners report on DGIS related indicators on poverty alleviation and inclusiveness. Additionally, do not only focus on traditional M&E yet also ensure learning is embedded in the project designs.
- **Improve the measurability of IWRM projects** by including indicators that reflect IWRM's comprehensive approach, including indicators related to (changes in) water management, stakeholder involvement, (economic/environmental) cost and benefit analysis and (changes in) institutional arrangements as well as legal frameworks. For a more detailed overview of exemplary KPIs to measure IWRM impact.
- **When needed, allow for flexibility to make intermediate adjustments** – In line with previous evaluations, this evaluation also emphasized the need for flexibility and more risk-taking. Partnerships are evolving and need to be able to respond to contextual changes. Encourage partners to focus on sustainable (and if needed smaller) results, instead of promising ambitious targets that have limited chance of success after the project funding ends. A 5-10 % contingency fund in all project budgets in future programmes could be considered in order to address unforeseen project obstructions and to deal with the dynamics and risks observed in and around FDW projects.
- **Focus on the PPP framework as a means to achieve impact, not as an end goal** – The PPP framework should serve as an instrument to achieve societal impact in the water sector. The key question when developing a new programme is: To what extent should a new programme focus on the PPP framework as instrument (focus on the instrument), or the water problems to be addressed (focus on the objectives)? This evaluation has demonstrated that while the PPP is a helpful instrument in the WASH and WEA themes, it is not relevant to addressing IWRM issues. When focusing on the objectives, we recommend choosing 'traditional' development programmes to address IWRM issues. Additionally, reconsider the mandatory requirement of including a Dutch partner. Instead, increase emphasis on the participation of local government and check the level of contribution and commitment in advance - in the proposal stage and also after inception as a 'decision to fund'.
- **Future programmes could consider a phased funding approach and/or offering various funding modalities** – We recommend adapting different funding modalities to the needs of the different project stages. For instance, the inception phase could be financed as a separate tranche to allow for more flexibility needed for scoping and piloting. After the successful completion of the inception phase and a 'decision to fund', the remaining project period can be financed. This recommendation builds on the recommendations of previous studies (e.g. the MTR (2016) and Caplan et al (2022)).
- **Future programmes could consider context-specific frameworks** – The findings of this evaluation also confirm a favourable stance towards considering context specific frameworks (as shared in a reflection by RVO in 2018). Success is not guaranteed by adopting a 'one size fits all' approach, as specific regions require differentiated instruments. Future programmes could experiment with different types of funding modalities by assessing which funding modality matches the project context. For instance, alternative financing models or smaller subsidy sizes can be considered for fragile states. However, when allowing more (co-financing) flexibility in financing projects in fragile states, the sustainability of the business case is a point of attention. Therefore, developing a viable business model and exit strategy is critical to the success of this approach.

## Recommendations at policy level

The following recommendations can help improve the effectiveness of future policies and programmes:

- **Exploit synergies between different programmes (such as health, water and circularity)** – Water issues are multidimensional and require a holistic approach. In order to optimize their outcomes, FDW projects should exploit synergies between different programmes. For instance, water quality and sanitation issues are interlinked with health issues and with poverty issues. Exploiting synergies increases FDW's relevance and additionality.
- **Increase coherence of FDW and other development programmes** – Improve the embedding of the programme in national/international strategic development agendas as well as alignment with other

donor programmes. FDW projects only have limited influence in isolation, but when placed in a larger framework or linked to existing programmes they may have a higher chance of success.

- **Encourage learning exchange between all water & PPP MFA programmes** – Continue to pay attention to aligning project activities in the field, and also start activities that put platforms in place that facilitate knowledge sharing. In addition to FDW Inspire sessions, exchange can be encouraged between the various water programmes funded by the MFA.
- **Future programmes could consider country-specific calls** to increase focus and/or efficiency tailored to programme objectives. Ideally the programme first identifies the most urgent water related problems in a specific country. In close collaboration with the EKN network, partners are invited to submit proposals that come up with potential solutions. For instance, focus on one or only a few target countries (such as the Ghana WASH programme) and make sure to be present for a longer time period (for instance 5 to 10 years). By adopting a regional or country specific approach, it is also easier to align and leverage its efforts with other stakeholders and programmes (for instance, UNICEF, Blue Deal, and others). This recommendation builds on previous reflections (e.g. by RVO, 2018).
- **Focus on the key development themes that have highest priority to the Dutch MFA** – FDW's focus on multiple water themes, multiple development goals and various PPP requirements leads to overambitious projects that are complex to manage in a dynamic development context. Specify realistic development outcomes at the start of the programme that can easily be operationalised (and monitored during project implementation). This evaluation shared a similar observation as the MTR (2016) that *“key issues like poverty alleviation, inclusiveness and sustainability have generally not been sufficiently translated in operational terms with special reference to institutional sustainability issues”*.
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# 1 Introduction

## 1.1 Sustainable Water Fund programme and context

The Sustainable Water Fund programme (FDW) is a Public-Private Partnership (PPP) facility that aims to contribute to water safety and water security in developing countries. The FDW programme is designed by the Dutch Ministry of Foreign Affairs and is being implemented by Netherlands Enterprise Agency (RVO) since its start in 2012. FDW has used its budget of EUR 150 million to support 42 public-private collaboration projects in 24 countries. Some projects that started in 2012 (first tender) or 2014 (second tender) have been completed. Other projects, mainly from the 2016-2017 (third) tender are still in implementation and continued until 2025-2026. This year marks the 10-year anniversary of the FDW programme.

### *Main objective of the FDW programme*

The FDW programme was initiated to achieve the following goals in developing countries: sustainable, inclusive, green and economic growth by the improvement of water security, water safety and flood resilience. These goals are pursued using Public-Private partnerships (PPPs) and with three sub-themes in mind. These sub-themes are drinking water and sanitation (WASH), integrated water resource management (IWRM) and water efficiency in agriculture (WEA).

FDW aims for cooperation between public and private entities in developing countries in order to achieve its objectives. The reliance on the private sector participation in achieving sustainable economic growth, self-reliance and poverty reduction is chosen because these objectives are beyond the capacity of the public sector alone to accomplish. FDW subsidises efforts that can eventually lead to market-based economic activities, for example by designing and executing a revenue model for providing clean drinking water or for collecting, processing, and reusing latrine waste.

## 1.2 Evaluation introduction

The main objective of this second mid-term evaluation (MTR) is to independently review the ongoing work of the FDW programme and projects. This is the second MTR; the first mid-term evaluation was completed in 2016. Complementing previous evaluations, this second MTR is meant to focus on the long-term results and sustainability of the FDW programme. These results are expected to be achieved through direct effects and systemic changes resulting from the PPP interventions of FDW projects. Hence, this MTR should include a comparison of different PPP interventions in achieving results.

The MTR has a clear learning ambition and should lead to 1) strategic policy lessons for NL-MFA on PPP and market-based approaches in development cooperation and 2) lessons at project level to improve the effective operation of ongoing projects and the programme as a whole. The timing of the study also aligns with broader initiatives of MFA and RVO to reflect on the use of PPPs as integrated intervention strategy.

### **Key issues to be evaluated**

We highlight three elements from the FDW programme objectives that we believe require particular attention in the second MTR, building on the lessons from the previous MTR. These also help direct the focus areas for the evaluation questions in section 2.1, particularly related to impact and sustainability of PPPs.

**Sustainable functioning of the partnerships.** According to the 2016 MTR, “ensuring commitment of the private (but also local public) partners in the partnerships over time” is considered one of the main challenges regarding FDW projects. This is likely to affect the financial self-sustaining capacity and ability to continue the partnership without major public support, which we aim to assess in this 2<sup>nd</sup> MTR.

**Achieving development goals.** FDW projects desire to achieve water-related development objectives by supporting cooperation between public and private entities in developing countries. The previous MTR pointed out a tension between commercial objectives and inclusiveness (e.g. access of vulnerable groups) and the need to focus more on development impact and poverty alleviation. This second MTR allows us to assess whether FDW has been able to increase its development impact over time.

**Barriers to scaling and systemic change.** The previous MTR raised some concern on the scalability of FDW projects, as other actors seem to be necessary to reach the desired scale. This second MTR provides the opportunity to deepen insights on possible barriers and system responses to scaling (unintended negative effects such as impact on market prices for inputs or outputs, scarcity of natural resources or resistance against system changes by influential players) and how successful PPPs are in tackling these.

## 1.3 This report

This report is organised as follows. Section 2 describes the evaluation approach of this MTR, including the evaluation questions, the theory of change of the FDW programme, and the evaluation methods.

The following sections report the findings on the specific evaluation questions. Each section provides answers from a particular perspective or so-called level of analysis: 1) the reporting perspective, 2) the stakeholder perspective and 3) the end-beneficiary perspective. These perspectives represent respectively insights derived from project reports and M&E documentation, Dutch project leaders, local project stakeholders and local beneficiaries. The detailed findings per evaluation criteria and perspective can be found in the Annexes. Subsequently, these perspectives are compared in the synthesis, with preliminary conclusions per section.

Section 3 provides answers on the evaluation questions that relate to effectiveness. Section 4 presents the findings on impact. Section 5 goes into depth about sustainability. Section 6 describes findings on the efficiency. Section 7 provides insights to relevance and additionality. Lastly, section 8 describes the conclusions and section 9 the recommendations.

# 2 Evaluation approach

## 2.1 Evaluation questions

We first present the evaluation questions along the lines of the OECD DAC evaluation criteria. We address the main question from the ToR through eight core questions, divided in sub-questions. After each (sub-) question we have indicated the learning purpose and value for key stakeholders. While the eight core questions will be answered extensively, the sub-questions mainly serve to substantiate these core questions. Questions 1 to 6 are the focus of data collection and analysis, where the effectiveness, Impact and Sustainability (Q1 to 3) will be the primary focus of this evaluation. Questions 7 and 8 are considered reflective questions, to provide conclusions and lessons. In answering these questions, we will consider the extent to which conclusions and lessons primarily seem to apply to specific FDW projects, the entire FDW programme, or to water-related development cooperation in general.



| NR  | Criteria       | Questions  | Learning purpose   |
|-----|----------------|--|--|
| 0   | Main question  | To what extent did the PPPs within FDW contribute to the FDW-objectives (sustainable, inclusive economic growth by creating financially sustainable solutions to improve water security, water safety and flood resilience) in an effective, sustainable, efficient and relevant manner?   |  |
| 1   | Effectiveness  | Can effectiveness of different projects be related to differences in approach (intervention & PPP forms)?  |  |
| 1,1 |                | <b>Project interventions:</b> What different approaches (intervention/PPP forms) have been applied by projects?  | <i>IGG/RVO: complement existing insights (incl. from previous MTR) to understand (key barriers for) effectiveness in PPP programmes.</i>   |
| 1,2 |                | <b>Project results:</b> To what extent have the intended project results been realized?  |  |
| 1,3 |                | <b>Determinants of results:</b> What were main determinants of success or failure in realizing project results?  |  |
| 2   | Impact         | What is the impact of the programme?   |  |
| 2,1 |                | <b>Development impact:</b> To what extent (and how) did FDW projects contribute to improving the standard of living (incl. health, water access, food production, income) for target groups, including vulnerable groups?  | <i>IGG/RVO/IOB: fill knowledge gaps of FDW contribution to (systemic) impact assumed in the ToC. Transfer to ongoing interventions.</i>  |
| 2,2 |                | <b>Systemic change:</b> To what extent (and how) did FDW projects contribute to systemic change in the institutional framework and the lasting professionalization of the local water sector/market? (ToR)   |  |
| 2,3 |                | <b>Unintended effects:</b> Has the PPP approach of FDW led to unintended negative (e.g., environmental or market distortion) effects?  | <i>IGG/RVO/PPPs: Awareness of potential indirect effects to address.</i>   |
| 3   | Sustainability | What results are sustainable and which factors led to these successes or to failure?   |  |
| 3,1 |                | <b>Continuity of performance:</b> Have PPPs been able to accomplish (financial) sustainability of the business model performance after project completion?   | <i>IGG/RVO/IOB: gain insights in ability to extend effects beyond projects, using a market-based approach, which is often considered a knowledge gap. Validate the ToC of MFA on sustainability &amp; scaling.</i> |
| 3,2 |                | <b>Continuity of impact:</b> Has development impact continued after project completion?  |  |
| 3,3 |                | <b>Scaling:</b> Have (innovative) business models/approaches been scaled up, scaling (part of) the project, or out, scaling beyond the project?  |  |
| 4   | Efficiency     | What was the impact of different approaches on the cost-benefit-ratio of projects?   |  |
| 4,1 |                | <b>Costs per person:</b> What were the costs per person for getting access to water or sanitation services?  | <i>IGG/IOB: receive input for comparison against benchmark. Support decision making to steer on cost-effectiveness.</i>  |
| 4,2 |                | <b>Costs for other outcomes:</b> What estimations can be provided for the costs per outcome unit for other project results (e.g. for WEA/IWRM)?  |  |
| 4,3 |                | <b>Determinants:</b> How is the cost-benefit ratio influenced by different intervention approaches and project factors?  |  |
| 5   | Relevance      | <b>Private sector relevance:</b> Which factors enhance or diminish the interest of private partners in the public-private partnership model?   | <i>RVO/IGG: Input to programmes &amp; policy strategies using PPPs.</i>  |
| 6   | Additionality  | <b>Input additionality:</b> Would the (private) partners have done the project (with own/other financial means) without the public contribution from FDW?  | <i>IGG/IOB: Insight in trade-off in market-based approaches between financial viability &amp; sustainability.</i>  |
| 7   | Conclusions    | How valid are the assumptions of the beneficial effects of public-private collaboration for water-related development cooperation?   |  |
| 7,1 |                | <b>Assumptions:</b> To what extent did the complementary multi-stakeholder approach in the PPPs and the FDW programme:<br>1. Help solve constraints and open new opportunities for development goals; (Q1 & 2)<br>2. Facilitate increased private sector involvement/ investment in ODA/SDGs & PPPs; (Q5 & 6)<br>3. Lead to continuity of the intervention and/or multi-stakeholder approach after the project ended? (Q3) | <i>IGG/RVO: provide input to support or revise assumptions of FDW and/or future PPP programmes.</i>  |
| 7,2 |                | <b>Objectives:</b> Was the combination of public and private sector contributions instrumental to reach FDW objectives (Q1, 2 & 3)?  |  |
| 8   | Lessons        | What lessons and recommendations can be drawn to inform MFA, RVO and project implementors of ongoing projects?   |  |
| 8,1 |                | <b>Project level:</b> What lessons can be drawn from completed projects about increasing the impact and sustainability of results that can be applied by ongoing projects as well as the programme as a whole?   | <i>RVO/PPPs: enhance the effectiveness of ongoing FDW projects and the long-term relevance of the programme</i>  |
| 8,2 |                | <b>Policy level:</b> How could PPP strategies be applied (even) more effective in future policies & programmes?  | <i>IGG: inform future policy choices to facilitate PPP / market approaches.</i>  |

Table 1: Research Questions (RQs)

## 2.2 Theory of Change

As a central part of our evaluation approach, we have developed a Theory of Change (ToC) for the FDW mid-term review. The ToC illustrates the key intended results at the output, outcome, and impact level. It also contains the main assumptions of how the intervention should lead to the expected results. We have constructed the ToC in line with the IGG water sector policy (using their ToC narrative<sup>1</sup>) and the FDW PPP approach (using FDW database project information) as well as our team's experience with the water sub-themes and PPP approaches. The ToC has several functions as part of the evaluation. It allows us to:

1. Compare the realized results with expected results at the impact level as well as at the output and outcome level.
2. Assess what different (combinations of) activities have been applied in relation to different results.
3. Make assumptions explicit and illustrate which gaps exist in explaining (a lack of) effects.
4. Assess whether FDW covers the overall ToC and which parts of the ToC is relatively over- or underrepresented in the portfolio of FDW and/or in the realization of results.

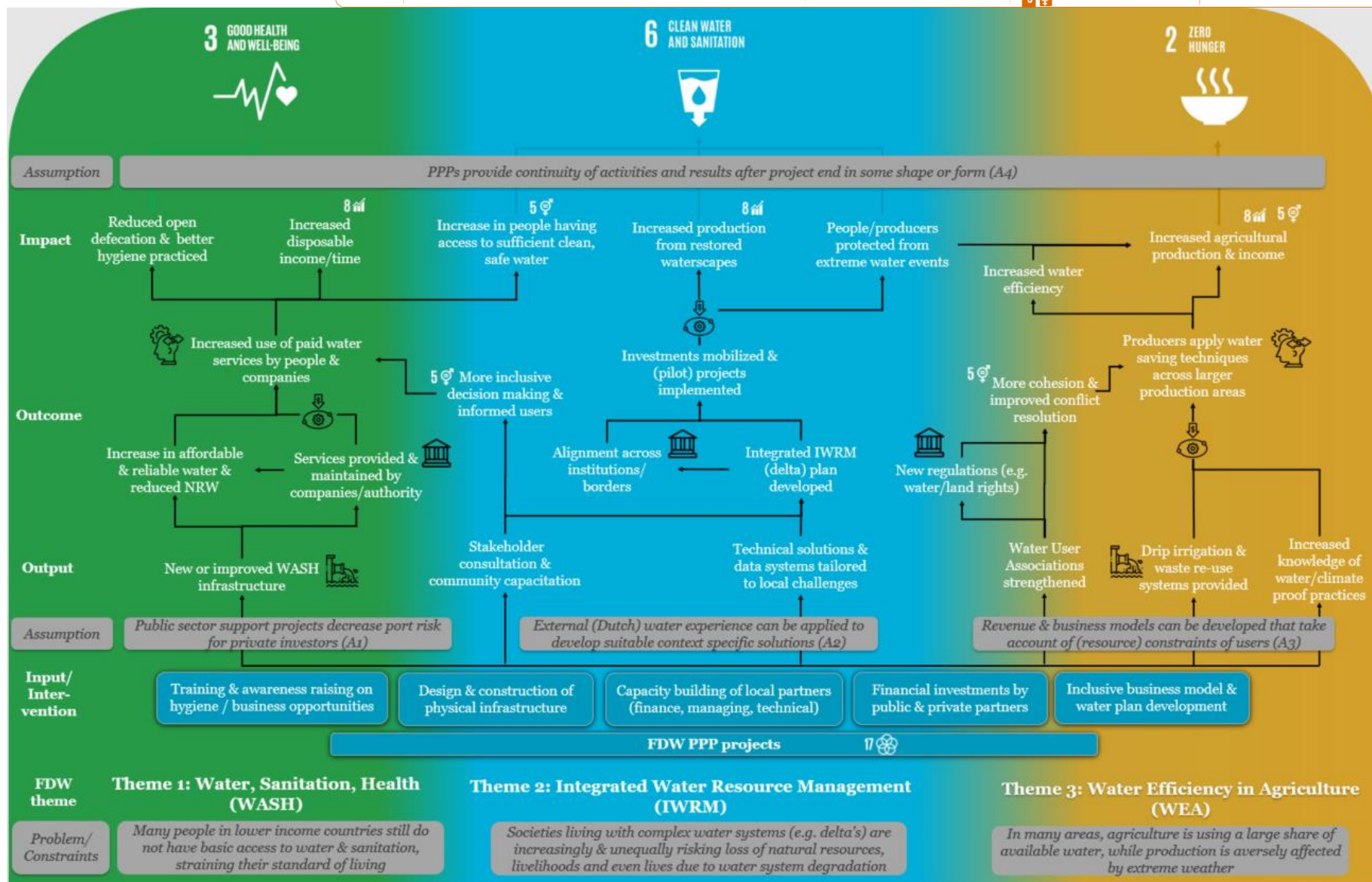
**Key elements** - We like to highlight the following aspects taken into account and depicted in the overall ToC for the MTR.

- **Three sub-themes** - The ToC is structured along the three water sub-themes (WASH, IWRM, WEA) as these follow different intervention logics and have partially different development results (SDGs). Yet, interrelations between the sub-themes exist and are also visible in the ToC.
- **Enabling environment** - The ToC shows the important role of local institutions and partners as well as activities of knowledge sharing and political processes, to ensure the intervention is engrained in the local system and addresses constraints beyond the technical solution. As prescribed by IGG<sup>2</sup> and visualized in the ToC, we pay attention to institutional and behavioural barriers and changes, in addition to infrastructure.
- **Market based approach** - The ToC includes the main intended market activities (supply/demand) for each sub-theme, which is an important element of FDW's approach to enhance financial sustainability of results.
- **Assumptions** - We incorporate the three assumptions (A1, A2, A3) from the ToR as well as additional assumptions that might influence the relevance and design of the interventions success in realizing results.

<sup>1</sup> Ministerie van Buitenlandse Zaken (2018). Theory of Change – WATER  
<https://www.rijksoverheid.nl/documenten/publicaties/2018/11/08/theory-of-change-ontwikkelingssamenwerking>

<sup>2</sup> Idem

**Legend** Infrastructure Behaviour Institutions Market-based approach FDW Relevant SDGs A PPP (FDW) assumption



## 2.3 Evaluation methods

The evaluation method includes five steps: (1) Grouping of projects, (2) Definition of KPI's, (3) Data collection, (4) Triangulation and attribution, and (5) Validation and learning.

### 2.3.1 Grouping of projects

The programme includes 42 projects, each with their own scope, structure, and geographical focus. Given that the aim is to provide an evaluation of the programme, the design of the evaluation should be such that generic lessons can be drawn from an analysis of individual projects, and that in-depth studies of a limited number of selected case studies can also contribute maximally to an understanding of challenges and successes at program level.

Hence, we have grouped the projects according to three criteria, and have selected case studies from each of the resulting groups – to the extent possible given other constraints such as geographical spread, inclusion of projects from different rounds of calls, and safety considerations. The three criteria are:

- (1) **Theme of the project** (WEA, IWRM, WASH). FDW finances activities that relate to (at least one of) three types of themes related to the water sector: water efficiency in agriculture (WEA), integrated water resource management (IWRM) and water, sanitation and health (WASH).
- (2) **Character of the PPP** (Academic, public, NGO, private, mixed), based on a count of partners identified as being academic, NGO etc, where the lead partners receive a double weight. If the share of a specific type of partner is at least 2/3, the PPP is labelled in accordance with the dominant type. If not, the PPP is labelled “mixed”
- (3) **Size of the PPP** (small or medium (at most 6 partners), or large (7 and more partners)). The number of partners in the PPP affects the dynamic within the partnership, its management and the type and number of activities that can be performed.

Combining these three criteria leads to 30 potential groups of projects, of which the following 13 are actually represented in the FDW portfolio:

| Group | Theme | PPP label | Size of PPP  | Number of projects |
|-------|-------|-----------|--------------|--------------------|
| 3     | WEA   | NGO       | Small/medium | 1                  |
| 4     | WEA   | Private   | Small/medium | 2                  |
| 5     | WEA   | Mixed     | Small/medium | 6                  |
| 10    | WEA   | Mixed     | Large        | 1                  |
| 14    | IWRM  | Private   | Small/medium | 2                  |
| 15    | IWRM  | Mixed     | Small/medium | 3                  |
| 20    | IWRM  | Mixed     | Large        | 5                  |
| 22    | WASH  | Public    | Small/medium | 1                  |
| 23    | WASH  | NGO       | Small/medium | 1                  |
| 24    | WASH  | Private   | Small/medium | 3                  |
| 25    | WASH  | Mixed     | Small/medium | 8                  |
| 29    | WASH  | Private   | Large        | 2                  |
| 30    | WASH  | Mixed     | Large        | 7                  |

Table 2: Overview of represented groups in the FDW portfolio

To limit the number of groups, for practical reasons, we have maintained only a distinction between mixed and private PPPs (including NGO and Public under mixed) and in some cases joined groups with different sizes. This leads to the following 8 groups:

| Original group(s) | New group | Theme | PPP Label | Size of PPP        | Number of projects |
|-------------------|-----------|-------|-----------|--------------------|--------------------|
| 4                 | 1         | WEA   | Private   | Small/medium       | 2                  |
| 3, 5, 10          | 2         | WEA   | Mixed     | Small/medium/large | 8                  |
| 14                | 3         | IWRM  | Private   | Small/medium       | 2                  |
| 15                | 4         | IWRM  | Mixed     | Small/medium       | 3                  |
| 20                | 5         | IWRM  | Mixed     | Large              | 5                  |
| 24, 29            | 6         | WASH  | Private   | Small/medium/large | 5                  |
| 22, 23, 25        | 7         | WASH  | Mixed     | Small/medium       | 10                 |
| 30                | 8         | WASH  | Mixed     | Large              | 7                  |

Table 3: Final grouping of FDW PPPs

### Introduction of case studies

We selected seven in-depth case studies and four remote case studies. The in-depth case studies were scored by RVO on a range of 'average performance' to 'show-case projects'. The remote case studies varied in scores from 'average' to 'brilliant failure'. These case studies are used to gather lessons learned on successes as well as failures. We collected data from different sources in order to allow for an objective observation, based on the triangulation of outcomes from various perspectives. For both in-depth and remote case studies, in-depth interviews with project partner representatives and external experts were held, while for the in-depth case studies, we also collected information from beneficiary surveys and focus group discussions with stakeholders.

#### In depth case studies

The seven in-depth case studies (Table 4) were visited for an inspection on project outputs, interviews with internal and external experts as well as for preparations for household surveys (four projects) and focus group discussions (three projects).

| Project details |   |              | Grouping |       |                           | Methodology |             |
|-----------------|---|--------------|----------|-------|---------------------------|-------------|-------------|
| FDW Reference   | Project   | Country      | Theme    | Group | PPP size / # of partners* | Label       | Survey/ FDG |
| 14BO11          | AQUACRUZ  | Bolivia      | WASH     | 7     | Medium / 5                | Mixed       | Survey      |
| 12ET03          | Sustainable water services                        | Ethiopia     | WASH     | 6     | Large / 8                 | Private     | Survey      |
| 17109IN         | Water efficiency in sustainable cotton production | India        | WEA      | 2     | Medium / 6                | Mixed       | FGD         |
| 14RI14          | Building with Nature                              | Indonesia    | IWRM     | 4     | Large / 9                 | Mixed       | FGD         |
| 16046RI         | Water quality management in the Brantas River     | Indonesia    | IWRM     | 5     | Medium / 6                | Mixed       | FGD         |
| 14MZ02          | Sustainable Water Services Beira                  | Mozambique   | WASH     | 7     | Small / 3                 | Mixed       | Survey      |
| 12SA01          | A Green Sustainable and Safe Water Source         | South Africa | WASH     | 8     | Large / 9                 | Mixed       | Survey      |

\*excluding RVO

Table 4: Overview of the seven in-depth case studies

## Remote case studies

For the selection of the four remote studies, see the Table below.

| Project details |                                  | Grouping  |       |       |                           |         |
|-----------------|----------------------------------|-----------|-------|-------|---------------------------|---------|
| FDW Reference   | Project                          | Country   | Theme | Group | PPP size / # of partners* | Label   |
| 12GH02          | Integrated water management      | Ghana     | WEA   | 1     | Small / 4                 | Private |
| 17074BJ         | Drops for Crops                  | Benin     | WEA   | 2     | Small / 4                 | Mixed   |
| 12OT01          | West Bank wastewater reuse       | Palestine | WEA   | 2     | Small / 4                 | Mixed   |
| 16048RW         | Sustainable water Akagera Valley | Rwanda    | IWRM  | 3     | Medium / 5                | Private |

\*excluding RVO

Table 5: Overview of the four remote case studies

### 2.3.2 Definition of KPI's

Following the ToC, we have developed an evaluation matrix that uses suitable (SMART) Key Performance Indicators (KPIs) to assess the impact and sustainability. We briefly explain the matrix set-up.

**Questions & Indicators** – In line with FDW's own monitoring, we have developed a generic matrix (and three sub-theme specific matrixes for WASH, WEA and IWRM indicators (see Annex A). The generic matrix presents the indicators for the result criteria 'Effectiveness', 'Impact' and 'Sustainability', including indicators related to characteristics and results of the partnership approach.

Each indicator is linked to the sub-questions in section 2.1, as well as result levels in the ToC in section 2.2. The matrix builds on indicators defined by FDW as well as indicators (in orange) added by the evaluation team. These are indicators that will allow us to assess the effectiveness, impact and sustainability and PPP performance across the FDW programme.<sup>3</sup>

**Judgement criteria** – For each KPI the matrix contains criteria to judge the realized results. Whenever available, programme and project targets (and thresholds of success) will be used in judging results. For each indicator, we appraise realized achievements against targeted objectives using defined performance levels that are presented in the rubric (Annex A). The use of a scoring rubric has several advantages:

1. It allows for clear assessment goals and clear judgement criteria which assure consistent and unbiased appraisal, over time and between evaluators
2. It enhances comparability between projects
3. A formalized appraisal methodology delivers convincing evidence-based arguments to policy makers and the wider audience.

**Sources (Means of Verification)** – The matrix shows the key information sources for the evaluation. These sources are primarily a **portfolio analysis** of project reports and data, **key informant interviews** (KII) with **internal experts** who are directly involved in the project and **external experts** who are not linked to the project (adding objective and unambiguous information) and selected **case studies**, that are further discussed in section 2.4.2. For each indicator the main data source is indicated in orange (✓) and combined and tested against information of complementary sources (✓). This combination of sources allows for triangulation (a core element of our attribution method).

For conclusions based on the portfolio analysis, all data on KPIs available in reports and other project documentation is summarized in project-specific sheets. For each project, a set of generic indicators on PPP performance and a set of project-specific indicators (WASH, WEA or IWRM) is included. Where appropriate and available, targeted as well as achieved levels for the indicators are included. In the next step, for each project, a score for each KPI is determined using the rubric definitions. Possible scores are 1,2,3,4, and 5. Averaging over the available indicators provides scores for effectiveness, sustainability, and additionality and

<sup>3</sup> We note that for the question of sustainability, continuity of performance (Q1.4) relates to the outcome level while continuity of impact (Q1.5) relates to the impact level of the ToC.

relevance. The final step is to convert these averages to a 10-point scale, to allow for intuitive interpretation of the scores. Averaging over all the different scores leads to a total score by project overall.

### 2.3.3 Data collection and analysis

This section describes the various methods of data collection and analysis used in this evaluation: portfolio analysis, interviews, surveys, focus group discussions and site visits. Lastly, we briefly mention the contribution of local experts.

**Portfolio analysis** – For the portfolio analysis, a template (see Annex E) has been designed to ensure consistent information gathering and analysis of the different projects. This template was programmed in Excel and consists of a project fact sheet, where general notes on data availability and quality are included, the intervention logic is described and there is room for other notes. Next, 5 worksheets, 1 for each of the DAC criteria, follow, where each sheet has a general section and a project specific section (tailored for WASH, WEA and IWRM). Within each sheet, data found in project documentation is inserted, and the source of the data is documented, to maintain full transparency. The input for each of the project is captured in one final file, summarizing available information for all the KPIs per project.

This final output sheet is used as one of the inputs for the rubric analysis, jointly with information the projects provided to IATI, information from the interviews, surveys and focus group discussions.

**Interviews** – The interviews were conducted at programme and at project level.

#### *Programme-level interviews*

A total of 9 people were interviewed about FDW at programme level, including RVO programme directors, managers and advisors, representatives of the Ministry of Foreign Affairs in the Netherlands, and leaders of more than one FDW project. Annex C includes the list of interviewed stakeholders. At each interview, two team members were present, to avoid bias in the interview and to help with the transcription of the interview. Next, following standard methods in qualitative data analysis<sup>4</sup>, the following steps were followed for the analysis of these interviews:

- **Database development:** All interviewees' answers to the questions were put into Excel sheets by theme (Partnerships, Sustainability, Effectiveness, Impact and Efficiency) (i.e., 1 sheet with answers to questions on partnerships, 1 sheet with answers to questions on sustainability, etc.)
- **Text analysis and classification:** The answers listed on each Excel sheet were analysed, by identifying the type of answers (e.g. positive/success, negative/failure, explanation, cause, effect, recommendation), the thematic aspects covered, etc., and then classified and the classes titled (e.g. "success factors").
- **Counting (frequencies):** for each class, the responses were listed and the corresponding numbers of interviewees providing such a response indicated (1x or 2 x or 4x, etc.)
- **Integration into paragraphs:** response classes were described and integrated (partly abridged) under various sub-thematic paragraphs (the titles of paragraphs refer to interview questions or types of answers)
- **Integration into chapters:** the paragraphs were integrated into the "stakeholder perspective" section of the chapters that refer to the OECD-DAC criteria
- **A short summary for each section / theme;** to give the reader a quick impression of the content

The thematic areas discussed by the interviewees differed per interviewee, as can be seen in the table below; some did not know the answer to the questions in a particular thematic area (e.g., those related to "efficiency"), while others gave an answer that was more appropriate to a question in another thematic area than to the thematic area asked.

| Programme level | Thematic areas that have been addressed in the interviews |             |               |        |                |
|-----------------|---|-------------|---------------|--------|----------------|
|                 | Interviewee   | Partnership | Effectiveness | Impact | Sustainability |
| Respondent 1    | x   | x           | x             | x      | x              |
| Respondent 2    | x   | -           | x             | x      | -              |

<sup>4</sup> See for instance, Erlingsson, C., & Brysiewicz, P. (2017). A hands-on guide to doing content analysis. *African Journal of Emergency Medicine*, 7(3), (p. 93–99).

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Respondent 3</b>   | <b>x</b> | <b>x</b> | <b>x</b> | <b>x</b> | <b>-</b> |
| <b>Respondent 4</b>   | <b>x</b> | <b>-</b> | <b>-</b> | <b>x</b> | <b>-</b> |
| <b>Respondent 5</b>   | <b>x</b> | <b>x</b> | <b>x</b> | <b>x</b> | <b>-</b> |
| <b>Respondent 6</b>   | <b>x</b> | <b>x</b> | <b>-</b> | <b>x</b> | <b>-</b> |
| <b>Respondent 7</b>   | <b>x</b> | <b>x</b> | <b>x</b> | <b>x</b> | <b>x</b> |
| <b>Respondent 8</b>   | <b>-</b> | <b>x</b> | <b>x</b> | <b>x</b> | <b>x</b> |
| <b>Respondent 9</b>   | <b>x</b> | <b>x</b> | <b>x</b> | <b>x</b> | <b>x</b> |
| <b>Total no of interviewees who answered questions on the thematic area</b> | <b>8</b> | <b>7</b> | <b>7</b> | <b>9</b> | <b>4</b> |

Table 6: Overview of programme-level interviews

### Project-level interviews

The project level interviews were conducted with stakeholders involved in the selected case studies (see section 2.4.2). The stakeholders interviewed included RVO project advisors, FDW project leaders and partners (at a local level or in the Netherlands), and local stakeholders who are not involved in the FDW projects, but who can reflect on the projects based on their expertise. The same analysis procedure as described above was followed, with the exception of step 3, because most of the answers were unique, i.e., referring to the answer of one or two interviewees associated with the case study project in question. The response paragraphs were integrated into the “stakeholder perspective” section of the respective thematic chapters.

### Surveys

For projects where the end-beneficiaries are individuals (as opposed to institutions), surveys are used to assess the impact the intervention has had. Given the scope of the projects, surveys have been carried out in South Africa (GreenSource), Mozambique (Sustainable Water Services Beira), Bolivia (AQUACRUZ) and Ethiopia (Sustainable water services). In all cases, the survey questionnaire was developed by the team in consultation with the local counterpart, who then implemented the survey. For Ethiopia, safety concerns did not allow for a visit by the team; in all other cases, preparation of the survey has been part of the visit to the projects.

For each of the projects, the sampling framework was designed such that meaningful statistical analysis was possible. Depending on the needs and possibilities of the local counterparts, survey responses were recorded on paper or in excel and then exported for analysis in SAS and Stata. Care was taken to ensure that all requirements of data privacy were fulfilled, following GDPR guidelines, including training of enumerators to comply with GDPR guidelines in the way they approach respondents. Surveys then covered perceived effectiveness of the intervention, sustainability, and satisfaction. Annex F provides more information on the survey methodology framework.

### Focus Group Discussion

For three case studies a Focus Group Discussion (FGD) has been designed to gather in-depth findings from end-beneficiaries. These case studies are Indonesia (Building with Nature), Indonesia (Brantas River) and India (Organic cotton project).

**FGD design** – The FGDs were tailored to the specific project, with several similarities on theme level to allow for a comparison between case studies. Every FGD covered the following topics: Introductions, knowledge of and involvement in the project, satisfaction with the project, effectiveness of project activities, impact of the project, sustainability, and recommendations. The discussions usually took about two hours per group. See Annex G for an example of an FGD template. The format included a group conversation as well as asking the group for individual input on posters prepared by the evaluation team. These posters are used to measure the level of satisfaction of beneficiaries with the project, a change in impact on their livelihoods (water access, water security or water management), a self-assessment of the level of involvement with the project in the coming three to five years and the level of confidence they will experience an improvement in water access/security in the coming three to five years. Every beneficiary would indicate their opinion by means of a post-it, representing their position on a defined scale. For instance, level of satisfaction from ‘not satisfied’ to ‘somewhat satisfied’ to ‘very satisfied’.

**Sampling** – To gain direct access to project beneficiaries, the evaluation team was supported by local project partners. For each project, the evaluation team provided the sampling criteria to the project partner, who



subsequently organised a group that fulfilled these criteria. Every group ideally included 10 people per group, yet the size would vary in practice from 8 to 25 participants. The goal was to make a representative sample of end beneficiaries. The evaluation team first identified the type of community groups involved in the project so as to make use of the given structures. For instance, if there were three type of community groups, we would organise a FGD for each of these groups. Additionally, within each FGD we focused on a representation on the following variables: gender, age, location, occupation, size of the business, family situation, years of involvement in the project, type of involvement in the project.

| Case study  | Amount of FGDs | Amount of participants | Amount of women | Project location(s)  |
|---|----------------|------------------------|-----------------|--|
| <b>Indonesia</b><br><b>(Building with Nature - FDW14RI14)</b> | 2              | 16                     | 8               | Betahwalang Village, Demak District  |
| <b>Indonesia</b><br><b>(Brantas River – FDW16046RI)</b>       | 2              | 16                     | 10              | Gresik, Jawa Timur   |
| <b>India</b><br><b>(Organic Cotton project – FDW17109IN)</b>  | 8              | 123                    | 40              | Jogingunfa village, Wardha (1)<br>Waigaon haldya village, Wardha (2)<br>Dhamangaon, Amravati (1)<br>Dhabada, Dhamangaon block, Amravati, (2)<br>Mozar village, Ner Block, Yavatmal (2) |

Table 7: Overview of Focus Group Discussions

### Site visits

In addition to interviews with both project partners and end-beneficiaries (when possible), the site visit is also an important aspect of the field visit. During a site visit, the evaluation team visits one of the locations where project activities take (or have taken) place. For instance, visiting an established water facility or training centre. This visit allows a physical observation of the effectiveness of project activities. The evaluation team visited at least two project locations for each selected case study. Table 8 provides an overview of the planning and data collection during the field visits.

| Case study   | Date field visit (including site visits and interviews) | Data collection survey (if applicable) |
|--|---|--|
| <b>South Africa</b> , A Green Sustainable and Safe Water Source                      | From 12 to 15 October 2022                              | From 5 to 13 February 2023             |
| <b>Mozambique</b> , Sustainable Water Services Beira                                 | From 16 to 19 October 2022                              | From 8 to 22 February 2023             |
| <b>Bolivia</b> , AQUACRUZ  | From 1 to 10 October 2022                               | From 23 to 28 January 2023             |
| <b>Indonesia</b> , Building with Nature Indonesia: Securing eroding delta coastlines | From 29 November 2022 to 1 December 2022                | Not applicable                         |
| <b>Indonesia</b> , Water quality management in the Brantas River                     | From 3 to 7 December 2022                               | Not applicable                         |
| <b>Ethiopia</b> , Safe Drinking Water  | From 27 February 2022 to 1 March 2023                   | From 3 to 10 March                     |

India, Water Efficiency in Sustainable Cotton based Production Systems in Maharashtra

From 13 to 19 February 2023

Not applicable

Table 8: Overview of the field visit planning and data collection

### Collaboration with local experts

For each of the field visits, we worked closely together with local experts who are experienced consultants or evaluators in the fields of WASH, IWRM, WEA and PPPs for development. Local presence is needed to ensure contextual understanding – political context, socio-economic environment, cultural aspects – and thus to increase the relevance of this MTR in terms of overall design, methodology and data analysis. Additional benefits of local presence include overcoming language barriers (contributing to data quality) and understanding of ‘how things work’ (e.g., contributing to case study logistics). To allow our local experts to broaden the evidence base of the MTR, they are given a strong role and responsibility in the substantive aspects of the joint evaluation phases – in particular the data collection phase: conducting in-depth interviews and focus group discussions or surveys. The PwC/VU evaluation team coordinates and contributes to field-research activities and is responsible for quality control.

**Selection process.** Considering duties and responsibilities, the local consultants from within our combined networks were selected based on strong (reli)ability and in accordance with the requirements below.

- **Working relation:** Primarily, we have selected researchers and institutes that we hold existing working relations with and that we trust to provide the required rigorousness and reliability of research.
- **Sector expertise:** We work with consultants with expertise in the water sector, through previous work experience and/or relevant degrees. This includes implementation and research of water related interventions in a development context.
- **Experience:** At least five years of professional development related work experience, including experience and technical knowledge in M&E (this also entails a good understanding of the methodological and operational dimensions of M&E), field work and field research experience (including design and implementation of data collection), and familiarity with relevant country level water issues (WASH/IWRM/WEA).
- **Geographical coverage:** Proximity or relatively easy access to sites and locations relevant to the projects under study.
- **Competencies:** Languages, good communication & interpersonal skills, ability to work in a multi-cultural team environment, good technical/analytical writing capabilities. Taking initiative and (proven) excellent team spirit is considered an asset.
- **Diversity:** In the local team, we have also strived to realize a balance in technical knowledge as well as age and gender.

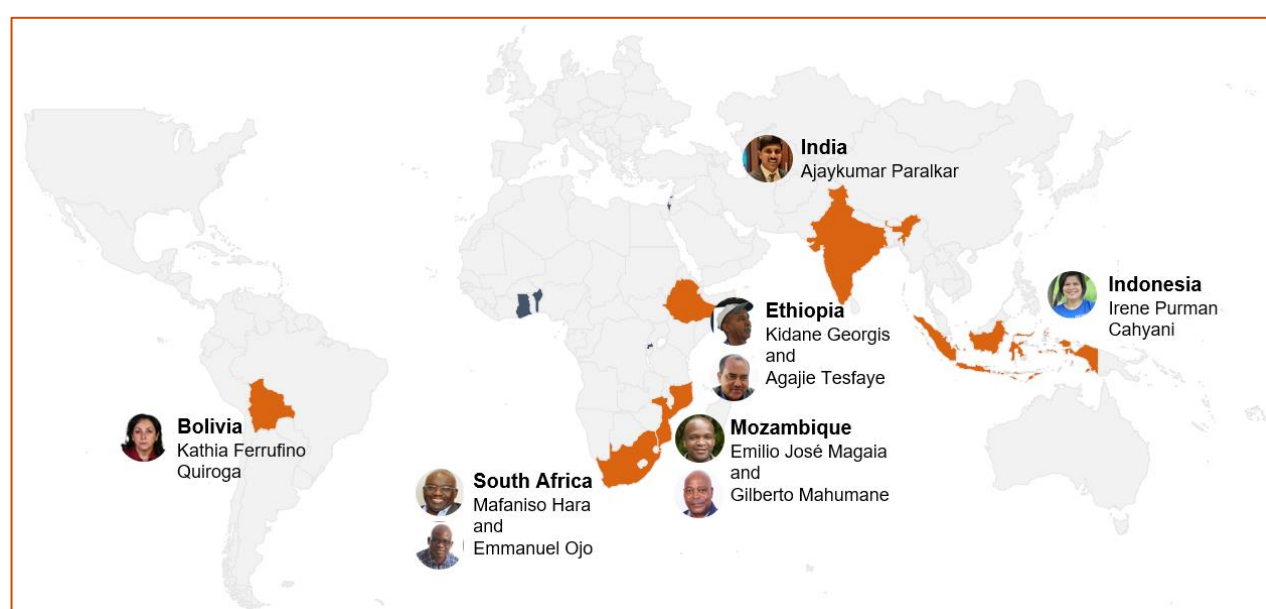


Figure 2: Overview of local counterparts

### 2.3.4 Triangulation and attribution

The different sources of information may provide different insight into the research questions. Hence, we use triangulation to validate conclusions drawn from one source against another. Annex A shows the primary and secondary sources that are used to measure the specific indicators for effectiveness, impact, sustainability and efficiency. See figure 3 for a high-level illustration of our triangulation approach. To reach the final conclusions, the evaluation team had a number of triangulation sessions, where the different perspectives were brought together for each of the six evaluation criteria, and conclusions were discussed.

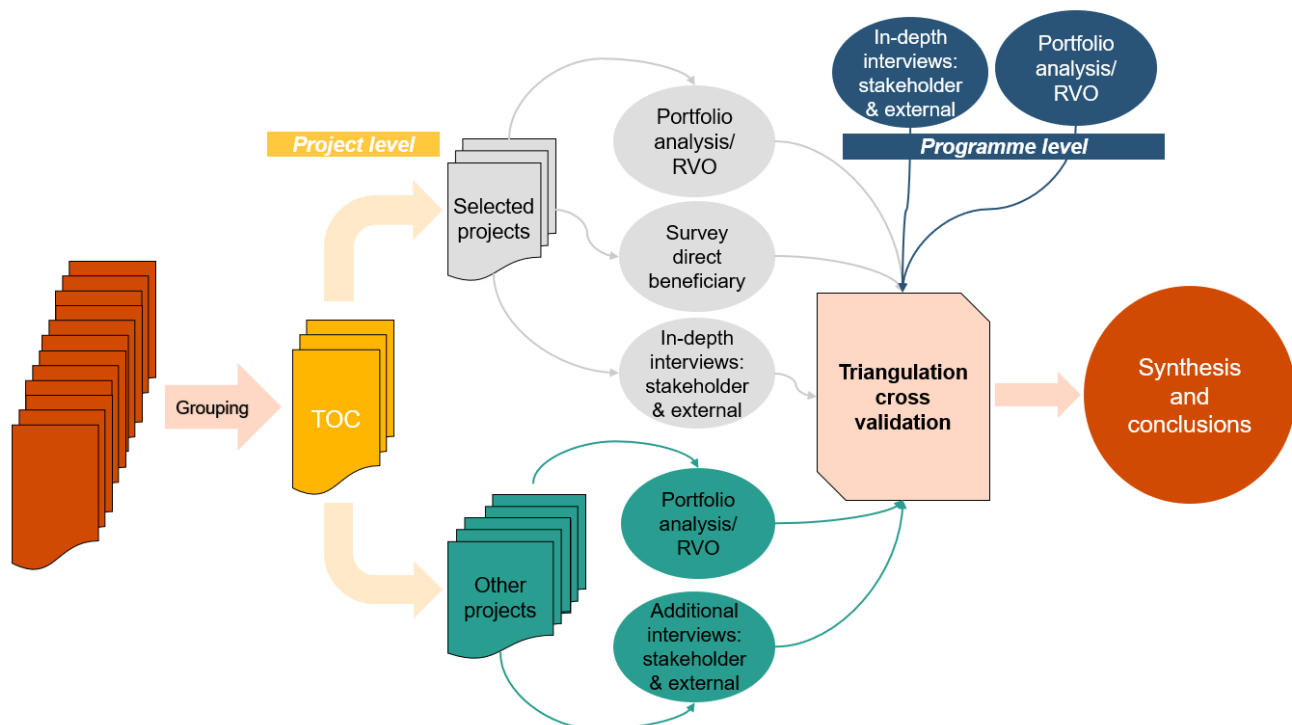


Figure 3: Triangulation approach

Furthermore, to arrive at a comprehensive judgement on each of the evaluation criteria per project, a system of rubrics has been designed, where values for the indicators are judged against a predefined scoring metric. The full scoring table is included in Annex A; here we include an example.

| Effectiveness  | 1    | 2            | 3            | 4            | 5     |
|--|------|--------------|--------------|--------------|-------|
| beneficiaries of facility or service related to project (realized /target) | <0.2 | 0.2<= x <0.4 | 0.4<= x <0.6 | 0.6<= x <0.8 | =>0.8 |
| beneficiaries buying facility or service (realized /target)                | <0.2 | 0.2<= x <0.4 | 0.4<= x <0.6 | 0.6<= x <0.8 | =>0.8 |
| project budget spent on Operation & Maintenance (realized /target)         | <0.2 | 0.2<= x <0.4 | 0.4<= x <0.6 | 0.6<= x <0.8 | =>0.8 |
| vulnerable people benefiting (realized /target)                            | <0.2 | 0.2<= x <0.4 | 0.4<= x <0.6 | 0.6<= x <0.8 | =>0.8 |
| female stakeholders in decision making process (realized /target)          | <0.2 | 0.2<= x <0.4 | 0.4<= x <0.6 | 0.6<= x <0.8 | =>0.8 |
| Number of people trained (realized /target)                                | <0.2 | 0.2<= x <0.4 | 0.4<= x <0.6 | 0.6<= x <0.8 | =>0.8 |

Table 9: Example of the FDW scoring table

Under effectiveness, one of the criteria is the number of people who received a training. Projects provided a target in the proposal, and realisation is reported during the project. The ratio between realisation and target is used as the yardstick. If this ratio is lower than 0.2, a score of 1 is assigned, scores in the interval [0.2, 0.4> receive a 2, those in the interval [0.4,0.6> a 3, those in the interval [0.6, 0.8> a 4, and those above 0.8 receive a 5. Averaging over all indicators for which information is available then provides an overall score for the project on a scale of 1-5, which is then transformed to a scale of 1-10. For each project, also subscores for PPP performance, effectiveness, and sustainability are computed, based on overall indicators as well as project-specific ones.

### 2.3.5 Validation and learning

The rubric methodology provides a transparent way to "score" each individual project. However, to draw lessons on why some projects perform better than others, cross-tabulation is used to find correlations of performance with project characteristics (e.g., region, size of partnership, call round), as well as PPP characteristics (size, type, performance). In this way, we can draw conclusions at the program level.

## 2.4 Characterization of FDW projects

Before starting the in-depth evaluation of FDW projects by means of the OECD-DAC criteria, these sections provide the necessary context to the FDW portfolio. Based on the portfolio analysis, paragraph 2.4.1 characterises the FDW projects. The following paragraph 2.4.2 introduces the selected case studies. For each of the case studies a short background to the project context, partnership and activities is included.

### 2.4.1 Introduction to the FDW portfolio

FDW has financed 42 projects in three subsequent calls (2012, 2014 and 2016-17). Of the total portfolio of 42 projects, four projects stopped prematurely. These were two WEA projects (in Palestine and Sri Lanka) and two IWRM projects (in Rwanda and Egypt). Jointly, only EUR 786,000 was spent on these projects, and each of them was given the label 'brilliant failure' by RVO. Two of these projects (Palestine and Rwanda) are included as remote case studies in this evaluation (see paragraph 2.4.2). The breakdown of the total subsidy of a little over EUR 108 million shows that about half of the projects (18) were completed by July 1<sup>st</sup> 2022 and spent 88% of the subsidy. The other half was still ongoing and hitherto spent some 55% of the budget. The 11 projects in round I received 37% of the subsidy, followed by 10 projects of round II receiving 27% and 35% for 17 projects in round III. Regarding the themes, WASH stands out with 57% of the subsidy and a similar share of 58% of the projects (22 out of 38). The themes IWRM and WEA both had 8 projects, with WEA absorbing more budget, 25% as compared to 18% for IWRM. Moving from one round to the other, the dominance of WASH diminishes, although still the majority of projects are WASH (Figure 4). Only 3 projects reported waste management as an activity.

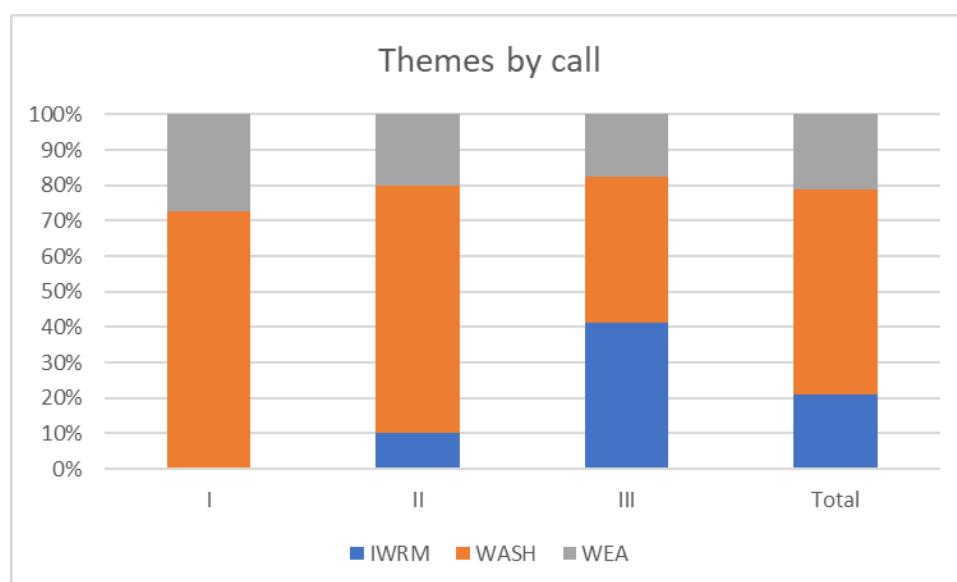


Figure 4: Distribution of FDW themes by call

The regional distribution shows a focus on Eastern Africa and indicates that the size of the projects is similar in the various regions. For example, 42% of the projects are in Eastern Africa and comprise 37% of the budget, followed by Asia with 29% of the projects and 30% of the budget. It seems that East Africa is disproportionately represented in all calls, although calls II and III show a more balanced regional picture (Figure 5).

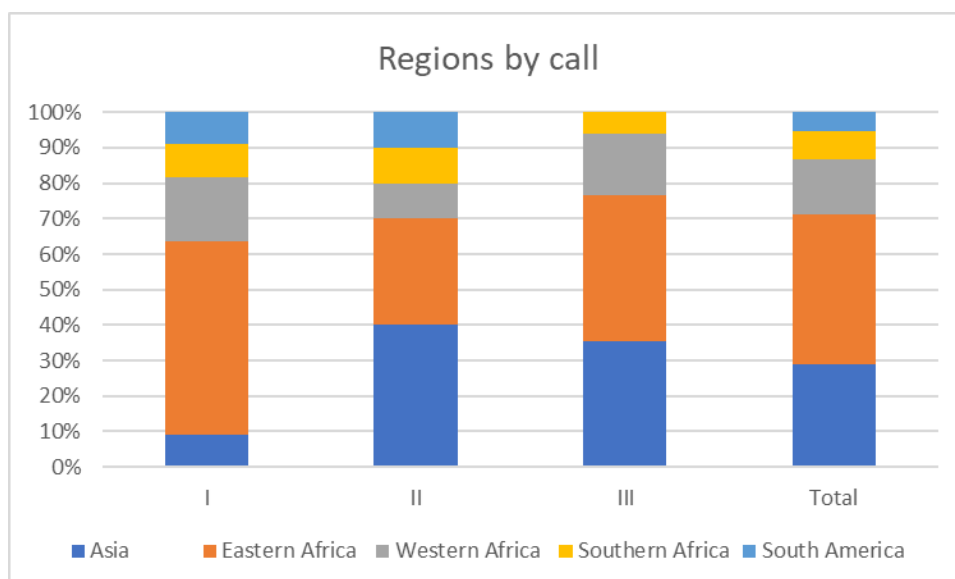


Figure 5: Distribution of FDW projects over regions by call

Finally, the distribution by PPP size appears to be balanced with 37% large, 39% medium and 24% small sized projects and similar budget shares. The PPP size has little effect on the budget. The PPP type has a clear focus on mixed public-private projects with 79% of the projects and 72% of the budget. The subsidy for the 21% private project comprises 28% of the budget and makes the private project on average somewhat more expensive.

Figure 6 shows rubric scores that have been computed on the basis of an assessment of the project performance on six different aspects following the rubric methodology. The overall average “grade” is 5.9 out of the maximum of 10. This indicates that, in general, the progress and results of the projects leave much to be desired. Looking at the six rubrics, it appears that the performance on the effectiveness criteria is generally very good, averaging 8.7. This is followed by a good score of 7.0 on the criteria regarding additionality and relevance. On the other side, at an average score of only 4.0, the PPP performance indicators are particularly low and, likewise, the average of 4.5 out of 10 justifies concerns about sustainability. This pattern of scores from low PPP performance to high effectiveness reappears in all dimensions.

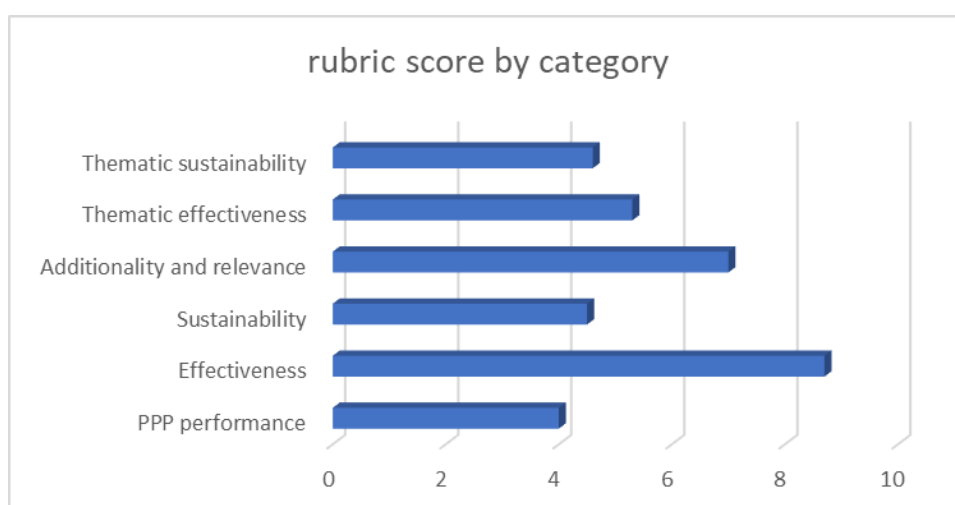


Figure 6: Rubric score by category

The 18 projects that were ended by July 1<sup>st</sup> 2022 scored considerably higher, an average of 6.8 as compared to 5.2 for the 20 projects still ongoing. This is probably due to the fact that ongoing projects have yet to reach their targets and some of the performance indicators are yet unavailable. Looking at the performance by round, figure 7 shows that the projects in the earliest round perform relatively well with an average score of 7.0, as

compared to 6.6 for the second round and only 4.8 for the third round. Again, this may partly be explained from the fact that more rubrics are still missing for ongoing projects

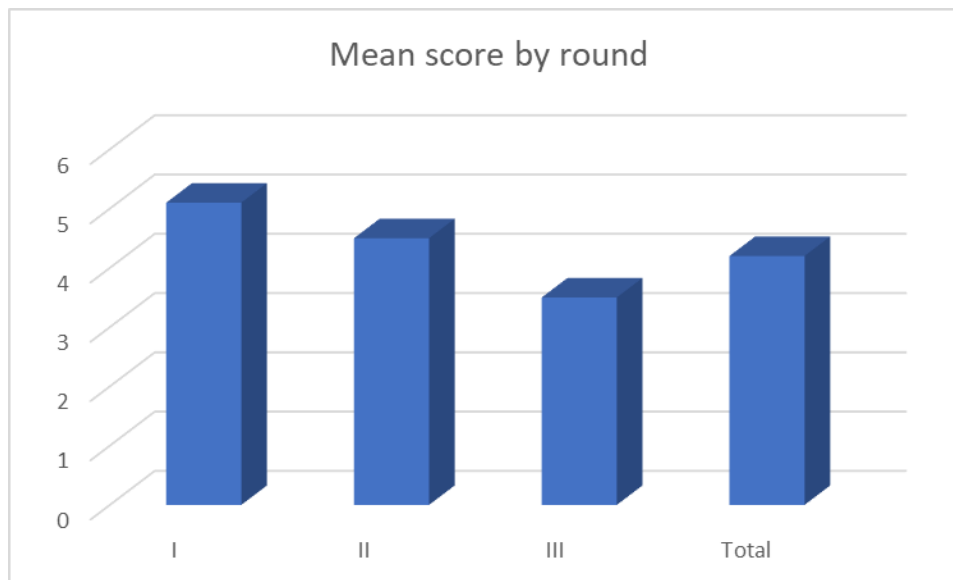


Figure 7: Mean project scores by round and total

Another finding is that WASH projects have the highest score, average of 7.0, with WEA and IWRM scoring a meagre 4.7 and 4.1, respectively (Figure 8). This would imply that the success of the ensemble of the FDW projects is driven by the WASH projects. Alternatively, it could also point to the fact that the performance indicators of WASH projects are relatively straightforward (e.g. number of improved facilities) while the indicators for WEA and IWRM projects are more difficult to measure (e.g. crop yield per unit water) or more intricate (e.g. number of stakeholder platforms established). Further comparisons of the performance differences by theme would be needed.

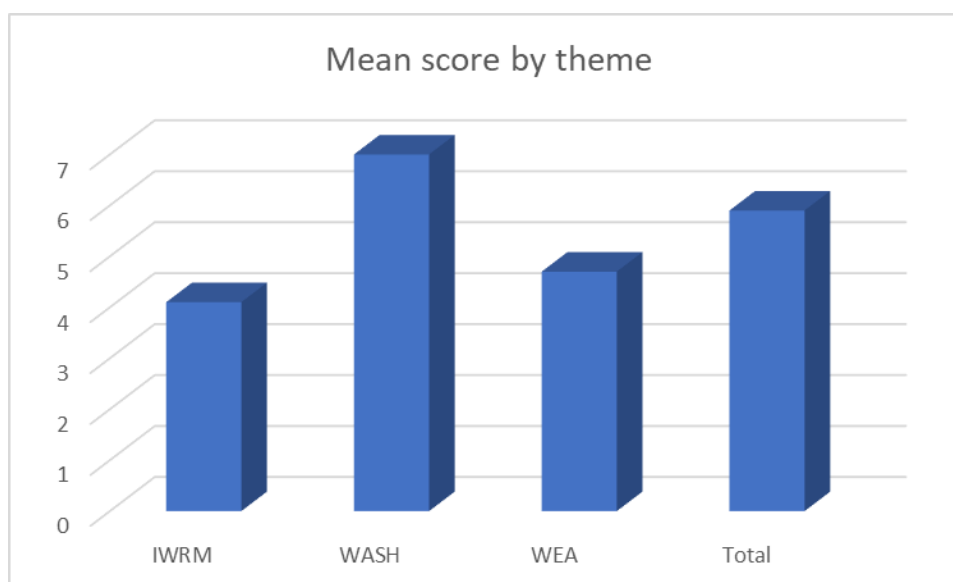


Figure 8: Mean scores of projects by theme

Regionally, the 2 projects and the 16 projects in Eastern Africa stand out, with average scores of 6.9 and 6.5, respectively, followed by Asia with 5.9 and Western Africa with a low 3.9. The three projects in Southern Africa have a particularly low average score of only 3.9. In terms of PPP size, the 14 larger consortia perform best, with an average score of 6.6, as compared to 6.0 for the 9 small sized partnerships. The 15 medium sized PPPs perform relatively worst with an average score of 5.3. As regards the private versus private-public PPPs it

seems that the 6 private PPPs perform somewhat better, score of 6.6 as compared to 5.7 for private-public projects. Finally, it is reassuring that the quantitative assessment based on the rubrics-methodology is in line with the qualitative assessment by RVO. The 22 projects considered to have average progress / results, have an average score of 6.1, close to the total average of 5.9. Moreover, the 6 projects considered to perform above the average have a higher score of 6.8, while those considered below average have a substantially lower score of 4.5.

Below we introduce the selected in-depth and remote case studies.

## 2.4.2 Background to the selected case studies

This section provides a first introduction to the case studies, as in the order of the table below. This sequence is also followed in sections 3 to 7.

| Reference  | Country      | Project   | Theme | PPP size | PPP type | Group | FDW Call | End date            | In depth / Remote |
|------------|--------------|---|-------|----------|----------|-------|----------|---------------------|-------------------|
| FDW14BO11  | Bolivia      | AQUACRUZ  | WASH  | medium   | public   | 7     | II       | 08-12-2020          | In depth          |
| FDW16050ET | Ethiopia     | Safe Drinking Water   | WASH  | small    | private  | 6     | III      | 30-06-2023          | In depth          |
| FDW17109IN | India        | Water efficiency in sustainable cotton-based production           | WEA   | medium   | mixed    | 2     | III      | 31-12-2023          | In depth          |
| FDW14RI14  | Indonesia    | Building with Nature Indonesia: Securing eroding delta coastlines | IWRM  | large    | mixed    | 5     | II       | 31-10-2021          | In depth          |
| FDW16046RI | Indonesia    | Water quality management in the Brantas River                     | IWRM  | medium   | mixed    | 4     | III      | 30-04-2024          | In depth          |
| FDW14MZ02  | Mozambique   | Sustainable Water Services Beira                                  | WASH  | small    | mixed    | 7     | II       | 31-12-2021          | In depth          |
| FDW12SA01  | South Africa | A Green Sustainable and Safe Water Source                         | WASH  | large    | mixed    | 8     | I        | 31-12-2023          | In depth          |
| FDW12GH02  | Ghana        | Integrated water management and knowledge transfer in SK Basin    | WEA   | small    | private  | 1     | I        | 24-08-2020          | Remote            |
| FDW17074BJ | Benin        | Drops for Crops   | WEA   | small    | NGO      | 2     | III      | 01-09-2025          | Remote            |
| FDW12OT01  | Palestine    | West Bank wastewater reuse project                                | WEA   | small    | mixed    | 2     | I        | Stopped preliminary | Remote            |
| FDW16048RW | Rwanda       | Sustainable water for inclusive Akagera Valley Improvement        | IWRM  | medium   | private  | 3     | III      | Stopped preliminary | Remote            |

Table 10: Overview of FDW case studies

## In-depth case studies

### AQUACRUZ, Bolivia

Situated in the eastern Tropical Lowlands the Santa Cruz Metropolitan Region is the most populous urban agglomeration in Bolivia with an estimated of 2.4 million population. Santa Cruz meets its rapidly increasing water demand (47 MCM <sup>5</sup> in 2004 to 107 MCM <sup>6</sup> in 2023) from groundwater reserves.

**The AQUACRUZ project** – The objective of the AQUACRUZ project (2016-2020) was to contribute to a sustainable water and wastewater sector in Bolivia. The project concentrated on a capacity building program for EPSAs (Entidades Prestadores de Servicios de Agua y Saneamiento), private water companies that are organised as cooperatives. EPSAs were created in absence of state support. Tariffs of EPSAs are regulated by the state upon proposed tariffs by EPSAs users' assembly. Social pressure to limit increase is high and EPSAs have to forego the necessary investments to comply with mandated tasks to collect and treat wastewater. Widespread pollution of Santa Cruz's main water source, the semi-confined aquifer is alarming AQUACRUZ partnered with 21 EPSAs in Santa Cruz that were selected by the Ministry of Environment and Water Resources. The selected EPSAs belonged to Category B (serving 50,000- 500,000 inhabitants) and C (serving 10,000- 50,000 inhabitants). The implementation of Performance Improvement Plans (PIP) has been the centre of the project and was established in 7 intervention-areas: a) Non-revenue water, b) Water quality, c) Sanitation, d) Commercial Management e) Financial-administrative Management, f) Socio-institutional Management, and g) Capacity building.

**The institutional setting** – The AQUACRUZ project is embedded in the German-Bolivian program PERIAGUA I, II and II (Programa para Servicios Sostenibles de Agua Potable y Saneamiento en Áreas Periurbanas, 2013 –2023, managed by the applicant GIZ. EPSAs are supervised by public institutions: AAPS (Autoridad de Fiscalización y Control Social en Agua Potable y Saneamiento Básico), the regulatory authority; SENASBA (Servicio Nacional para la Sostenibilidad de Servicios en Saneamiento Básico), authority for technical assistance; FEDECAAS (Federación Departamental de Cooperativas de Agua y Alcantarillado Sanitario Santa Cruz) association of water utilities in the department of Santa Cruz. The project was implemented by the following project partners:

| Partner     | Type    | Local/Dutch/Int. | Contribution               |
|-------------|---------|------------------|----------------------------|
| GIZ         | NGO     | German           | EUR 0                      |
| FEDECAAS    | Public  | Bolivian         | EUR 0                      |
| SENASBA     | Public  | Bolivian         | EUR 0                      |
| AAPS        | Public  | Bolivian         | EUR 0                      |
| VEI B.V.    | Private | Dutch            | EUR 0                      |
| RVO subsidy |         |                  | EUR 2.181.732 <sup>7</sup> |

Table 11: Project consortium of AQUACRUZ

<sup>5</sup> US Army Corps of Engineers (2004). Water resources assessment of Bolivia. Mobile, Alabama/Alexandria, Virginia. Also available at <https://www.sam.usace.army.mil/Portals/46/docs/military/engineering/docs/WRA/Bolivia/FINAL%20BOLIVIA%20WRA%20COMBINED%2013%20DEC%202004.pdf>

<sup>6</sup> Fundación Natura Bolivia. (2023).

<sup>7</sup> In total a EUR 4,707,147 was spent. It remains unclear who were the contributors



The first year AQUACRUZ identified for each of the 21 EPSAs the most constraining factors for the business operations. Jointly with the Dutch counterpart VEI a plan was set up including training and hands on approaches on the work floor. Dutch experts visited the EPSA premises at regular times.

**The MTR approach** – Within the 2<sup>nd</sup> MTR, the project team compiled data of the AQUACRUZ case study to evaluate Effectiveness, Impact, Sustainability and Additionality of the AQUACRUZ project using in-depth portfolio analysis, expert interviews, focus group discussions, a field visit to Santa Cruz and a household survey among direct beneficiaries of four selected EPSAS in the AQUACRUZ project.

## Safe Drinking Water for Ethiopia, Ethiopia

**Background** – Ethiopia has Africa’s second highest population, 120 million, out of which nearly half lack basic access to clean water. The occurrence of frequent droughts in the northern part of the country created water shortages that forces communities to access unsafe drinking water. The provided access to tap water is not necessarily a safe drinking source and an estimated ¾ of the population in Ethiopia does still not have access to safe drinking water. As a result, illness and diseases caused by unsafe drinking water supplies are among the top 10 diseases in the country and diarrhea is among the top three causes of all deaths in Ethiopia.

**The project** – The ‘Safe Drinking Water for Ethiopia Project’ expressed its commitment to address water-borne diseases through introducing technically simple and financially affordable water solutions. The project believes that market-driven technologies empower households to purify water and provides effective and sustainable solutions for safe drinking water.

The project identified Amhara region to pilot its water solutions in the first phase and then scale-up the good practices to other regions in subsequent phases. In this regard, the project launched its piloting mission in 2018 by brokering public-private partnerships. The project aims for the following results:

- 400,000 women to be aware of risk of waterborne diseases and water treatment solutions
- 4,000 Safe Drinking Water Events to be successfully organized
- 50,000 households (250,000 people) to have purchased a water filter
- 10,000 households to be enabled to buy water filter on credit of micro-finance organizations
- First ever locally produced water treatment and storage solution in Ethiopia to be
- At least 25,000 water filters to be produced per year in Ethiopia

The project has been addressing these aspects in a concerted effort between the government (Amhara Bureau of Health), NGO (iDE) for providing the additional capacity building support; and a company for producing and supplying of the water treatment solution (Shayashone and Resilience).

| Organisation    | Role    | Type       | Country     | Year founded | Size (FTE) | Core activity     |
|-----------------|---------|------------|-------------|--------------|------------|-------------------|
| Resilience BV   | Lead    | Company    | Netherlands | 2004         | 8          | Consultancy       |
| Shayashone PLC  | Partner | Company    | Ethiopia    | 2009         | 27         | Consultancy       |
| Regional Bureau | Partner | Government | Ethiopia    |              | 3,800      | Health extension. |
| iDE             | Partner | NGO        | Ethiopia    | 2007         | 47         | WASH solutions    |

Table 12: Project consortium of Safe Drinking Water for Ethiopia

The project faced a challenge when the local production of water filters, had to stop because the business license was not submitted. The reason is that the factory does not provide sufficient added value. Hence, the project started with imported water filters from Indonesia. Currently the licenses are submitted and building of the production plant has started.

**The MTR approach** – The evaluation team compiled data of the Safe Drinking Water for Ethiopia Project to evaluate Effectiveness, Impact, Sustainability and Additionality using in-depth portfolio analysis, expert interviews, a field visit to Amhara and a household survey among (potential) beneficiaries.

## Water efficiency in sustainable cotton-based production systems, India

The Water efficiency in sustainable cotton-based production systems project in India focuses on an integrated approach to increase water productivity and value per unit of water in cotton-production regions of Vidarbha. Particularly, the project aims to 1) contribute to a substantial increase in water availability, water efficiency and reduced water stress for 20,000 cotton farmers and 2) contribute to sustainable livelihoods of male and female cotton farmers by facilitating the adoption of sustainable production practices that reduce production costs, increase yields and increase quality of produce.

In order to support 20,000 cotton farmers in Vidharaba the project includes three workstreams (and corresponding outputs).

1. **Introduction of technologies and techniques to effectively and efficiently harvest, conserve, re-use and distribute available water by**
  - a. Installing or rejuvenating 3,000 water harvesting structures
  - b. Training 20,000 farmers on water conservation, micro irrigation and water saving practices
  - c. Establishing 30 Water User Associations with integrated plans on water management
  - d. Training 10,000 farmers on financial literacy and awareness of government schemes and subsidies
2. **Adoption of water-efficient production methods in market-oriented irrigated cotton-based cropping systems, by**
  - a. Training 20,000 farmers on Good Agricultural Practices (GAP), quality seed information and procurement, of which 2,500 women farmers
  - b. Establishing 30 demonstration plots
  - c. Training 75 women for micro-entrepreneurship
  - d. Ensuring a socio-hydrological model is adopted by Local extension of government
3. **Creating market demand for the uptake of sustainably produced cotton from beneficiary farmers, by**
  - a. Establishing a linkage between buyers and FPOs
  - b. Integrating project plans in the policy of 02 Zila Parishad
  - c. Mobilizing additional resources

The project started in August 2018 and will finish in 2024 (including a one-year extension). The project is implemented by the following 6 project partners:

| Partner                                  | Type                | Local/Dutch/Int. | Contribution  |
|--|---------------------|------------------|---------------|
| Solidaridad Network Asia Limited         | NGO                 | International    | EUR 0         |
| Welspun India Limited                    | Private             | Local            | EUR 827,571   |
| BioCare Pvt. Ltd.                        | Private             | Local            | EUR 326,620   |
| Technische Universiteit Delft (TU Delft) | Knowledge Institute | Dutch            | EUR 179,777   |
| Zilha Parishad Yavatmal                  | Public Institute    | Local            | EUR 0         |
| Krishi Vigyan Kendra - Nagpur - India    | Knowledge Institute | Local            | EUR 0         |
| RVO subsidy                              |                     |                  | EUR 2,000,952 |

Table 13: Project consortium of Water efficiency in sustainable cotton-based production systems

## Building with Nature, Indonesia

The Building with Nature (BwN) project intended to provide coastal security and support sustainable revitalization of 6,000 hectare of aquaculture ponds along a 20-kilometer shoreline in the Demak district in Indonesia. Furthermore, the project intended to enhance productivity by 50% in 300 hectares of aquaculture ponds, at an average cost of EUR 1,200 per hectare. Ultimately, this could enhance safety, inclusive economic growth and self-reliance of 70,000 vulnerable people. To do so, the project aimed to:

- Install 9-kilometer grids of permeable dams.
- Develop a master plan for sustainable development in the Demak districts and 10-year community development plans for the local communities.
- Train at least 100 government officials on the applicability of BwN, 50 representatives of Indonesian engineering firms on the design and implementation of BwN, and 250 members of 10 to be established community groups on sustainable aquacultural practises and maintenance of the permeable structures.
- Increase awareness of nature-based solutions through 2 national level lowland policies, 4 small BwN replications across Western Indonesia, 2 coastal safety plans for Jakarta Bay and Semarang, and a targeted outreach campaign.

The project lasted from January 2015 to July 2022 and was implemented by the following project partners:

| Partner                                       | Type                | Local/Dutch/Int. | Contribution <sup>8</sup> |
|---|---------------------|------------------|---------------------------|
| Deltares                                      | Knowledge institute | Dutch            | EUR 0                     |
| Imares Wageningen UR                          | Knowledge institute | Dutch            | EUR 0                     |
| Ministry of Marine Affairs & Fisheries (MMAF) | Public              | Local            | EUR 0                     |
| Ministry of Public Works & Housing (MPWH)     | Public              | Local            | EUR 0                     |
| Ecoshape Foundation                           | NGO                 | Dutch            | EUR 1,054,073             |
| Wetlands International                        | NGO                 | International    | EUR 250,000               |
| Witteveen & Bos                               | Private             | Dutch            | EUR 0                     |
| RVO subsidy                                   |                     |                  | EUR 3,042,836             |

Table 14: Project consortium of Building with Nature

## Water quality management in the Brantas River, Indonesia

The Water quality management in the Brantas River project seeks to strengthen focus on water quality within the Indonesian river basin management, by developing a capacity-building program and mobilizing stakeholders to positively engage in integrated water resource management. Indeed, water quality management is not yet sufficiently integrated in river basin management in Indonesia and there are overlapping mandates of different agencies at national and regional level to monitor water quality adds to this problem. Hence, agencies use different monitoring techniques, data sharing protocols are less clear, and data are often unavailable and/or non-compatible. Furthermore, although women are comparatively highly impacted by failing water resources management, their involvement in decision making processes is limited. Due to increasing water pollution, water quality in the Brantas river has deteriorated, which increases socio-economic inequality, as typically the poorest communities live on and along the river. To improve the water quality and decrease inequality, the project partners intend to:

1. Develop an Integrated Water Quality Monitoring Plan (IWQMP) and establish a comprehensive water quality database that is accessible by stakeholders involved in the water quality monitoring.

<sup>8</sup> As stated in the project plan (2014)

2. Establish a Clean Industry Hub (CIH) that offers offer Clean Development Packages (CDPs) to at least 20 industries, to enable these industries to sustainably transform their waste management processes. The CDPs are intended to be offered at a commercial tariff.
3. Support the TKPSDA Platform where stakeholders (both governmental organizations and NGOs) and local communities can interact about decision making processes on water resource management, and develop guidelines on equal gender participation in the Brantas, to strengthen participative processes.
4. Link the project to wider policy and academic communities through, amongst others, 4 Brantas outreach activities per year, 2 news items in Indonesian media per year, and 3 papers in journals with a high scientific standard.

The project started the inception in May 2018 and is implemented by the following project partners:

| Partner                  | Type                | Local/Dutch/Int. | Contribution <sup>9</sup> |
|--------------------------|---------------------|------------------|---------------------------|
| BBWS Brantas             | Public              | Local            | EUR 869,418               |
| Ecoton                   | NGO                 | Local            | EUR 102,087               |
| Perum Jasa Tirta (PJT) 1 | Public              | Local            | EUR 1,267,875             |
| TAUW B.V.                | Private             | Dutch            | EUR 101,260               |
| TU Delft                 | Knowledge institute | Dutch            | EUR 79,084                |
| RVO subsidy              |                     |                  | EUR 3,000,000             |

Table 15: Project consortium of Water quality management in the Brantas River

## Sustainable Water Services Beira, Mozambique

The Sustainable Water Services Beira project in Mozambique aimed to improve access to drinking water for 110,000 (low income) people in (greater) Beira, contributing to improving health. In addition, it aimed to improve service levels for low-income consumers in terms of supply hours from 11 to 14 hours per day, less supply interruptions and improved water quality. Thirdly, the project also targets FIPAG Beira, the local water supplier, to enhance the financial sustainability and organisational robustness FIPAG Beira (which should lead to 18% higher revenues). Finally, the project also had the ambition to create an enabling social/community environment that addresses WASH knowledge, needs of low-income people, and payment issues, targeting 50,000 people.

The project started in January 2015 and finished (after extension) in 2021. It is implemented by the following partners:

| Partner | Type    | Local/Dutch/Int. | Contribution  | Remarks                            |
|---------|---------|------------------|---------------|------------------------------------|
| VEI BV  | Private | Dutch            | EUR 1,300,000 | Lead partner                       |
| WSUP    | Public  | International    | EUR 300,000   | Programme rather than organization |
| FIPAG   | Private | Local            | EUR 1,000,000 | Local water company                |

Table 16: Project consortium of Sustainable Water Services Beira

Beira was visited in October 2022. During this stay, the FIPAG headquarter in Beira, various water supply locations in the city, and the purification plant to the North of the city were visited, and interviews were conducted with the Director of FIPAG, officers of UNICEF (as external expert) and a WSUP representative.

<sup>9</sup> As stated in the project proposal (2016). Project partner PT WLN ended its participation in the project and was informally replaced by the East Java Environmental Agency (DLH Jatim).

## A Green Sustainable and Safe Water Source, South Africa

The GreenSource project in South Africa seeks to supply safe drinking water to school children and their families while at the same time creating options for children to exercise sports. The intervention has two elements: First, the establishment of a sports field made with artificial turf, which also acts as a rainwater catchment area, since a storage tank is placed underneath the field. Secondly, a water purification system (in containerized form) is installed at the target schools, where water is sourced from the field as well as from boreholes. The area of implementation is the North West Province of South Africa, which suffers from water shortages, but also from water pollution by the mining industry that is dominating the area. In addition to installing the equipment, training activities included training of school staff to maintain the system, and Asset Based Community Development (ABCD) trainings on for school staff and local communities (where applicable).

The project started the inception in October 2013 and finished (after extension) in December, 2021. 16 of the planned 20 systems have been installed, and all systems are still operational. It is implemented by the following project partners:

| Partner                               | Type                | Local/Dutch/Int. | Contribution | Remarks                                |
|---------------------------------------|---------------------|------------------|--------------|--|
| GreenSourceNPC                        | Non-profit          | Mixed            |              | Project management in SA               |
| NW provincial government              | Public              | Local            | EUR 800,000  | Unclear contribution                   |
| Ten Cate NI                           | Private             | Dutch            | EUR 475,000  | Lead Partner                           |
| Pentair Water Process Technology BV   | Private             | Dutch            | EUR 465,000  |  |
| Wavin BV                              | Private             | Dutch            | EUR 465,000  |  |
| Landscape solutions                   | Private             | Dutch            | EUR 200,000  | Dropped out after takeover of Ten Cate |
| Royal Turf                            | Private             | Local            | EUR 140,000  | Active partner                         |
| Minapula Community Development        | Private             | Local            | EUR 90,000   | Unclear contribution                   |
| Saxion University of Applied Sciences | Knowledge institute | Dutch            | EUR 150,000  | Active partner                         |

Table 17: Project consortium of GreenSource

## Remote case studies

### Integrated water management, Ghana

This project was carried out in the North of Ghana, which is an area characterized by difficult agro-ecological conditions, such as annual flooding, drought periods, poor soils, and erratic rainfall. In addition, infrastructure in this region is worse than elsewhere in Ghana, exacerbating the difficulties for smallholder farmers to eke out a living. In the project, the Ghana Government, through the Savannah Accelerated Development Authority (SADA), Wienco Ghana Ltd. (later replaced by African Tiger), Alterra and the RebelGroup International engaged in the development of innovative flood mitigation measures, introduced new soil and water conservation practices, promoted irrigation and drainage systems and expanded educational and training opportunities. The intention of the project was to assist smallholder farmers in graduating into medium and high-value added farming.

The project started the inception in 2013, and ended in 2017. Implementing partners were the following:

| Partner  | Type                | Local/Dutch/Int. | Contribution  | Remarks  |
|--|---------------------|------------------|---------------|--|
| The Savannah Accelerated Development Authority | Public              | Local            | EUR 800,703   | Local governance, in kind                            |
| Alterra  | Knowledge institute | Dutch            | EUR 635,852   | Training   |
| Wienco Ghana Ltd                               | Private             | Local            | EUR 3,226,364 | Dropped out, replaced by African Tiger. Lead partner |
| Rebel group International BV                   | Private             | Dutch            | EUR 47,100    | Finance/business cases, partly in kind               |

Table 18: Project consortium of Integrated water management

Specific interventions by the project are

1. **Policy and regulatory framework:** With the involvement of SADA the policy and regulatory framework for sustainable water use and agro-business development will be strengthened;
2. **Flood control & climate related risks:** Through government and private sector involvement development of infrastructure for the diversion and/or storage of water resources and the implementation of irrigation and drainage systems at the right location;
3. **Innovative agricultural water management and improved security (land, water and environment):** Development of the capacity to plan and manage the supply and demand of water for agriculture. Also initiate a dialogue with the other sectors on how to further increase the water productivity, ensure water quality, strengthen access to land, water and environmental safety for the project stakeholders;
4. **Capacity development and training:** Together with Alterra and through local institutes generate and disseminate knowledge on water management for agriculture and development of innovative approaches for increased productivity;
5. **Extension services, inputs and market access:** Provision through private sector involvement of finance, agro-inputs and other incentives for the out-growers associations, the block farms and the nucleus farm to adopt water management innovations and new farming practices;
6. **Monitoring and evaluation:** Carry out systematic monitoring of environmental, social, health and economic effects of the project outputs as input for organizational learning and as feedback mechanism in the theory of change.

### Drops for Crops, Benin

Due to the scarcity of water resources available in the northern part of Benin during the dry season, inefficient water use for irrigation is a major problem in the region. Furthermore, farming as a business is in an early development stage, and there is no integrated plan for water storage within the catchment areas of the production sites. Hence, the Drops for Crops (D4C) project in the Atacora-Donga district intends to improve the efficiency of water use for vegetable production through irrigation equipment, solar pumps and better water storage. Herewith, the project initially focused on 1,442 members of the cooperative of vegetable producers

(URCooPMA), among which 70% vulnerable smallholders and 60% women, covering 229 hectares in total. In addition, local manufacturer CSF-Benin would be supported to become a professional service provider in irrigation equipment, throughout its commercial partnership with URCooPMA. The project will further realise new infrastructure to improve water storing capacities and water mobilisation, within an overall approach of IWRM.

To improve the efficiency of water use, the project partners initially intended to:

- WP2: Increase water efficiency for agricultural production with 30% for 850 (60% of the 1,442) farmers, contributing to an increase in water productivity of 25% for 229 hectares, through providing trainings, water efficient equipment and 9,00 irrigation equipment packages.
- WP3: Improving water points and integrated water resource management for 50 production sites and 8 catchment areas, through improving water retention infrastructures in 65% of the production sites, implementing IWRM plans and monitoring systems, and establishing water management committees in 80% of the production sites.
- WP4: Let the 1,442 farmers realize a productivity increase of 35% on the 229 hectares, through providing trainings, access to finance and helping the farmers to establish business plans.
- WP5: Let the farmers realize an average revenue (EBIT) per farmer of EUR 1,086 per year, through providing trainings and established value chain collaboration between 42 farmer cooperatives and buyers.

The project started the inception in September 2019 and is now implemented by the following project partners:

| Partner   | Type    | Local/Dutch/Int. | Contribution <sup>10</sup> |
|---|---------|------------------|----------------------------|
| Stichting Woord en Daad                             | NGO     | Dutch            | EUR 300,000                |
| Dedras  | NGO     | Local            | EUR 243,428                |
| Centre Saint Famile de Saaba (CSF)                  | Private | Local            | EUR 587,305                |
| Commune de Djougou                                  | Public  | Local            | EUR 197,880                |
| Social Enterprise for Producer Organisations (ESOP) | Private | Local            | -                          |
| RVO subsidy   |         |                  | EUR 1,600,000              |

Table 19: Project consortium of Drops for Crops

During the inception of the project, two changes in the PPP have occurred. Local NGO Protos decided to leave the partnership immediately after the project approval and was replaced by Dedras, and URCooPMA was replaced by ESOP due to the poor financial performance of URCooPMA. Although the project budget and subsidy remained unchanged, this resulted in significant delays during the inception phase. Ultimately, this phase was only completed in April 2022.

## West Bank wastewater reuse project, Palestine

Jenin city, located in the most Northern Governorate of the West Bank, hosts 56,000 people while 12,000 people live in the neighbouring Jenin refugee camp<sup>11</sup>. Agricultural lands surrounding Jenin are located in A- and B-areas under control of the Palestinian Authority. The agricultural sector, Palestinians largest water consumer suffers from severe water shortages exacerbated by climate change, drought and the steadily increasing more affluent Jenin city population that demand their fresh water rights. Waste water in the West Bank amounts to a

<sup>10</sup> As stated in the project proposal (2017).

<sup>11</sup> PCBS. Projected Mid -Year Population for Jenin Governorate by Locality 2017-2026. Palestinian Central Bureau of Statistics. [visited; 30/01/2023]. [https://www.pcbs.gov.ps/statisticsIndicatorsTables.aspx?lang=en&table\\_id=695](https://www.pcbs.gov.ps/statisticsIndicatorsTables.aspx?lang=en&table_id=695)

75 MCM (2017 estimate<sup>12</sup>) that could provide a serious contribution to address prevailing water scarcity. This also justifies the FDW projects' objective to invest in post treatment, water storage and distribution systems of the treated received water from the recently completed Jenin Waste Water Treatment Plant (WWTP). The water quality will be upgraded to acceptable levels that can be sold and distribute to the farms, in particular those that cultivated orchards and grassland. The unprecedented scale of the wastewater reuse for agricultural purposes is the innovative component of this project.

The project was set-up as a PPP, including Royal Haskoning DHV as expert on wastewater treatment and distribution, Padico as investor, Jenin Municipality as owner of the WWTP and the Palestinian Hydrology Group as NGO for farmer support. with co-financing from the PPP-SWF fund. In combination with substantial support and co-financing directly by the Palestinians (PADICO), the project was planned to pilot the large scale wastewater reuse in the Palestinian Territories.

The project focus was on (i) professionalizing and managing a wastewater treatment plant, (ii) installing a tertiary sand filter, and (iii) marketing purified water for irrigation to small farmers in the region. Two strategic sectoral changes were aimed for with this: (i) multiplying the Jenin business model for all wastewater treatment plants and (ii) reducing the pollution of surface waters to decrease the number of environmental fines imposed by Israel.

| Partner                     | Type    | Local/Dutch/Int. | Remarks             |
|-----------------------------|---------|------------------|---------------------|
| Royal Haskoning DHV         | private | Dutch            | Project management  |
| PADICO                      | private | Local            | Financial support   |
| Jenin Municipality          | public  | Local            | Owner WTTP          |
| Palestinian Hydrology Group | NGO     | Local            | Support for farmers |
| RVO                         | Public  | Dutch            |                     |

Table 20: Project consortium of West Bank wastewater reuse project

## Sustainable water Akagera Valley, Rwanda

Rwanda is a relatively small country where the availability of agricultural land is limited and partly affected by floods and droughts. Rwanda's population density is the highest in Africa at 471 people per square kilometre, and with a fast-growing population, pressure on land is very high. The SWIAVI project is partly based on an earlier project funded through RVO, namely the FDOV12RW02 project 'Sugar, make it work', which was set up to optimize the existing land use by carrying out drainage work between 2013 and 2018; more specifically, the project regulated the water level in a sugarcane growing area along the Nyabarongo river, not far from the capital Kigali. The SWIAVI project aims to make the wetland area further downstream along the Akagera river also suitable for sugarcane cultivation. The interventions are threefold: first, the reclamation of 800 ha of the Masaka marshland (50% of which is to be reserved for outgrower farmers) through the implementation of a multi-purpose water management system for flood protection and facilitating irrigation during dry periods; second, the establishment of a marshland training and demonstration centre (SWAMP School) and the creation of new sugarcane cooperatives for the outgrower farmers aided by the project interventions to develop new businesses; and third, the development of new transport infrastructure to improve the connectivity of the marshlands to hillsides by improved road linkages and the establishment of sufficient river barging capacities for fast and safe transport of harvested sugarcane and other goods.

<sup>12</sup> World Bank. 2018. "Securing Water for Development in West Bank and Gaza." World Bank, Washington, DC.



The SWIAVI project was awarded funding in the summer of 2017 and set up as a PPP, with the following partners:

| Partner  | Type    | Local/Dutch/Int.      | Role / remarks   |
|--|---------|-----------------------|--|
| Kabuye Sugar Works                               | Private | Local / International | Lead partner and principal investing partner   |
| Royal Haskoning DHV                              | Private | Dutch                 | Water management expert for survey, design development, and supervision of water works |
| TechForce Innovations B.V.                       | Private | Dutch                 | Subcontracted for overall project management   |
| Stichting Alterra                                | Private | Dutch                 | Support to sugarcane farmers and cooperatives  |
| Ministry of Agriculture / Government Apex agency | Public  | Local                 | Share data, allocation of land, good governance  |

*Table 21: Project consortium of Sustainable water Akagera Valley*

However, 2018 saw the heaviest rainfall in the project area for about 50 years, followed by above-normal rainfall in 2019 and 2020, all of which have had a serious impact on the project. The unforeseen heavy rainfall in 2018 caused significant damage to some of the drainage structures built in the area of the previous project, making the restoration of the drainage works in that area a top priority and delaying the launch of the newly awarded SWIAVI project. Subsequently, after more heavy rains and flooding in 2019 and 2020, the SWIAVI proposal had to be redefined and the proposed interventions adjusted. However, before implementation could start, it was realized that the area originally earmarked for the project was no longer suitable for sugarcane cultivation: the costs for water management solutions became unrealistically high, while other political reasons were also at stake. A more viable option was to move the project to another area where sugarcane cultivation could be established. Given the situation, and, a little later, the lack of a government decision on the allocation for another project area and the realization that the water management challenges could not be resolved within the timeframe of the FDW program, Kabuye Sugar Works formally withdrew from the project, and so did the other partners, bringing the project to an end in 2021.

# 3 Effectiveness

|            |  |
|------------|--|
| <b>Q1</b>  | <b>Can effectiveness of different projects be related to differences in approach (intervention &amp; PPP forms)?</b> |
| <b>1.1</b> | <b>Project interventions:</b> What different approaches (intervention/PPP forms) have been applied by projects?      |
| <b>1.2</b> | <b>Project results:</b> To what extent have the intended project results been realized?                              |
| <b>1.3</b> | <b>Determinants of results:</b> What were main determinants of success or failure in realizing project results?      |

FDW project partners typically succeed in implementing the activities foreseen in their project plans. They conduct trainings, design and implement infrastructure, contribute to capacity building, perform activities that aim to leverage additional financial investments, and attempt to devise inclusive business models to sustain project benefits.

In many cases, FDW projects are effective in generating tangible results at output level. Infrastructure is put in place, stakeholders and communities are consulted, technical solutions are tailored to local challenges, and water systems such as drip irrigation are provided to project beneficiaries.

However, noticeable change at outcome level, yet, remains challenging for project partners to achieve. Implemented WASH infrastructure does not always result in increases in affordable and reliable water, and associated services are not always maintained. IWRM projects typically do not yet result in alignment across institutional borders or in the development of integrated plans. Subsequently, further investments are not (yet) mobilized and decision making is not (yet) more inclusive in nature or more informed. WEA projects do not always result in increased cohesion of water use practices, better regulations in terms of water and land rights, or water-saving techniques.

Three aspects appear to be important causes that constrain the desired changes :

1. Maintenance of WASH infrastructure requires funding that in FDW projects typically is foreseen to come from revenue streams from users of the infrastructure (e.g. households that use clean water). Generally, the poor segment of these users is not well positioned to pay for their water use to the extent needed for the infrastructure operators to break even on maintenance. As such, the water provided is typically not affordable, and the maintenance of the infrastructure depends on external funding.
2. Government actors at the ministerial level are typically not involved enough to remove bottlenecks to project effectiveness and to improve the enabling environment that would allow the project to thrive. Organizing alignment across institutional borders may require a strong stance from national-level government actors. Water affordability and the viability of business cases may require state-level interventions in country- or district-wide water tariffs, and in household level purchasing power. Water and land rights are typically subject to legislation at the national level, just as certification and registration processes are overseen by national-level bureaucracies.
3. For some projects, sustainability of project benefits rests on successful handover of tasks and responsibilities to local communities. These local communities are not always in a position to effectively conduct these tasks and take on these responsibilities, e.g. in terms of building financial resources, and scheduling, coordinating and overseeing maintenance work.

**FDW objectives** – The FDW programme aims to pursue multiple objectives simultaneously (a PPP approach, commercially viable business cases, and the achievement of development objectives) by means of a variety of interventions (diverse WASH, WEA, IWRM projects). In a dynamic development context, tension between these objectives is almost inevitable. According to the majority of stakeholders, FDW could use more focus on specific and operationalized objectives. FDW is effective in establishing new partnerships and strengthening existing ones. However, long-term engagement of strong business-driven commercial partners remains difficult. Many projects lack a solid business case that fits well with both the interests of a (local) private partner and the pro-poor context.

**Conducting the tasks as agreed** – At the activities level, most FDW projects perform the tasks that they have promised to. Especially FDW project activities around training and awareness raising and design and construction of physical infrastructure are implemented as agreed. We can observe this in our portfolio analysis, and we can confirm it in our case-study analyses. PPPs in WASH projects conduct training and awareness raising, construct physical infrastructure, and build the capacity of local partners. For IWRM projects, establishing infrastructure and capacity building typically also is performed as agreed, although the picture is more mixed. Financial investments in IWRM projects lag behind as typically there is not an appealing business case for private partners to buy into. Public partners sometimes invest, yet are inclined to focus on new infrastructure whilst not always paying sufficient attention for community training. For WEA projects, most activities are performed as agreed, with the exception of the development of inclusive business model and water plans – which proves to be a challenging task for the PPPs.

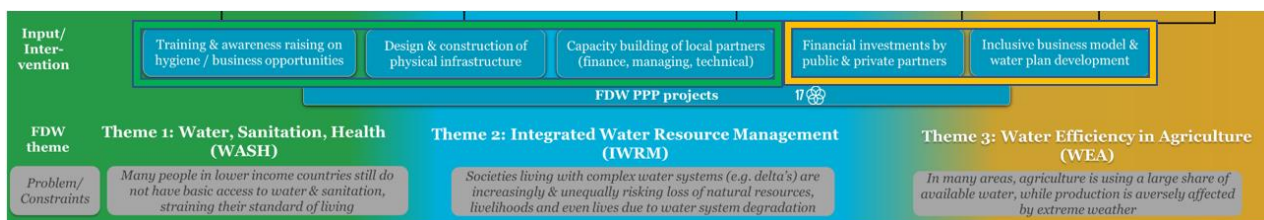


Figure 92: Focus on effectiveness of the intervention level of FDW's Theory of Change

**Realization of tangible project results on output level** – The portfolio analysis shows that WASH PPPs are generally more effective than IWRM and WEA PPPs, while private PPPs are more effective than mixed PPPs. The WASH infrastructure established by the PPPs is working well. WASH projects in the FDW portfolio are mainly focused on drinking water facilities (21 out of 22), and there are few projects that focus on sanitation facilities (8 out of 22) and or waste management (3 out of 22). Most IWRM PPPs are still in progress, yet generally tend to fall behind schedule. Furthermore, the role of local partners in IWRM projects is often limited, and the (technical) solutions involved are often driven by and highly dependent on Dutch expertise, often times without an appropriate knowledge transfer to local counterparts. WEA projects are effective in increasing knowledge of water/climate proof practices. They also succeed in establishing drip irrigation and waste water re-use systems, though on a rather small scale. The water user associations are typically not sufficiently strengthened, and more structural capacity building is needed to ensure these groups of beneficiaries are well positioned for their role in maintaining infrastructure.

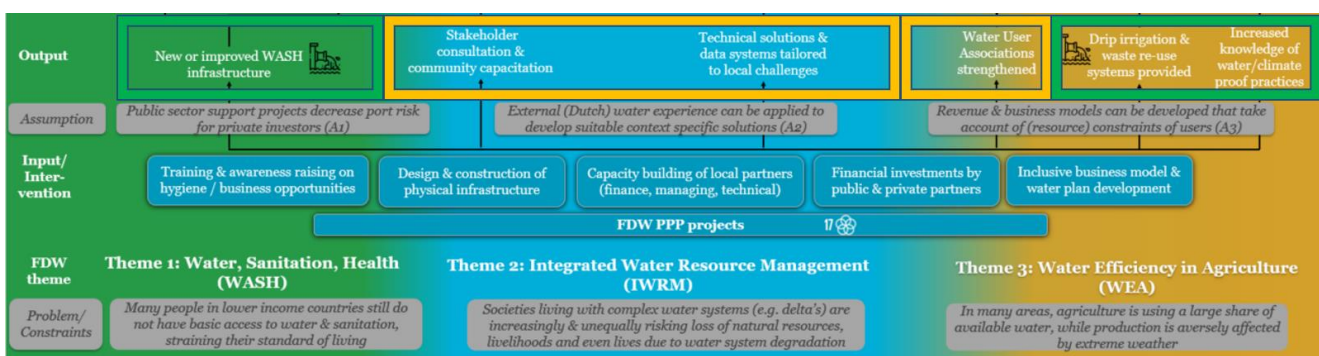


Figure 10: Focus on effectiveness of output level of FDW's Theory of Change

Furthermore, the majority of projects is not on schedule, and some have readjusted their targets during the project. Based on the interviews with project partners, we conclude this is partly caused by overambitious target setting, a lack of a multidimensional problem analysis in the inception phase, and challenges occurring more frequently in a dynamic context. Programme stakeholders explain that they conceptualise project effectiveness in other terms than is captured in the formal project-level KPIs, and they consider aspects such as establishing partnerships as at least as important.

While not all targeted beneficiaries are reached by the projects, case-study level analyses demonstrates that the beneficiaries who are reached are generally satisfied with the activities carried out by the project and feel involved with the project. The limited availability of monitoring and evaluation data makes it difficult to quantify

tangible output-level results for the FDW portfolio. Results are not always consistently tracked at the project level, and availability of monitoring data at the FDW programme-level is very limited.

**Noticeable change at outcome level** – FDW effectiveness becomes less visible at the outcome level. For **WASH projects**, the case studies provide a mixed picture. Some projects demonstrate an increase in affordable water, some experience difficulties in terms of affordability. For instance, in both the Sustainable Water Services Beira project in Mozambique and the Green Sustainable and Safe Water Source project South Africa, FDW beneficiaries largely experienced payment problems (25-54% of survey respondents). As a result, the increase in service availability does not necessarily lead to an increase in number of people using these services. Consequently, maintenance of the services is a key challenge. For the AQUACRUZ project in Bolivia this is less of a problem, also because this project has a well-established structure and is embedded in a long-term programme.

We did not find evidence that FDW investments in WASH leverage additional investments from public sector organisations or from the private sector. Typically, business models are too fragile as the willingness and/or ability of users to pay for services does not suffice to meet the required cost coverage for O&M. Combining the current WASH projects with livelihood development projects could help increase beneficiary income and at the same time increase the likelihood of beneficiaries paying for better water services. For instance, the FDW Safe Drinking Water project in Ethiopia has successfully engaged local microfinance partners in the project. Additionally, aligning the project with Ministry of Health programmes or other local public funds is recommended.

While **IWRM projects** involve various stakeholders in consultations, this does not yet result in inclusive decision making. In general, projects did not make substantial progress on outcome level to date. In one IWRM case study (Building with Nature in Indonesia), technical solutions have been translated in larger plans. However, alignment across institutions and the development integrated plans for water resource management is highly complex, and is highly challenging for private or non-governmental project partners to achieve without long-term public-sector support at the right levels. Challenges include the fragmentation of public-sector mandates, constraints on the capacity and commitment of public-sector organisations, and staff rotation within public-sector institutions hindering the continued presence and build-up of project-relevant knowledge. Moreover, IWRM projects may benefit from project timelines that stretch beyond five years.

**WEA projects** also encounter challenges in realizing the intended outcomes. Projects typically did not yet succeed in contributing to new regulations, to more cohesion and conflict resolution, or to producers applying water saving techniques across larger production areas. Lack of government support and financial commitment is a key challenge. WEA projects often experience issues related to political agendas on topics of land ownership and communal water use. Noticeable change from WEA projects requires that water user associations and other user groups are fully positioned to sustain the project benefits, business models that should generate the needed revenue streams are viable and scalable, and (local) government is actively engaged in and committed to project success.

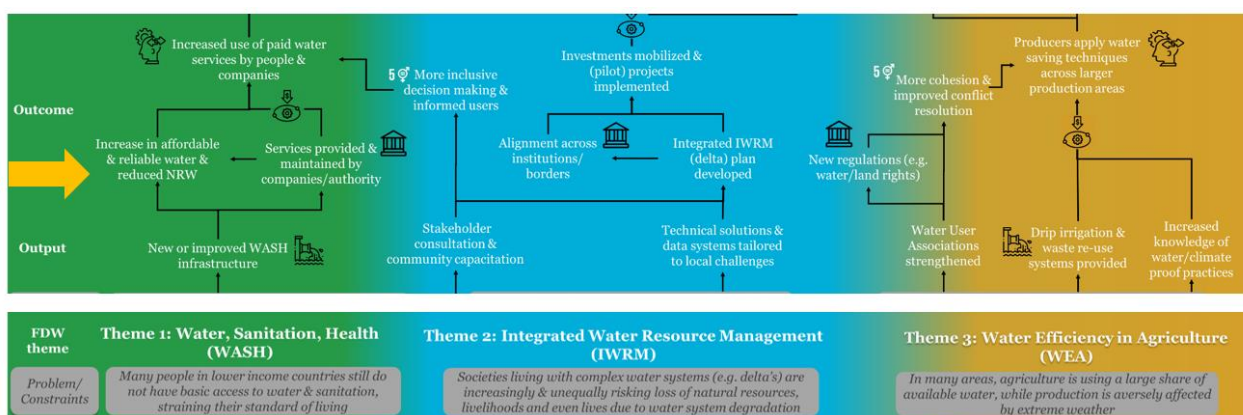


Figure 11: Focus on outcome level of FDW's Theory of Change

**Key determinants of success** – There are various *general* determinants that may lead to the success or failure of a project. The key determinants of success are: Involving local communities based on a trusted relationship, good relationships and acknowledgement of previous collaborations between project partners, common

interests and shared objectives, strong local presence of the partners, and clear strategies for project implementation and project exit.

Key determinants of failure are: Lack of equality between local and Dutch partners, mid-stream changes within the partnerships, inaccurate initial assumptions and too little research (due to time constraints in the inception phase), insufficient understanding of the local context, insufficient ownership by local (public) partners, too frequent staff rotations, and limited flexibility within the FDW framework.

In addition, there are some recommendations to increase the success of projects *per theme*.

| WASH  | IWRM  | WEA  |
|---|---|--|
| Link FDW projects with livelihood development projects or include local MFIs in the project | Ensure knowledge transfer from Dutch private partners to local partners                             | ensure long-term commitment from public partners to  |
| Include a local (private) partner who is willing to commit long-term investments            | Include the 'right public partners', i.e., with the mandate to influence institutional arrangements | Carefully examine the local context to determine a suitable business model and any possible risks related to land ownership/ water use |
| Align projects with Ministry of Health programmes or other local public funds               |   | Increase attention to capacity building of water user associations   |

### 3.1 Reporting perspective

#### Effectiveness of the design and distribution of the FDW programme

The FDW programme aims for multiple goals simultaneously through a wide range of interventions. The two main objectives of FDW (1. reaching development goals and 2. engaging the private sector) pose a challenge in aiming for both goals at the same time. Previous evaluations commented on the uneven distribution of the portfolio. The current portfolio analysis showed an improvement in the representation amongst the three different themes, especially because FDW has focused on including more IWRM projects (one project in call II, and nine projects in call III). However, the waste management sector is still underrepresented (only three projects to date include this in their activities).

#### Generic effectiveness on project level

Most projects are effective in providing training and establishing new water infrastructure. However, many projects are not quite on track to reach their targets, particularly on outcome level, or have readjusted their targets because they turned out to be unrealistic. Out of the 11 case studies, five projects did not manage to reach their targets or are far behind schedule. The main reasons for this delay are: Complexity of stakeholder alignment, external factors (climate or market related), and lack of or untimely performance of a feasibility study.

The portfolio analysis shows that WASH PPPs score higher on effectiveness than IWRM and WEA PPPs, while PPPs in Asia score slightly higher than PPPs in Africa. Furthermore, private PPPs are more effective than mixed PPPs, and PPPs score higher on general effectiveness than on theme specific effectiveness.<sup>13</sup> Theme specific indicators could only be properly analysed for WASH, as the lack of monitoring data for WEA and IWRM projects hindered the analysis.

<sup>13</sup> Generic effectiveness refers to generic indicators such as the number of people trained (realized /target). Theme specific indicators refer to indicators that relate to the effectiveness of a specific theme (WASH/WEA/IWRM). For instance, the number of people that have access to safe drinking water (realized/target).

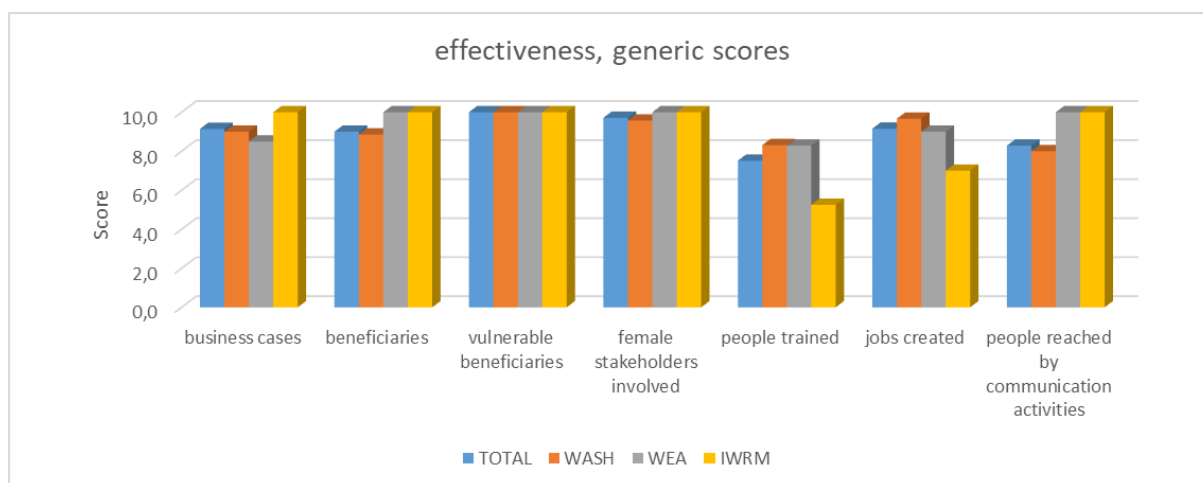


Figure 12: Scores for generic indicators for effectiveness, total and by theme

### Theme specific findings on project level effectiveness

For safe drinking water access, on average, WASH projects score below par for females and rural populations (5.0, 5.3 respectively), while vulnerable populations are also reached less than on average with sanitation and education (score: 6.0 and 4.7 respectively). Reduction in NRW is quite good (8.0 out of 10).

For WEA, the only indicators available are the yield (realized/target), water productivity by crop (realized/target) and area under improved practices (realized/target). For yield, WEA projects score only a 3.6, while performance on the other two indicators is just sufficient (6). Hence, effectiveness of WEA projects when judged by the available data is limited.

For IWRM, specific M&E indicators are unreliable because only one project has reported on these. However, project documentation shows that to date, the effectiveness of these projects lags behind. Of the 10 IWRM projects, two have stopped prematurely, two have experienced serious delays that have left the projects with few activities and project scopes to be adjusted and in the remaining six projects project activities have been partially implemented.

### Reaching vulnerable target groups

In terms of effectiveness on reaching vulnerable target groups the picture is mixed. Overall, reaching women seems to be challenging. On average, 37% of the beneficiaries trained are women. As regards PPP size, it stands out that the percentage of women trained in the small projects (64% of all trainees) is more than 2.5 times higher than in projects with a large PPP (24%).

### Determinants of success

In programme- and project-level documentation, the following factors emerge as essential to project success or failure: Shared objectives between partners and strong (public sector) commitment, equality between local and Dutch partners, and limited changes in the partnerships and engagement of local communities and institutions.

## 3.2 Stakeholder perspective

Stakeholders explain that FDW projects were particularly effective in providing training and engaging local communities. Additionally, projects were generally effective in establishing new infrastructure. Maintenance of established and rejuvenated structures, and encouraging multistakeholder dialogue, remain challenging aspects to project implementation.

Stakeholders consider it difficult to assess the effectiveness of the FDW programme. They generally argue that effectiveness should not only be measured quantitatively. "Effectiveness is beyond indicators; it is also learning from mistakes." On project level, stakeholder perspectives on the effectiveness varies largely per project. Overall, project partners believe steady progress has been made and acknowledge certain challenges that have caused project delay.

FDW funds a wide range of water-related interventions and is considered to be effective in establishing new partnerships and strengthening existing ones. Most PPPs are however still not strongly business driven, and FDW tends to overestimate the willingness of Dutch parties to truly invest risk capital in developing countries. Stakeholders believe FDW is not effective in engaging private partners in partnerships, mainly because finding a commercially viable business case is difficult in a pro-poor context.

Several key determinants of success can be identified, namely a holistic approach, good relationships and/or previous collaborations between project partners, common interests, strong local presence of the partners, and a clear implementation strategy. On the other hand, inaccurate assumptions and too little research due to time constraints in the inception phase, insufficient knowledge of the local context, insufficient ownership of local (public) partners, changes in partnership and staff rotations, tension between partners, extreme weather situations, and limited flexibility within the FDW framework are repeatedly mentioned as current determinants of failure.

### 3.3 Beneficiary perspective

FDW is effective in engaging local communities and training and sensitizing beneficiaries at household level. NGOs in the PPPs are successful in building and maintaining high-trust relationships at community level, which is an important success factor towards community-level activities and interventions. Although the characteristics of FDW projects vary greatly, projects almost always directly involve beneficiaries through awareness raising activities and trainings, thereby making use of established social structures (such as community groups or cooperations).

The beneficiaries as included in our sample were generally satisfied with the activities carried out by the project. Trainings on acquiring new skills are generally most effective and receive the highest satisfaction rate. Training on water management, maintenance and training related to women empowerment could be improved. For the projects involving infrastructure most are functioning well (4 out of 5 case studies). These are mainly WASH projects and one WEA project, thereby leading to an increase in water supply and/or water quality. However, in one case study (BwN Indonesia) the infrastructure did not sufficiently address the problem. The interventions were only operating on a small scale and involved simple materials, which meant it was not up to the continued levels of groundwater extraction that cause coastal erosion. For WASH projects, the percentage of households reporting payment problems is still relatively high (25% for South Africa and 54% for Mozambique).

# 4 Impact

| Q2  | What is the impact of the programme?  |
|-----|---|
| 2.1 | <b>Development impact:</b> To what extent (and how) did FDW projects contribute to improving the standard of living (incl. health, water access, food production, income) for target groups, including vulnerable groups? |
| 2.2 | <b>Systemic change:</b> To what extent (and how) did FDW projects contribute to systemic change in the institutional framework and the lasting professionalization of the local water sector/market?                      |
| 2.3 | <b>Unintended effects:</b> Has the PPP approach of FDW led to unintended negative (e.g., environmental or market distortion) effects?   |

As described in section 3 and Annex H, in many cases, **FDW projects are effective in putting infrastructure in place, consulting and engaging stakeholders and communities, tailoring technical solutions to local challenges, and providing systems such as drip irrigation to project beneficiaries.** Also described in section 3 and Annex H is that implemented WASH infrastructure does not always result in increases in affordable and reliable water, and that the associated services are typically encounter maintenance issues. IWRM projects particularly do not achieve the necessary alignment across institutional borders or in the development of integrated plans. Subsequently, further investments are not (yet) mobilized and decision making is not (yet) more inclusive in nature or more informed. WEA projects do not always result in increased cohesion of water use practices, better regulations in terms of water and land rights, or the widespread application of water-saving techniques.

Consequently, achieving significant **impact remains a challenge for the FDW programme.** As project partners find it difficult to realise noticeable change at the outcome level of the Theories of Change of their projects, subsequent long-term societal impact is hard to reach. With WASH projects not structurally resulting in increases in affordable and reliable water, with IWRM projects typically not resulting in the implementation of integrated water management plans, and with WEA projects not always resulting in improved uptake of water-saving approaches or the strengthening of regulatory frameworks, development impact is difficult to achieve. As these outcome-level project results are not always in reach, it is difficult for FDW projects to contribute to standard of living for target groups in terms of health, water access, food production or income generation. Moreover, the market-based approach makes it challenging for PPPs to combine the intention to develop commercially viable business cases with the intention to reach the most vulnerable groups.

Also, as a result from project-level challenges at the outcome level, **systemic change in the local water sectors, in which the projects operate, is difficult to achieve.** Lasting professionalization of local water markets and structural improvements of the institutional framework of local water sectors would be helped by demonstrable success of FDW projects at the outcome level, with noticeable long-term changes for target communities and vulnerable groups, and by sustained project benefits through commercially viable business cases, successful handovers of project activities to local communities, or multi-year commitments from local public-sector institutions.

At project level, FDW projects are found to improve access to drinking water and water productivity, yet no convincing result are found regarding increases in yield or income. Furthermore, for IWRM projects, almost no direct impact is measurable. According to beneficiaries of our case studies, part of the projects did lead to improved access to water, better hygiene, or increased income. Yet, the interplay of local challenges is often not properly identified beforehand. As a result, projects often do not contribute substantially to the standard of living, or only on a relatively small scale, as confounding contextual factors influence project impact. Also, reaching women and vulnerable groups is confirmed to be challenging and in need of more effective approaches. PPPs could pay more attention to a clear identification of their ultimate beneficiaries. FDW could also have more impact if there was more flexibility in the programme.

Several projects have the potential to bring about systemic change in the institutional framework and the lasting professionalisation of the local water sector/market. However, to contribute to systemic change, acquired knowledge should be institutionalized and local knowledge and governmental institutes could be more actively involved in PPPs. Finally, FDW generally induced few unintended effects, although some case study projects led to minor social tensions locally.



## 4.1 Reporting perspective

Development impact is reported on for part of the projects, although not consistently. Programme and project documentation rarely specifically discuss the topic of systemic change (and this is not a specific FDW criterium for projects to report on). Although unintended effects are also rarely discussed in the documentation, RVO actively tries to mitigate risks of market distortion.

With an average score of 7.5 in the portfolio analysis, generally, FDW projects are found to indeed improve access to drinking water (WASH). Furthermore, an increase in water productivity (WEA) can be observed (average score of 6.0 in the portfolio analysis), but no convincing results are found regarding increases in yield or income. Almost no direct impact is measurable for IWRM projects. With FDW, a very wide range of development goals is often pursued by the PPPs, but the impact on the real target groups is not well monitored. PPPs could pay more attention to a clear identification of the ultimate beneficiaries. In total 3 out of 7 case studies reported notable findings on the impact to date, for instance by the decline of water-borne diseases among the family members (Ethiopia) or an increase in productivity (India and Indonesia, BwN).

## 4.2 Stakeholder perspective

On programme-level, stakeholders find it hard to assess the impact of FDW. Most case-study projects did or do not yet significantly contribute to the standard of living, or only on a relatively small scale. Indeed, the projects often take place in a challenging context, with water-related issues being only part of the multidimensional local problems. Reaching women and vulnerable groups is confirmed to be challenging and in need of more effective approaches. According to various stakeholders, FDW could have more impact if there was more flexibility in the program.

While stakeholders do not consider systemic change to be a focus of FDW, several projects have the potential to bring about systemic change. To contribute to systemic change, local knowledge institutes and the public sector could be more actively involved in PPPs. Now, often Dutch knowledge institutes participate in a PPP, or the appropriate local public partner is not involved. Although FDW generally induced few unintended effects, some case study projects led to minor social tensions locally.

## 4.3 Beneficiary perspective

According to beneficiaries, part of the projects led to improved access to water, better hygiene, or increased income. Yet, project activities not always lead to a significantly improved standard of living. The causes of challenges of beneficiaries often go beyond water-related issues, or the multidimensional causes of the water-related problems were not properly identified beforehand.

# 5 Sustainability

| Q3  | What results are sustainable and which factors led to these successes or to failure?   |
|-----|--|
| 3.1 | <b>Continuity of performance:</b> Have PPPs been able to accomplish (financial) sustainability of the business model performance after project completion? |
| 3.2 | <b>Continuity of impact:</b> Has development impact continued after project completion?  |
| 3.3 | <b>Scaling:</b> Have (innovative) business models/approaches been scaled up, scaling (part of) the project, or out, scaling beyond the project?            |

One of the ambitions of the FDW programme is to generate project benefits through a market-based approach, to sustain project benefits through commercially viable business cases, leverage of additional private-sector investment, and scale-up of successful approaches. It proves challenging for project partners to implement project activities that result in market-based sustainability of project results beyond the period of donor involvement. As several FDW projects are ongoing at the time of this second mid-term review, there is still opportunity for these projects to achieve sustainability of project benefits.

As described in previous chapters, developing a business case in the water sector is challenging. It is also challenging to sustain a business case after project completion. Most PPPs in the FDW portfolio did not (yet) achieve a financial sustainable business model towards the end of the project period. Important reason for this is that profit margins within the water sector are small, and revenue generated from project benefits typically do not allow (local) private partners to continue the activities that are needed to sustain these benefits beyond the project period.

As described in section 3 and Annex H, maintenance of WASH infrastructure requires funding that in FDW projects typically is foreseen to come from revenue streams from users of the poor segment of these users are not well positioned to pay for their water. For other projects, sustainability of project benefits rests on successful handover of tasks and responsibilities to local communities that are not always in a position to effectively conduct these tasks and take on these responsibilities. Yet other projects require long-term public-sector support at the right levels to overcome fragmentation of public-sector mandates and capacity, both of which are challenging to achieve by the FDW PPPs.

As described in section 4 and Annex I, it is challenging for FDW projects to contribute to standard of living for target groups in terms of health, water access, food production or income generation. With such development impact being elusive, consequently, continuity of impact is only achieved in a few projects, as the ability and/or willingness of both local and Dutch partners to continue project activities is limited. Likewise, long-term commitment from the local government is often insufficiently present. Projects do not always develop a suitable exit strategy, although in some cases project beneficiaries do continue project activities or maintain the infrastructure themselves.

Documentation and reporting at both programme and project level indicates that, despite the focus on a market-based approach, revenue generation may not be central nor relevant to a significant number of FDW interventions. Also, profit margins in the water sector are typically small. Hence, many PPPs did not achieve a financial sustainable business model at the end of the project period. Reporting also indicates that continuity of impact is only achieved in a few projects, as the ability and/or willingness of both local and Dutch partners to continue the project activities is limited.

Programme-level and project-level stakeholders report that, as profit margins within the water sector are small, local private partners are not always able to continue project activities. For most Dutch private partners, the FDW projects are seen as CSR or demonstration projects, without the need to be profitable at all. Hence, business cases within FDW projects are often fragile. Stakeholders think that to achieve sustainable business cases, a strong presence of a local private partner would be helpful. Stakeholders explain that it appears unlikely that projects will realize their intended long-term impact without additional investments or subsidies. Projects often lack a proper exit strategy and start developing ways to sustain project benefits at a relatively late stage.

Sustainability from a beneficiary perspective typically comprise the extent to which beneficiaries can afford paying for ongoing water services provided to them, and the extent to which local communities can take on

responsibilities regarding infrastructural maintenance. In 4 of the 7 in depth case studies, beneficiaries to some extent continue to pay for project activities or manage the maintenance of infrastructure. In cases where beneficiaries help the project to sustain project benefits (i.e. take on maintenance responsibilities), this is often limited to simple tasks that require few resources. In the other 3 case studies, beneficiaries are not able to sustain project benefits.

## 5.1 Reporting perspective

Documentation and reporting at both programme and project level indicates that, despite the focus on a market-based approach, revenue generation may not be central or even relevant in a significant number of FDW interventions. Also, profit margins in the water sector are typically small. Hence, many PPPs did not achieve a financial sustainable business model at the end of the project period.

Reporting also indicates that continuity of impact is only achieved in a few projects, as the ability and/or willingness of both local and Dutch partners to continue the project activities is limited. Theme-specific indicators show that in **WASH** and **WEA** projects, infrastructure involved is still working after project periods. However, there is limited progress made on water policy aspects. For **IWRM** projects, the picture is less positive. Programme-level documentation indicates that, to ensure institutional sustainability, RVO should include the role of partnership capacity development in a more open and prominent way in PPP projects. Furthermore, PPPs with high local public sector commitment are more likely to be sustained.

Scaling project approaches nationwide are to some extent apparent in multiple case study projects (4 out of 7 in-depth case studies), but it appears challenging to upscale concepts systematically.

## 5.2 Stakeholder perspective

Programme-level and project-level stakeholders report that, as profit margins within the water sector are small, local private partners are not always able to continue project activities. For most Dutch private partners, the FDW projects are seen as CSR or demonstration projects, without the need to be profitable at all. Hence, business cases within FDW projects are often fragile. Stakeholders think that to achieve sustainable business cases, a strong presence of a local private partner would be helpful.

Stakeholders explain that typically it appears unlikely projects will realize their intended long-term impact without additional investments or subsidies. Projects often lack a proper exit strategy and start developing ways to sustain project benefits at a relatively late stage. Stakeholders indicate that Dutch partners are generally too much in the lead during the project, while the local public sector does not take its role as custodian and protector of the project. After the project ends, the role of the local partner is often limited, and not sufficient to guarantee the continuation of project activities. Stakeholders explain that, to enhance sustainability and upscaling, PPPs should be set up to align with current activities of the public sector.

## 5.3 Beneficiary perspective

Sustainability from a beneficiary perspective typically comprise the extent to which beneficiaries can afford paying for ongoing water services provided to them, and the extent to which local communities can take on responsibilities regarding infrastructural maintenance.

In 4 of the 7 in depth case studies (BwN, Brantas, Ethiopia and Mozambique), beneficiaries to some extent continue to pay for project activities or manage the maintenance of infrastructure. In cases where beneficiaries help project sustain project benefits (i.e. take on maintenance responsibilities), this is often limited to simple tasks that require few resources. In the other 3 case studies, beneficiaries are not able to sustain project benefits. A key challenge to infrastructural maintenance is the lack of financial resources at community level. Although transferring ownership and responsibility to local communities is challenging, communities of beneficiaries generally do express to have confidence in the long-term development project of the project. Yet, this confidence can also be explained by the fact that they often mention they believe that the project partners will still help them in the future when the community members turn out not to be able to maintain the project infrastructure themselves.

# 6 Efficiency

|            |   |
|------------|---|
| <b>Q4</b>  | <b>What was the impact of different approaches on the cost-benefit-ratio of projects?</b>   |
| <b>4.1</b> | <b>Costs per person:</b> What were the costs per person for getting access to water or sanitation services?                                     |
| <b>4.2</b> | <b>Costs for other outcomes:</b> What estimations can be provided for the costs per outcome unit for other project results (e.g. for WEA/IWRM)? |
| <b>4.3</b> | <b>Determinants:</b> How is the cost-benefit ratio influenced by different intervention approaches and project factors?                         |

**Cost estimation of FDW projects** – It is difficult to evaluate the efficiency of FDW on a programme level due to the great differences between FDW projects (for instance, diversity in theme, type of intervention, and local context). Additionally, the link between projects and the number of direct beneficiaries is not always clear, especially for IWRM and WEA projects. For WASH, general cost estimations can be made. On average, EUR 26 per beneficiary is spent, which is fairly congruent with spending on WASH interventions at other programs or institutions. Cost estimations for WASH facilities vary more often, amounting to EUR 376 on average.

**Monitoring, evaluation and learning critical to portfolio oversight and efficiency** – The efficiency of FDW is only scarcely mentioned in both programme and project documentation, but stakeholders indicate that it is implicitly assessed by RVO, such as by determining whether project budgets are proportionate to the planned outputs/results during the proposal phase. However, RVO does not seem to steer towards a structural and timely monitoring and evaluation on project level. Project information is available but does often not provide the necessary data on project progress and results. Furthermore, stakeholders frequently regard the management structure of projects as labour intensive and time-consuming (especially in the proposal and inception change). Key challenges mentioned are high staff turnover (both within RVO and PPPs), administrative burden from FDW reporting, and complex local environments that require tailored approaches.

**Recommendations to enhance efficiency and project success** – To enhance efficiency as well as project success, PPPs could appoint a dedicated staff member to the continuous monitoring and evaluation on project level. A lesson learned from current FDW projects is to cooperate with local knowledge institutes with subject matter expertise. This cooperation leads to benefits on both sides (the university gathering more data for current research and the project gathering data on its progress). RVO could also simplify and supervise the monitoring and evaluation framework. Especially keeping a close eye on key challenges related to the sustainability of the project, such as the functioning of water user associations or the strength of business models are important. Efficiency could also be enhanced by seeking more coherence and interaction with other (Dutch/international) development programmes, strengthening the inception phase, and allowing more flexibility in implementation.

**Recommendations to improve the measurability of IWRM projects** – IWRM projects are complex and multi-faceted by nature, also involving a longer time investment before results can be observed. This makes the evaluation of IWRM projects more difficult than, for instance, WASH projects. Project evaluation should ensure that IWRM interventions are effective, sustainable, and contribute to long-term management of water resources. Indicators should reflect IWRM's comprehensive approach, including indicators related to (changes in) water management, stakeholder involvement, (economic/environmental) cost and benefit analysis and (changes in) institutional arrangements as well as legal frameworks. IWRM project operate much in public space where shared resources are non-excludable. Hence, KPI's of IWRM projects will closely align to the guidelines of Nobel Laureate Elinor Ostrom for a sustainable development of common property resources (Ostrom et al. 1994<sup>14</sup>).

First, water resources should be managed sustainably. Hence any IWRM project should consider KPIs like: (changes in) water quality, quantity, and year-round availability. Second, interconnectedness of water flows requires close stakeholder involvement (public and private entities as well as local communities and water users) as well as important but non-vocal representatives of ecology and next generation of water users. As a

14 Ostrom, E., R. Gardner, and J. Walker. 1994. Rules, Games, & Common-pool Resources. Ann Arbor, MI: University of Michigan Press.

rule, many stakeholders are involved, as owners, users or caretakers, each with their own set of interests and values. Hence, any IWRM intervention should reconcile these complex objectives and interests into a coherent set of principles and procedures. KPI's are stakeholder involvement, conflict resolution mechanisms, shared agreements (formal and informal), accounting for the ecological values. Third, the viability of the project should be based on a comprehensive assessment of economic as well as environmental cost and benefit analysis. KPIs are willingness to pay for maintaining the service provided, economic CBA and NPV. restoration of ecology, reduction pollution processes, improving water quality, protect natural habitats, changes in biodiversity indices. Fourth, institutional arrangements as well as the legal and regulatory frameworks are key for the success of the IWRM intervention and sustainable management of water resources. KPI's are adequacy and functioning of the legal framework).

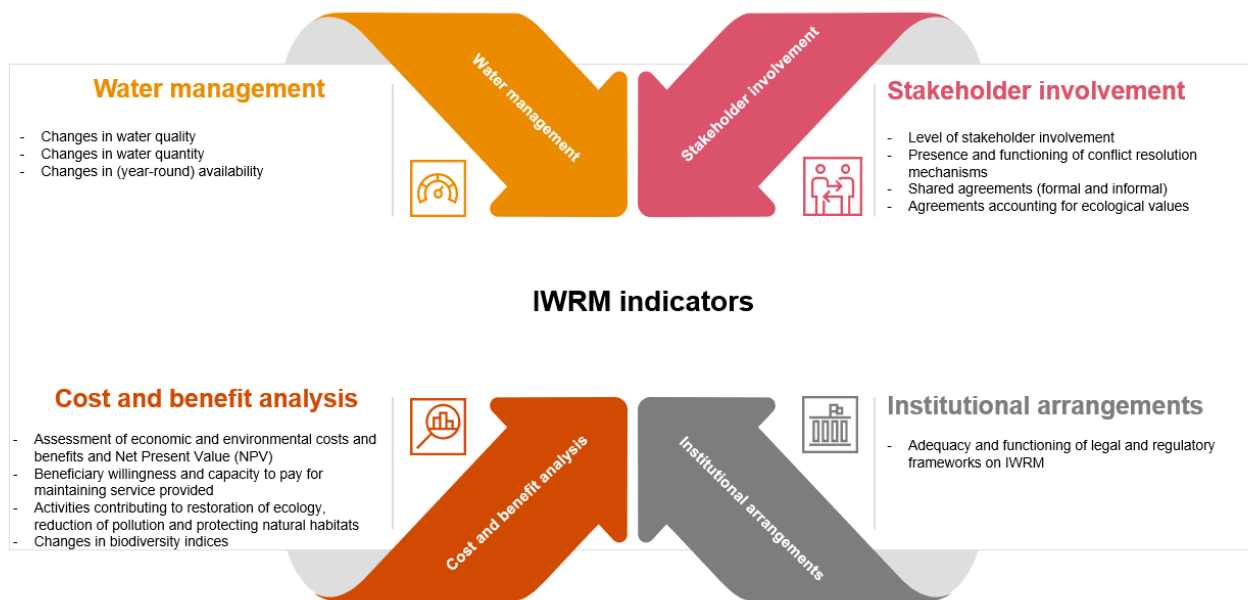


Figure 13: Examples of IWRM indicators

## 6.1 Reporting perspective

Although cost efficiency of projects is difficult to assess due to empirical constraints, for WASH projects, cost estimates can be made. Per beneficiary, on average EUR 26 is spent, while per facility, this is EUR 376. These expenditures per beneficiary are fairly congruent with spending on WASH interventions at other programs or institutions. Besides, small WASH PPPs seem to be more efficient than larger ones, whereas there is no difference between private and mixed PPPs in efficiency per beneficiary. The efficiency of training interventions highly varies per project, some being efficient with only EUR 2.20 per trainee, others averaging almost EUR 865 per trainee. RVO seems to adhere to the agreed budget on portfolio level, yet on a project level the budget is often subject to small changes. Several project case studies seem to exceed project management costs (4 out of 9 projects) due to a delay in the inception phase or internal challenges.

In line with the previous MTR evaluation, the current evaluation also observed that present monitoring methods, formats and tools are insufficient to properly analyse data on a portfolio level. Due to the broad range of interventions within FDW, it is unclear how the efficiency of projects and the programme is monitored. A general finding relates to the lack of available M&E data and the low level of information density in available reports on project level. This reduces the efficiency on portfolio level. Nonetheless, efficiency could be enhanced by strengthening the inception phase (including focus on contents and providing more flexibility), focus on quality of the partnership instead of on the quantity of partners, allowing more flexibility in project implementation, and simplifying M&E procedures.

## 6.2 Stakeholder perspective

Although not being an explicit part of the internal monitoring procedures, stakeholders report that efficiency is implicitly assessed by RVO in the proposal stage. For example, by determining whether project budgets are proportionate to the planned outputs/results during the proposal phase and including specific benchmarks for shares of project costs (including limiting project management costs to 10%).

Nonetheless, the management structure of projects is frequently regarded by stakeholders as labour intensive and time-consuming. Additionally, project interventions that involve training local communities are seen to make high costs, as building the relationships and building the capacity of local communities is labour intensive. While this aspect may be reducing efficiency, it is still considered important for the impact of the project.

Key challenges to efficiency mentioned are high staff turnover (both within RVO and PPPs), administrative burden from FDW reporting, complex local environments that require tailored approaches and climate related issues (such as the 2019 cyclone in Mozambique). Moreover, projects often encounter delays, although this is partly unforeseen due to Covid-19 as well. Options to increase the efficiency of FDW include seeking cooperation with other (Dutch/international) development programmes and phased funding.

## 6.3 Beneficiary perspective

Most beneficiaries did not provide any direct or indirect information on the efficiency of the project. Only two examples were provided, which illustrate that increasing efficiency on project level may not always seem to benefit beneficiaries. For instance, the higher efficiency of billing cycle in the AQUACRUZ Bolivia project was profitable for EPSAS but earlier payments were somewhat less popular with invoiced clients. Another example is from the India project. While the training of representatives of certain groups could increase overall project efficiency, there is a risk that the level of information will degrade. Effective dissemination of knowledge is not guaranteed and field officers should ensure frequent follow-up to monitor group understanding.

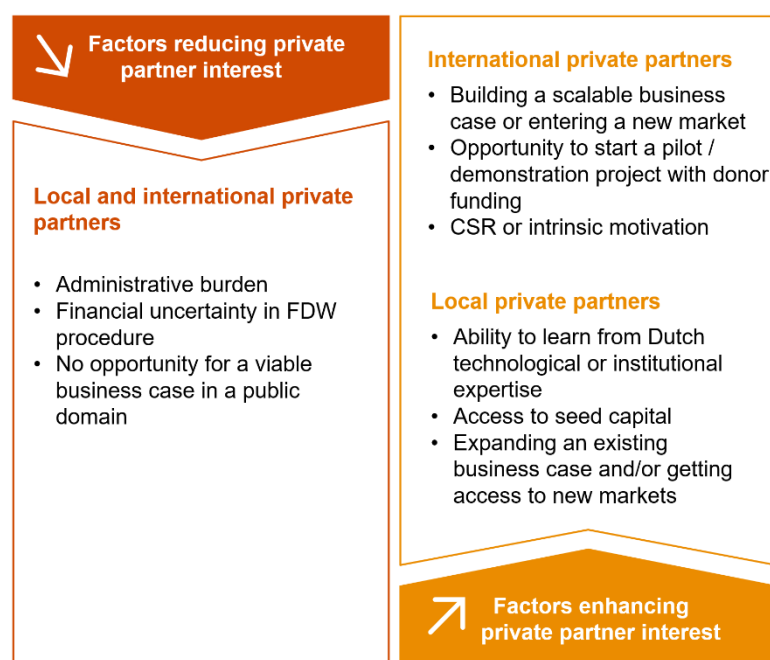
# 7 Relevance & Additionality

**Q5 Private sector relevance:** Which factors enhance or diminish the interest of private partners in the public-private partnership model?

**Q6 Input additionality:** Would the (private) partners have done the project (with own/other financial means) without the public contribution from FDW?

**FDW projects address essential issues in the local water sector** – All FDW projects have high development relevance and address essential issues in the local water sector. Preliminary knowledge and analysis of the local context is a key determinant of both success and failure. The PPP requirements of FDW may, but do not necessarily increase local relevance. Despite their best efforts, FDW interventions may not always be capable of sufficiently addressing problems. Linking FDW projects to other water related or livelihood funding instruments can enhance this.

**Engaging the private sector is still challenging** – Actively engaging private partners within FDW PPPs for the long term and at strategic levels remains challenging, as the profitability of the water sector in developing countries is low, especially in a pro-poor context. To strengthen private partner involvement, it is important to include partners that can build on solid existing business cases, and, for example, want to expand their market. In addition, the following factors are found to have the most significant influence on the interest of private partners in FDW PPPs:



**FDW funding is largely additional in the local context** – FDW funding was essential for the projects to address the relevant problems; hence the contribution of the programme is considered additional. Typically, private-sector partners in the PPPs would not have undertaken their project activities without the donor support from the FDW programme. Also, FDW funding reduces the level of investment risks for project partners and FDW projects offer a platform for cooperation. For some IWRM projects the additionality is less evident as these projects seemed to finance existing business services of Dutch private partners. Lastly, FDW funding does not guarantee that commercially viable business cases are developed around FDW projects. Business cases that have been observed are fragile and projects are often still reliant on donor funding after project completion.

## 7.1 Reporting perspective

Project and programme documentation indicates that, while it is a key requirement to include a private partner in the PPP, private partners do not always play an important role in practice. This can be explained by the simple fact that the sector is mainly a public domain, and profit margins are low in developing countries. Especially for IWRM projects, this is a key challenge. Nonetheless, private partners are interested in PPP models in the water sector for several reasons. The most important ones are: Opportunities to start a pilot/demonstration project, improving knowledge, entering into strategic collaborations, mitigating financial risk, market extensions, and CSR or intrinsic motivations.

In general, project and programme documentation describes FDW projects as additional. Portfolio-level data analysis indicates that, on average, the additionality of the FDW portfolio scores a 6.7 out of 10. In addition, the portfolio analysis shows that the additionality of FDW is much higher for WASH PPPs than for WEA or IWRM PPPs. Furthermore, the additionality is higher for private PPPs than for mixed PPPs. Additionality is primarily high because many project partners have limited financial resources themselves. Moreover, Dutch partners are considered additional by providing technological and institutional knowledge.

## 7.2 Stakeholder perspective

Stakeholders believe FDW projects are relevant from a development perspective and address essential issues. Nonetheless, they stipulate that adequate knowledge and an *upfront* analysis on the local context is needed to plan the project properly and mitigate the risks. This includes a needs-based assessment, stakeholder mapping, and risk analysis. Some stakeholders experienced challenges when they only found out *during the project* that they did not include the right partners to address the local issue or that project partners were not fully committed.

In addition to the positive aspects of FDW mentioned in the analysis of the reporting perspective, financial uncertainty in the FDW procedure, administrative burdens, unfavourable water sector characteristics and strict FDW requirements are considered as negative aspects of FDW relevance by private partners.

FDW funding is considered additional by both the programme- and project-level stakeholders. The funding reduces the level of investment risks for project partners and has been essential to start a project. Besides its financial support, FDW projects are also additional by offering a platform for cooperation and can help to leverage additional financing.

## 7.3 Beneficiary perspective

Beneficiaries as part of the in-depth case study analyses all believed the project interventions are relevant and additional. FDW projects provide locally relevant technological and infrastructural solutions to reduce water scarcity and increase water efficiency. Furthermore, projects mostly target a differentiated group of beneficiaries, which enhances the relevance as well.

However, project interventions often lack the capacity and scale to address the bigger problems within the local context that beneficiaries also describe, which are complex and multidimensional. Beneficiaries often indicate they are grateful for current support, yet they experience many confounding challenges and wish for more support. For WASH projects this mainly relates to affordability issues, while for WEA projects there are often challenges related to seed production and marketing (which are not yet included in the project intervention). For IWRM projects, beneficiaries indicated that the infrastructure is not considered sufficient to address the large scale of the problem or water management has not resulted in an improve in water quality. They also understand that (IWRM) activities can only have impact once government regulation is coherent and effective.



# 8 Conclusions

## Effectiveness of the Sustainable Water Fund

In this second mid-term evaluation, we investigated the effectiveness of interventions at project level. By following the Theory of Change for WASH, IWRM and WEA interventions, we can see that the FDW programme is effective in getting public-private partnerships off the ground and these partnerships conduct the activities to which they agreed. The programme is also effective in the sense that these activities produce the tangible results they were expected to deliver. However, the positive change that is expected to occur as a consequence of these results is a challenging aspect to FDW effectiveness.

- FDW project partners typically succeed in implementing the activities foreseen in their project plans. They conduct trainings, design and implement infrastructure, contribute to capacity building, perform activities that aim to leverage additional financial investments, and attempt to devise inclusive business models to sustain project benefits.
- In many cases, FDW projects are effective in generating tangible results at output level. Infrastructure is put in place, stakeholders and communities are consulted, technical solutions are tailored to local challenges, and water systems such as drip irrigation are provided to project beneficiaries.
- Noticeable change at outcome level yet remains challenging for project partners to achieve. Implemented WASH infrastructure does not always result in increases in affordable and reliable water, and associated services are not always maintained. IWRM projects typically do not yet result in alignment across institutional borders or in the development of integrated plans. Subsequently, further investments are not (yet) mobilized and decision making is not (yet) more inclusive in nature or more informed compared to the period before the project started. WEA projects do not always result in increased cohesion of water use practices or better regulations in terms of water and land rights, nor do we observe a consistent widespread application of water-saving techniques.

Three aspects appear to be important causes that constrain the desired changes:

4. Maintenance of WASH infrastructure requires funding that in FDW projects typically is foreseen to come from revenue streams from users of the infrastructure (e.g. households that use clean water). Generally, the poor segment of these users is not well positioned to pay for their water use to the extent needed for the infrastructure operators to break even on maintenance. As such, the water provided is typically not affordable, and the maintenance of the infrastructure depends on external funding.
5. Government actors at the ministerial level are typically not involved enough to remove bottlenecks to project effectiveness and to improve the enabling environment that would allow the project to thrive. Organizing alignment across institutional borders may require a strong stance from national-level government actors. Water affordability and the viability of business cases may require state-level interventions in country- or district-wide water tariffs or alignment with development programs that aim to increase purchasing power of local households. Water and land rights are typically subject to legislation at the national level, just as certification and registration processes are overseen by national-level bureaucracies.
6. For some projects, sustainability of project benefits rests on successful handover of tasks and responsibilities to local communities. These local communities are not always in a position to effectively conduct these tasks and take on these responsibilities, e.g. in terms of building financial resources, and scheduling, coordinating and overseeing maintenance work.

## Impact of the Sustainable Water Fund

Impact of the FDW programme is in many cases elusive, at best. Project partners find it challenging to realise noticeable change at the outcome level of the Theories of Change. Development impact is difficult to achieve when WASH projects do not structurally result in increases in affordable and reliable water, when IWRM projects typically do not result in the implementation of integrated water management plans, and when WEA projects do not always result in improved uptake of water-saving approaches or the strengthening of frameworks that regulate the use of common water resources. As these outcome-level project results are not

always in reach, it is difficult for FDW projects to contribute to standard of living for target groups in terms of health, water access, food production or income generation. Moreover the market-based approach makes it challenging for PPPs to combine the intention to develop commercially viable business cases with the intention to reach the most vulnerable groups.

Also, as a result from project-level challenges at the outcome level, systemic change in the local water sectors is difficult to achieve. Lasting professionalization of local water markets and structural improvements of the institutional framework of local water sectors would benefit from demonstrable success of FDW projects at the outcome level, with noticeable long-term changes for the targeted communities and vulnerable groups. Furthermore, project benefits could be sustained through commercially viable business cases, successful handovers of project activities to local communities, or multi-year commitments from local public-sector institutions.

At project level, FDW projects contribute to improving access to drinking water and water productivity, yet no convincing results are found regarding increases in yield or income. For IWRM projects, almost no direct impact is measurable. Indeed, part of the projects did lead to improved access to water, better hygiene, or increased income. Yet, the interplay of local challenges is often not properly identified beforehand. As a result, projects often do not contribute substantially to the standard of living, or only on a relatively small scale. Also, reaching women and vulnerable groups is confirmed to be challenging and in need of more effective approaches. PPPs could pay more attention to a clear identification of their ultimate beneficiaries. FDW could also have more impact if there was more flexibility in the programme.

Several projects have the potential to bring about systemic change in the institutional framework and the lasting professionalization of the local water sector/market. However, to contribute to systemic change, acquired knowledge should be institutionalized and local knowledge and governmental institutes could be more actively involved in PPPs. Finally, FDW generally induced few unintended effects, although some case study projects led to minor social tensions locally.

#### Efficiency of the Sustainable Water Fund

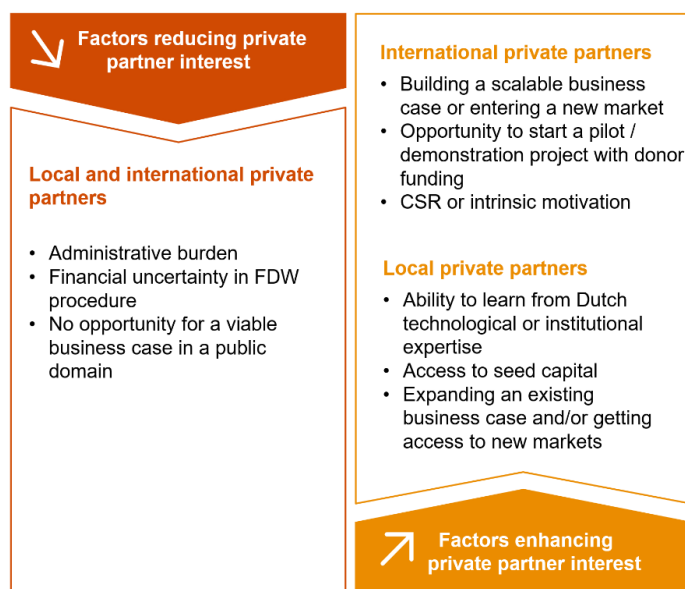
The great differences between FDW projects in theme, type of intervention, and local context, makes it difficult to evaluate the efficiency of FDW at programme level. Additionally, the link between projects and the number of direct beneficiaries is not always clear, especially for IWRM and WEA projects. For WASH, general cost estimations can be made. On average, EUR 26 per beneficiary is spent, which is fairly congruent with spending on WASH interventions at other programs or institutions. Cost estimations for WASH facilities vary more often, amounting to EUR 376 on average.

The efficiency of FDW is only scarcely mentioned in both programme and project documentation, yet stakeholders indicate that it is implicitly assessed by RVO, such as by determining whether project budgets are proportionate to the planned outputs/results during the proposal phase. However, RVO does not seem to steer towards a structural and timely monitoring and evaluation on project level. Project information is available but does often not provide the necessary data on project progress and results. Furthermore, stakeholders frequently regard the management structure of projects as labour intensive and time consuming (especially in the proposal and inception stages). Key challenges mentioned are high staff turnover (both within RVO and PPPs), administrative burden from FDW reporting, and complex local environments that require tailored approaches.

#### Relevance and additionality of the Sustainable Water Fund

FDW projects predominantly focus on essential issues in the local water sector, and in their design they have high development relevance. Preliminary knowledge and analysis of the local context is a key determinant of both subsequent success and failure of projects. The PPP requirements of FDW may, but do not necessarily increase local relevance. Despite their best efforts, FDW interventions may not always be capable of effectively addressing problems. Problems in the water sector are complex and often interlinked with other development challenges, thereby increasing the need for a holistic approach and strategic cooperation. Linking FDW projects to other water related or livelihood funding instruments can enhance the influence and possible impact of FDW projects.

Actively engaging private partners within FDW PPPs for the long term and at strategic levels remains challenging, as the profitability of the water sector in developing countries is low, especially in a pro-poor context. To strengthen private partner involvement, it is important to build on solid existing business cases, and, include partners that, for example, want to expand their market. In addition, the following factors are found to have the most significant influence on the interest of private partners in FDW PPPs:



FDW funding was essential for the projects to occur; hence the contribution of the programme is considered additional. Typically, private-sector partners in the PPPs would not have undertaken their project activities without the donor support from the FDW programme. FDW funding reduces the level of investment risks for project partners and FDW projects offer a platform for cooperation. For some IWRM projects the additionality is less evident as these projects seemed to finance existing business services of Dutch private partners. Lastly, FDW funding does not guarantee that commercially viable business cases are developed around FDW projects. Business cases that have been observed are fragile and projects are often still reliant on donor funding after project completion.

#### The multi-stakeholder approach in the PPPs and the FDW programme to solve constraints and open new opportunities for development goals

The complementary multi-stakeholder approach in the PPPs and the FDW programme contributed only modestly to solving constraints and opening new opportunities for development goals in the water sector. FDW has surely been effective in establishing new partnerships and strengthening existing ones, yet ambitious FDW calls in which many different requirements were demanded may have evoked partners to overpromise on project goals, while time-boundedness restrict importance of a thorough problem analysis in the inception phase. Hence, only a few projects fully met their project goals.

Nonetheless, the portfolio analysis shows that private-led PPPs are generally more effective and efficient compared to mixed PPPs. Furthermore, WASH PPPs are generally more effective than IWRM and WEA PPPs. Stronger involvement of the private sector in water sector projects could thus certainly have a positive impact on achieving project goals, yet the type of water project seems to be an essential element to consider in this regard. For IWRM projects, which are executed in a typical public-sector domain, a PPP approach is generally not instrumental to achieve development goals. For WEA projects, this applies to some extent as well.

Although projects do not always reach all targeted beneficiaries, the beneficiaries reached are generally satisfied with the project activities and feel involved with the project as well. Yet, projects often take place in a difficult context with large and complex local challenges. As a result, most projects only contribute to the standard of living on a relatively small scale. Hence, projects often do not meet the impact goals they have set.

#### The multi-stakeholder approach in the PPPs and the FDW programme to facilitate increased private sector involvement/ investment in ODA/SDGs & PPPs

Despite the PPP approach of FDW, engaging strong business driven commercial partners remains difficult. As the profitability of the water sector in developing countries is low, private partners do not always play an important role in the sector, especially in a pro-poor context. Hence, many projects find it challenging to develop a commercially viable business case that fits well with both the interests of a (local) private partner and the bottom of the pyramid. Most projects are highly dependent on public funding. For WASH and WEA projects, this evaluation highlights the importance of including private partners that can build on existing business cases and for example want to extend their market. Funding then reduces level of investment risks for project partners and offers a platform for cooperation. As many IWRM activities take place in the public domain, the PPP approach of FDW is not effectively resulting in increased local private-sector investments.

On the other hand, FDW funding was surely essential for most projects to occur, so the contribution of the programme is considered additional. Furthermore, most projects have high development relevance and address essential issues in the local water sector. Preliminary knowledge and analysis of the local sector is a key determinant of both success and failure. Investing in an upfront analysis of the local context can pay off in terms of efficiency by helping mitigate risks during the project. The PPP requirements of FDW may, but do not necessarily increase local relevance. If local private parties consistently and actively participate in addressing the water-related issues, this certainly strengthens the development relevance of the projects, but so far this has not often been the case. By linking FDW to other water related funding instruments, the involvement of the private sector could be enhanced.

#### The multi-stakeholder approach in the PPPs and the FDW programme to lead to continuity of interventions and/or multi-stakeholder approach after projects end

Continuity of interventions and impact is achieved in only a few projects, as the ability and/or willingness of both local and Dutch partners to continue project activities is often limited. In the long term, projects are not always backed well by the local government and private parties. Furthermore, transferring local responsibility is challenging due to perceptions amongst local communities that 'water is a right'. Aside from poverty, this compromises the willingness to pay. Thus, to enhance sustainability and upscaling, PPPs could be set up to align with local developments, while local partners could have stronger presence in the partnership. By institutionalising knowledge of and capacity for the interventions at local partners, this may help induce systemic change as well.

Furthermore, despite the requirement of including private partners within PPPs, revenue generation is not central or even relevant in a significant number of FDW interventions. Hence, many PPPs did not achieve a financially sustainable business model at the end of the project period. Moreover, projects often lack an exit strategy. Upfront risk analyses regarding both the financial and institutional sustainability of the PPPs are conducted insufficiently, and. Post-project financing opportunities or demands are essential elements for the exit strategy and should be taken into account at the early stages of the project.

#### The combination of public and private sector contributions to reach FDW objectives

To date, the combination of public and private sector contributions has not been convincingly instrumental to reach FDW objectives. In most PPPs, partners had complementary roles and the intention of working towards a shared goal. However, initial expectations of partners' roles were not always met during the project. This especially holds for the contribution of public partners. In some cases, projects did not include public partners at the needed levels, i.e. with the necessary mandate to play a decisive role in the local water sector. Interventions often struggled to align activities with other public sector activities and initiatives due to ambiguities in institutional responsibilities, staff rotations, and limitations to public budget expenditure. In addition, the role of the private sector in a pro-poor context is less evident than expected. Establishing a sustainable business case in this context is challenging. The most successful business cases (for WASH and WEA) are built by aligning project objectives to an existing business case of a local partner – yet these business cases are still rather fragile.

For IWRM projects, private sector contributions are particularly difficult as the potential for a business case in this institutional context is almost non-existent, as the foreseen project benefits of IWRM interventions are typically non-rival and non-excludable in nature. Moreover, private-sector provision of such benefits may result in underprovision. If private technical expertise is needed, contracts can be made between government institutions and private-sector organisations, yet this is different from trying to sustain project benefits through a commercially viable business case. As such, IWRM projects primarily rely on public-sector contributions and the role of public sector institutions as custodian of the project. While the PPP structure has potential to contribute to reaching FDW objectives in WASH and WEA domains, the structure does not seem to bring clear benefits to IWRM interventions.

This evaluation also highlights the importance of including strong local lead partners within the PPPs. An upfront problem analysis is essential to determine which partner(s) are capable and willing of locally embedding the interventions at the institutional level, and if the intervention could bring long-term benefits. As the water sector is strongly affected by the public sector, it is crucial to set clear expectations on the roles and responsibilities of local public partners within the PPP. Finally, FDW projects do not seem to make use of strategic collaborations with other international, national or local development instruments. Embedding projects in national development programmes or linking projects to existing programmes could significantly increase the influence of FDW projects.

# 9 Lessons

|            |  |
|------------|--|
| <b>Q8</b>  | <b>What lessons and recommendations can be drawn to inform MFA, RVO and project implementors of ongoing projects?</b>  |
| <b>8.1</b> | <b>Project level:</b> What lessons can be drawn from completed projects about increasing the impact and sustainability of results that can be applied by ongoing projects as well as the programme as a whole? |
| <b>8.2</b> | <b>Policy level:</b> How could PPP strategies be applied (even) more effective in future policies & programmes?  |

## 9.1 Project level

The analysis presented in this evaluation report has provided the following general learnings and recommendations. We distinguish between recommendations 1) for current FDW projects and 2) for future projects.

### Recommendations for current FDW projects:

- **Continue a strong presence and commitment of local partners** – Maintain relations between partners by sharing project learnings during project meetings. Make sure there is a clear agreement on the roles and level of involvement of partners after project completion.
- **Design exit strategies to transfer responsibility to local communities and partners** – Exit strategies should include all activities that are needed to ensure a continuation of project results. This includes ensuring the sustainability of the business case and/or transferring responsibility to local communities or local partners. For instance, building the capacity of local communities or organisations to maintain the established infrastructure or making arrangements with public-sector partners to include continuation of project activities as part of their mandate. When still possible, include a 2-3 year transition phase at the end of the project. Carefully monitor the project-specific maturity level of communities or organisations to ensure long-term success after project completion. This also includes a period of follow-up monitoring and evaluation post-project (at least annually).

### Recommendations for future projects:

- **Ensure strong presence and commitment of local partners** – Because the water sector is still mainly a public-sector domain, commitment from public-sector partners is key. This includes collaboration at the local, regional or district and national level. Finding a suitable private-sector partner can be challenging. Look for a partner that has a clear interest in the partnership (e.g. because of alignment with existing business activities) and has the capacity to take on a large role. To get local communities engaged in the project, an established NGO with an extension network is essential. A track-record in the particular region in which the project is active can help the project by acting on a trusted relationship.
- **Allow time to carefully prepare in the inception phase** – Allow time to understand the local context and test key assumptions prior to the start of a project. This may increase alignment with the local context, increase project relevance, and increase the likelihood of success. The upfront problem analysis should include a needs-based assessment (involving local beneficiaries), an institutional / stakeholder analysis to find the right public-sector partners, and risk analysis and contingency plans to mitigate anticipated risks. Allow time before setting KPIs until the inception phase is finished. Ensure the design of a suitable exit strategy should also be included in the inception phase. To ensure the successful transfer of responsibility to local communities/public-sector partners, include a 2–3-year transition phase at the end of the projects where this will be the case.
- **Build a strong relationship amongst partners** – Make sure to include the most suitable organisations in the partnerships. Find partners with complementary expertise, specify the role of each partner, set the right expectations, and assess commitment of the organisations before the start of the project. Work together based on a trusted relationship and on equal footing. A defined governance structure is helpful

to ease decision-making (especially in challenging circumstances). Regular partner meetings are essential to building relationships and to monitor progress. In-person meetings work best.

- **Ensure partners have a shared goal and are committed at the start of the project** – This also encourages partners to feel shared ownership and responsibility for delivering project results. These shared goals should be mindful of the local context and aligned with the national development strategy. In most areas, there are multiple other (donor) programmes who work towards a similar goal. Opportunities should be explored to link the shared goals other likeminded stakeholders and programmes, e.g. by collaboration across programmes and exchanging learnings. This could also improve sustainability and increase scaling potential of individual projects.
- **Focus on continuous monitoring, evaluation and learning (MEL)** – Embed a continuous monitoring, evaluation and learning framework in the project design and collaboration with partners. Focus on outcomes instead of outputs when conducting monitoring & evaluation. When collected and structured properly, the M&E data can facilitate intermediate learning. Furthermore, gather feedback from end beneficiaries. This is a valuable source of information to assess the effectiveness and impact of the project.
- **Adopt an agile approach throughout the project** – The project should have a well-defined outcome and goal in mind, yet should allow for flexibility to adapt to contextual changes. Regular collaboration and consultation with RVO can help to explore the best or additional opportunities to make impact.

Figure 14 below summarizes the 6 pillars of project success for the FDW programme. Factors in black are *existing* success factors, factors in orange require more attention.

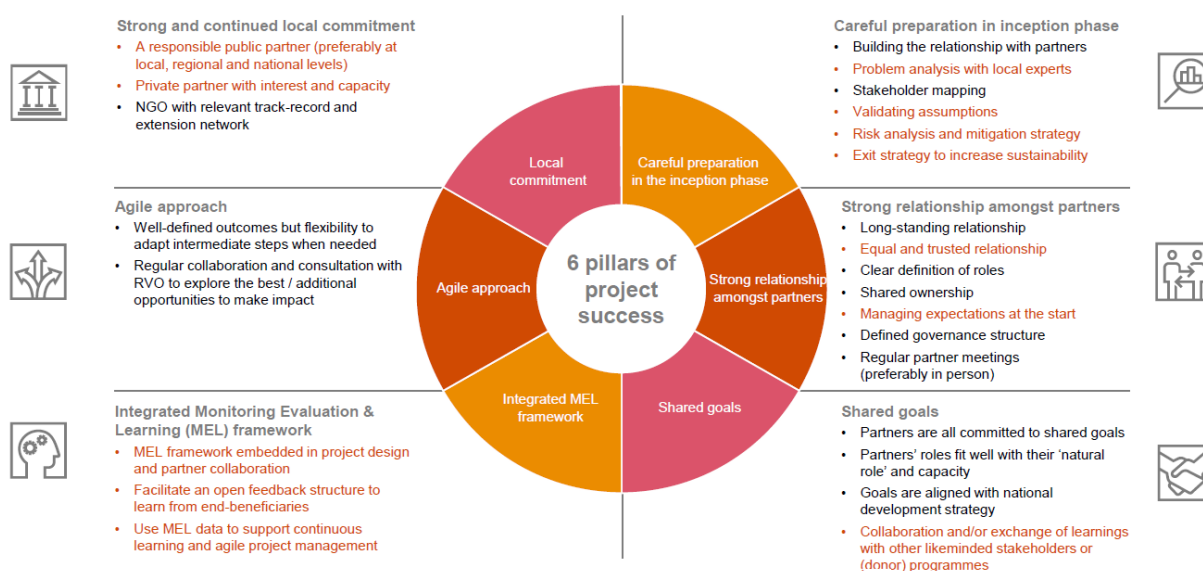


Figure 14: Pillars of FDW project success

## 9.2 Programme level

The following recommendations can help improve the effectiveness of future policies and programmes.

### Recommendations for current FDW projects:

- **Support partners in formulating an exit strategy** – Focus on embedding the project in the local context and on how project benefits can best be sustained. Ensure RVO is timely consulted and informed of the project's exit strategy. Provide support where needed (e.g. by providing examples or by helping projects find access to potential sources of finance).

- **Support partners with the institutionalisation of acquired knowledge** – Establish best practices with project partners on the continued availability of individual project staff and the institutionalisation of project knowledge. Also pay attention to partners' willingness to transfer knowledge and technology.
- **Facilitate targeted exchange of knowledge and experience amongst project partners and similar RVO programmes** – Provide various platforms (in addition to the FDW inspire sessions) to share knowledge and project learnings not only amongst FDW projects but also with similar (water or PPP) programmes.

### Recommendations for future projects:

- **Extend the inception phase to at least one year** to facilitate a thorough problem analysis and thereby increase the likelihood of project success and sustainability. The inception phase proves critical to building a trusted relationship between partners, determining if the partnership is set for success, and whether project designs optimally align with the context. This recommendation adds to those mentioned in earlier studies (e.g. Caplan et al., 2022).
- **Support partners with setting up a monitoring, evaluation and learning (MEL) framework and generate a data system to keep track of portfolio impact** – Make sure to focus the M&E system on development impact and sustainability, rather than on project outputs only. Simplify the reporting requirements, yet at the same time do more serious checks on the quality of the data provided. Ensure partners report on DGIS related indicators on poverty alleviation and inclusiveness. Additionally, do not only focus on traditional M&E yet also ensure learning is embedded in the project designs.
- **Improve the measurability of IWRM projects** by including indicators that reflect IWRM's comprehensive approach, including indicators related to (changes in) water management, stakeholder involvement, (economic/environmental) cost and benefit analysis and (changes in) institutional arrangements as well as legal frameworks.
- **When needed, allow for flexibility to make intermediate adjustments** – In line with previous evaluations, this evaluation also emphasized the need for flexibility and more risk-taking. Partnerships are evolving and need to be able to respond to contextual changes. Encourage partners to focus on sustainable (and if needed smaller) results, instead of promising ambitious targets that have limited chance of success after the project funding ends. A 5-10 % contingency fund in all project budgets in future programmes could be considered in order to address unforeseen project obstructions and to deal with the dynamics and risks observed in and around FDW projects.
- **Focus on the PPP framework as a means to achieve impact, not as an end goal** – The PPP framework should serve as an instrument to achieve societal impact in the water sector. The key question when developing a new programme is: To what extent should a new programme focus on the PPP framework as instrument (focus on the instrument), or the water problems to be addressed (focus on the objectives)? This evaluation has demonstrated that while the PPP is a helpful instrument in the WASH and WEA themes, it is not relevant to addressing IWRM issues. When focusing on the objectives, we recommend choosing 'traditional' development programmes to address IWRM issues. Additionally, reconsider the mandatory requirement of including a Dutch partner. Instead, increase emphasis on the participation of local government and check the level of contribution and commitment in advance - in the proposal stage and also after inception as a 'decision to fund'.
- **Future programmes could consider a phased funding approach and/or offering various funding modalities** – We recommend adapting different funding modalities to the needs of the different project stages. For instance, the inception phase could be financed as a separate tranche to allow for more flexibility needed for scoping and piloting. After the successful completion of the inception phase and a 'decision to fund', the remaining project period can be financed. This recommendation builds on the recommendations of previous studies (e.g. the MTR (2016) and Caplan et al (2022)).
- **Future programmes could consider context-specific frameworks** – The findings of this evaluation also confirm a favourable stance towards considering context specific frameworks (as shared in a reflection by RVO in 2018). Success is not guaranteed by adopting a 'one size fits all' approach, as specific regions require differentiated instruments. Future programmes could experiment with different types of funding modalities by assessing which funding modality matches the project context. For instance, alternative financing models or smaller subsidy sizes can be considered for fragile states. However, when allowing more (co-financing) flexibility in financing projects in fragile states, the sustainability of

the business case is a point of attention. Therefore, developing a viable business model and exit strategy is critical to the success of this approach.

### 9.3 Policy level

The following recommendations can help improve the effectiveness of future policies and programmes:

- **Exploit synergies between different programmes (such as health, water and circularity)** – Water issues are multidimensional and require a holistic approach. In order to optimize their outcomes, FDW projects should exploit synergies between different programmes. For instance, water quality and sanitation issues are interlinked with health issues and with poverty issues. Exploiting synergies increases FDW's relevance and additionality.
- **Increase coherence of FDW and other development programmes** – Improve the embedding of the programme in national/international strategic development agendas as well as alignment with other donor programmes. FDW projects only have limited influence in isolation, but when placed in a larger framework or linked to existing programmes they may have a higher chance of success.
- **Encourage learning exchange between all water & PPP MFA programmes** – Continue to pay attention to aligning project activities in the field, and also start activities that put platforms in place that facilitate knowledge sharing. In addition to FDW Inspire sessions, exchange can be encouraged between the various water programmes funded by the MFA.
- **Future programmes could consider country-specific calls** to increase focus and/or efficiency tailored to programme objectives. Ideally the programme first identifies the most urgent water related problems in a specific country. In close collaboration with the EKN network, partners are invited to submit proposals that come up with potential solutions. For instance, focus on one or only a few target countries (such as the Ghana WASH programme) and make sure to be present for a longer time period (for instance 5 to 10 years). By adopting a regional or country specific approach, it is also easier to align and leverage its efforts with other stakeholders and programmes (for instance, UNICEF, Blue Deal, and others). This recommendation builds on previous reflections (e.g. by RVO, 2018).
- **Focus on the key development themes that have highest priority to the Dutch MFA** – FDW's focus on multiple water themes, multiple development goals and various PPP requirements leads to overambitious projects that are complex to manage in a dynamic development context. Specify realistic development outcomes at the start of the programme that can easily be operationalised (and monitored during project implementation). This evaluation shared a similar observation as the MTR (2016) that *"key issues like poverty alleviation, inclusiveness and sustainability have generally not been sufficiently translated in operational terms with special reference to institutional sustainability issues"*.
- **Future programmes could consider a phased implementation approach and/or offering various funding modalities** – We recommend adapting different funding modalities to the needs of the different project stages. For instance, the inception phase could be financed as a separate tranche to allow for more flexibility needed for scoping and piloting. After the successful completion of the inception phase and a 'decision to fund', the remaining project period can be financed. This recommendation builds on the recommendations of previous studies (including the MTR (2016) and Caplan et al (2022)).
- **Future programmes could consider context specific frameworks** – The findings of this evaluation also confirm a favourable stance towards considering context specific framework (as shared in a reflection by RVO in 2018). Success is not guaranteed by adopting a 'one size fits all' approach, as specific regions require differentiated instruments. Future programmes could experiment with different types of funding modalities by assessing which funding modality matches the project context. For instance, alternative financing models or smaller subsidy sizes can be considered for fragile states. However, when allowing more (co-financing) flexibility in financing projects in fragile states, the sustainability of the business case is a point of attention. Therefore, developing a viable business model and exit strategy is critical to the success of this approach.



# Annex

## A. Evaluation matrix and rubrics

The evaluation matrix (Table 22) lists the indicators that are considered for the evaluation. Exact data collection and analysis of the indicators depends on the data availability. The matrix indicates the primary and secondary sources for the data/information needed.

For each of the indicators summarized, evaluation of the progress made with respect to targets set by the projects themselves must be assessed. Here, we have used an approach that classifies the outcomes into five main categories: clearly insufficient, insufficient, average, above average and good. To ensure that the classification is transparent and independent of the evaluator doing the classification, a set of *rubrics* is defined, where specific values for outcomes are linked to each of the five classes. To allow for aggregation over the variables, a “grade” is associated with each of the classes, ranging from 1 for the lowest class to 5 for the highest class. The classification criteria have been presented and agreed upon before their application to the data, to ensure that no *ex-post* adjustments of classification criteria can be made that would undermine the objective nature of the rubric approach.

Table 23 summarizes the rubrics for the indicators evaluated. The judgements presented in the report are aggregate results, based on averages over the projects and/or over several indicators. For example, by project, a total judgement (score) can be made for PPP performance by averaging over the indicators under this heading, while an overall score for the program follows by averaging these scores over all projects, or sub-sets of projects according to geography, round, theme, or other criteria.

It is important to discuss two challenges when presenting aggregate scores. First, there is missing data. Whenever there is missing data for an indicator, this indicator is not included when computing averages. Secondly, judgement based on thematic indicators only includes the set of indicators relevant to the theme, i.e., WASH projects are not judged on performance on WEA or IWRM indicators.

| GENERIC INDICATORS     |                                       | Means of Verification |            |              |                    |                  |                  |                      |
|------------------------|---------------------------------------|-----------------------|------------|--------------|--------------------|------------------|------------------|----------------------|
|                        |                                       | unit                  | Targ<br>et | Realis<br>ed | Portfolio analysis | Experts External | Experts Internal | Househol<br>d Survey |
| <b>Level of output</b> | <b>PPP performance</b>                |                       |            |              |                    |                  |                  |                      |
| Outcome                | formalized agreement between partners | yes/no                |            | √            |                    |                  | √√               |                      |
| Outcome                | quality of the agreement              | qualitative           |            | √            |                    |                  | √√               |                      |
| Outcome                | Joint website                         | yes/no                |            | √            |                    | √                | √√               |                      |
| Outcome                | PPP's shared vision                   | qualitative           |            | √            |                    |                  | √√               | v                    |
| Outcome                | PPP's shared goals                    | qualitative           |            | √            |                    |                  | √√               | v                    |

|                                    |  |               |    |    |   |      |
|------------------------------------|--|---------------|----|----|---|------|
| Outcome                            | Share of investment of international private partners wrt to RVO contribution.       | %             | √√ |    | √ |      |
| Outcome                            | Share of Investment of local private partners wrt to RVO contributions.              | %             | √√ |    | √ |      |
| Outcome                            | formalized structure with shared decision-making coordination                        | qualitative   |    | √  |   | √√   |
| <b>Effectiveness</b>               |  |               |    |    |   |      |
| Outcome                            | business cases by project  | #             | √√ | √  |   | √    |
| Outcome                            | business cases breaking even   | #             | √√ | √  |   | √    |
| Output                             | beneficiaries of facility or service related to project                              | #             | √  | √  |   | √ √√ |
| Outcome                            | beneficiaries buying facility or service   | #             | √  | √  |   | √ √√ |
| Outcome                            | project budget spent on Operation & Maintenance                                      | #             | √√ | √  |   | √    |
| Output                             | vulnerable people benefiting   | #             | √√ | √  |   | √ √  |
| Output                             | female stakeholders in decision making process                                       | #             | √√ | √  |   | √ √  |
| Output                             | Number of people trained   | #             | vv |    |   | v v  |
| Outcome                            | Number of jobs created   | #             | vv | v  |   | v    |
| Outcome                            | People reached by communication activities   | #             | √√ |    |   | √    |
| <b>Sustainability</b>              |  |               |    |    |   |      |
| outcome                            | Progress made towards financial sustainability, Business case (revenue/costs)        | qualitative   | √  | √  |   | √√ √ |
| outcome                            | Progress made towards financial/ institutional sustainability: enabling environment  | qualitative   | √  | √√ |   | √ √  |
| outcome                            | Potential for scaling  | ordinal scale | √  |    |   | √ √√ |
| outcome                            | Did private partners make additional investments or continue after the project?      | yes/no        | √√ |    |   | √ √  |
| outcome                            | Number of Dutch companies with a supported plan to invest, trade or provide services | #             | √√ |    |   | √    |
| outcome                            | Number of local companies with a supported plan to invest, trade or provide services | #             | √√ |    |   | √    |
| <b>Additionality and relevance</b> |  |               |    |    |   |      |
| outcome                            | Did private partners contribute financially or in kind to the project                | yes/no        | √√ |    |   | √ √  |
| outcome                            | What is the share of the contribution compared to the total project budget?          | %             | √√ |    |   | √ √  |
| outcome                            | Would partners have done this project without external financial support?            | yes/no        | √√ |    |   | √ √  |

| Thematic indicators: WASH |   |   |    |   |   |    |
|---------------------------|---|---|----|---|---|----|
| Effectiveness             |   |   |    |   |   |    |
| output                    | people with improved safe drinking water facilities/sources         |   |    |   |   |    |
|                           | -total  |   | √√ | √ | √ | √  |
|                           | -female   | # | √√ | √ | √ | √  |
|                           | -rural  | # | √√ | √ | √ | √  |
|                           | -vulnerable   | # | √√ | √ | √ | √  |
| outcome                   | people that use improved safe drinking water sources                |   |    |   |   |    |
|                           | -total  | # | √  | √ | √ | √√ |
|                           | -female   | # | √  | √ | √ | √√ |
|                           | -rural  | # | √  | √ | √ | √√ |
|                           | -vulnerable   | # | √  | √ | √ | √√ |
| output                    | people with access to improved sanitation facilities                |   |    |   |   |    |
|                           | -total  | # | √√ | √ | √ | √  |
|                           | -female   | # | √√ | √ | √ | √  |
|                           | -rural  | # | √√ | √ | √ | √  |
|                           | -vulnerable   | # | √√ | √ | √ | √  |
| outcome                   | people that use sanitation services or facilities                   |   |    |   |   |    |
|                           | -total  | # | √  | √ | √ | √√ |
|                           | -female   | # | √  | √ | √ | √√ |
|                           | -rural  | # | √  | √ | √ | √√ |
|                           | -vulnerable   | # | √  | √ | √ | √√ |
| outcome                   | Total number of households with access to waste management services |   |    |   |   |    |
|                           | -total  | # | √√ | √ | √ | √  |
|                           | -urban  | # | √√ | √ | √ | √  |
|                           | -rural  | # | √√ | √ | √ | √  |
|                           | -vulnerable   | # | √√ | √ | √ | √  |
| outcome                   | People reached by hygiene education or social marketing programmes  |   |    |   |   |    |
|                           | -total  | # | √√ | √ | √ | √  |

|                                 |   |                |    |    |    |    |
|---------------------------------|---|----------------|----|----|----|----|
|                                 | -urban  | #              | √√ | √  | √  | √  |
|                                 | -rural  | #              | √√ | √  | √  | √  |
|                                 | -female   | #              | √√ | √  | √  | √  |
|                                 | -vulnerable   | #              | √√ | √  | √  | √  |
| outcome                         | % reduction in NRW  | %              | √√ | √  | √  | √  |
| outcome                         | communities that have reached Open Defecation Free (ODF) status       | #              | √√ | √  | √  | √  |
| outcome                         | schools that have reached Open Defecation Free (ODF) status           | #              | √√ | √  | √  | √  |
| outcome                         | Reduced release of pollution water to groundwater recharge zones      | MCM            | √√ | √  | √  | √  |
| <b>Sustainability</b>           |   |                |    |    |    |    |
| outcome                         | infrastructure still functional at end the project period             | %              | √√ | √  | √  | √√ |
| outcome                         | beneficiaries still using interventions at end of project period      | %              | √√ | √  | √  | √√ |
| outcome                         | Narrative about compliance with relevant water regulations and policy | qualitative    | √  | √  | √√ | √  |
| <b>Thematic indicators: WEI</b> |   |                |    |    |    |    |
| <b>Effectiveness</b>            |   |                |    |    |    |    |
| Output                          | Yearly agricultural yield of main crops                               | ton/ha         | √√ | √  | √  | √  |
| Outcome                         | Water productivity crop yield per unit water                          | ton/ha.MC<br>M | √√ | √  | √  | √  |
| Outcome                         | ha of agricultural area under improved practices                      | ha             | √√ | √  | √  | √  |
| Outcome                         | surface water and groundwater users regulated                         | #              | √√ | √  | √  | √  |
| Output                          | people targeted by water management interventions                     | #              | √√ | √  | √  | √  |
| Outcome                         | trans-boundary agreements   | #              | √  | √  | √√ | √  |
| Outcome                         | agricultural area under improved practices                            | ha             | √√ | √  | √  | √  |
| Outcome                         | households and enterprises using water more efficiently               | #              | √  | √  | √  | √√ |
| Outcome                         | increased income  | %              | √√ | √  | √  | √  |
| <b>Sustainability</b>           |   |                |    |    |    |    |
| outcome                         | infrastructure still functional at end the project period             | %              | √√ | √  | √  | √√ |
| outcome                         | beneficiaries still using interventions at end of project period      | %              | √√ | √  | √  | √√ |
| outcome                         | Progress made on environmental/climate related aspects                | qualitative    | √  | √√ | √  | √  |

| <b>Thematic indicators IWRM</b> |   |             |    |    |    |   |   |
|---------------------------------|---|-------------|----|----|----|---|---|
| <b>Effectiveness</b>            |   |             |    |    |    |   |   |
| Outcome                         | km2 under improved water management   | #           | √√ | √  | √  | √ | √ |
| Outcome                         | km2 land protected from extreme events like floods and droughts                   | #           | √√ | √  | √  | √ | √ |
| Outcome                         | people protected against extreme water events                                     | #           | √√ | √  | √  | √ | √ |
| Outcome                         | management information systems developed  | #           | √  | √  | √√ |   |   |
| Outcome                         | River basin plans / IWRM plans  | #           | √  | √  | √√ | √ |   |
| Output                          | high level (stakeholder) meetings regarding water management                      | #           | √  | √√ | √  |   |   |
| Outcome                         | communities that have reached Open Defecation Free (ODF) status                   | #           | √√ | √  | √  | √ | √ |
| Outcome                         | surface water and groundwater users licensed or regulated (water governance)      | #           | √  | √√ | √  | √ | √ |
| Outcome                         | effective river basin management organisations                                    | #           | √  | √√ | √  | √ | √ |
| Outcome                         | trans-boundary agreements on IWRM   | #           | √  | √√ | √  | √ | √ |
| Outcome                         | people targeted by water management interventions (total/female/rural/vulnerable) |             |    |    |    |   |   |
|                                 | -total  | #           | √√ | √  | √  | √ | √ |
|                                 | -urban  | #           | √√ | √  | √  | √ | √ |
|                                 | -rural  | #           | √√ | √  | √  | √ | √ |
|                                 | -women  | #           | √√ | √  | √  | √ | √ |
|                                 | -vulnerable   | #           | √√ | √  | √  | √ | √ |
| Outcome                         | # community committees and dialogue groups established                            |             | √√ | √  | √  | √ | √ |
| <b>Sustainability</b>           |   |             |    |    |    |   |   |
| outcome                         | Narrative about development and/or ratification of a sustainable water policy     | qualitative | √  | √√ | √  | √ | √ |
| outcome                         | Narrative about compliance with relevant water regulations and policy             | qualitative | √  | √  | √√ | √ | √ |

Table 22: Evaluation Matrix

|   | --                              | -   | +/-  | +   | ++   |
|---|---------------------------------|---|--|---|--|
| <b>PPP performance</b>  | 1                               | 2   | 3  | 4   | 5  |
| formalized agreement between partners   | No                              |   |  |   | Yes  |
| quality of the agreement  | very bad                        | bad   | moderate                                       | good  | very good  |
| Joint website   | No                              |   |  |   | Yes  |
| PPP's shared vision   | Vision is absent                | Vision is unclear                           | vision is ok but loose from project objectives | vision corresponds somewhat to project objectives | Clear vision corresponds to project objectives   |
| PPP's shared goals  | No shared goals                 | possibilities for agreement on shared goals | Plans on agreement on shared goals             | Verbal agreement on shared goals                  | Clear written evidence of shared goals           |
| Share of investment of international partners wrt to RVO contribution.        | <20%                            | 20%<= x <30%                                | 30%<= x <40%                                   | 40%<= x <50%                                      | =>50%  |
| Share of Investment of local partners wrt to RVO contributions.               | <20%                            | 20%<= x <30%                                | 30%<= x <40%                                   | 40%<= x <50%                                      | =>50%  |
| formalized structure with shared decision-making coordination                 | decision making protocol absent | some decision making protocol               | verbal agreement on decision making protocol   | written agreement decision making protocol        | clear written agreement decision making protocol |
| <b>Effectiveness</b>  |                                 |   |  |   |  |
| business cases by project (realized / target)                                 | <0.2                            | 0.2<= x <0.4                                | 0.4<= x <0.6                                   | 0.6<= x <0.8                                      | =>0.8  |
| business cases breaking even (realized /target)                               | <0.2                            | 0.2<= x <0.4                                | 0.4<= x <0.6                                   | 0.6<= x <0.8                                      | =>0.8  |
| beneficiaries of facility or service related to project (realized /target)    | <0.2                            | 0.2<= x <0.4                                | 0.4<= x <0.6                                   | 0.6<= x <0.8                                      | =>0.8  |
| beneficiaries buying facility or service (realized /target)                   | <0.2                            | 0.2<= x <0.4                                | 0.4<= x <0.6                                   | 0.6<= x <0.8                                      | =>0.8  |
| project budget spent on Operation & Maintenance (realized /target)            | <0.2                            | 0.2<= x <0.4                                | 0.4<= x <0.6                                   | 0.6<= x <0.8                                      | =>0.8  |
| vulnerable people benefiting (realized /target)                               | <0.2                            | 0.2<= x <0.4                                | 0.4<= x <0.6                                   | 0.6<= x <0.8                                      | =>0.8  |
| female stakeholders in decision making process (realized /target)             | <0.2                            | 0.2<= x <0.4                                | 0.4<= x <0.6                                   | 0.6<= x <0.8                                      | =>0.8  |
| Number of people trained (realized /target)                                   | <0.2                            | 0.2<= x <0.4                                | 0.4<= x <0.6                                   | 0.6<= x <0.8                                      | =>0.8  |
| Number of jobs created (realized /target)                                     | <0.2                            | 0.2<= x <0.4                                | 0.4<= x <0.6                                   | 0.6<= x <0.8                                      | =>0.8  |
| <b>Sustainability</b>   |                                 |   |  |   |  |
| Progress made towards financial sustainability, Business case (revenue/costs) | No business case                | Talks about business case                   | Business case in preparation                   | Business case formulated                          | Full business case in action                     |

|   |                                 |                               |                                     |  |  |
|---|---------------------------------|-------------------------------|-------------------------------------|--|--|
| Progress made towards financial/ institutional sustainability: enabling environment | No plans for PPP F/I agreements | Plans on PPP agreement on F/I | PPP agreement on F/I in preparation | PPP agreement on F/I almost completed                        | Signed PPP agreement on financial/institutional (F/I) agreements |
| Scaling of approach taken in project  | No scaling                      | Replication is discussed      | Project has been replicated         | Project has been replicated at least in four other locations | Project approach is adopted at national or regional scale        |
| Did private partners make additional investments or continue after the project?     | No                              |                               |                                     |  | Yes  |

### Additionality and relevance

|   |     |              |               |               |        |
|---|-----|--------------|---------------|---------------|--------|
| Did private partners contribute financially or in kind to the project       | No  |              |               |               | Yes    |
| What is the share of the contribution compared to the total project budget? | 0   | <10%         | 10%<= x < 20% | 20%<= x < 40% | => 40% |
| Would partners have done this project without external financial support?   | Yes | Probably yes | Maybe         | Probably not  | No     |

### Thematic indicators: WASH

#### Effectiveness

|   |        |              |              |               |       |
|---|--------|--------------|--------------|---------------|-------|
| people with improved safe drinking water facilities/sources |        |              |              |               |       |
| -total (realized / target)                                  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -female (realized / target)                                 | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -rural (realized / target)                                  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -vulnerable (realized / target)                             | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| people that use improved safe drinking water sources        |        |              |              |               |       |
| -total (realized / target)                                  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -female (realized / target)                                 | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -rural (realized / target)                                  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -vulnerable (realized / target)                             | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| people with access to improved sanitation facilities        |        |              |              |               |       |
| -total (realized / target)                                  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |

|  |        |              |              |               |       |
|--|--------|--------------|--------------|---------------|-------|
| -female (realized / target)  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -rural (realized / target)   | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -vulnerable (realized / target)  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| people that use sanitation services or facilities                                    |        |              |              |               |       |
| -total (realized / target)   | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -female (realized / target)  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -rural (realized / target)   | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -vulnerable (realized / target)  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| Total number of households with access to waste management services                  |        |              |              |               |       |
| -urban (realized / target)   | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -rural (realized / target)   | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -vulnerable (realized / target)  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| People reached by hygiene education or social marketing programmes                   |        |              |              |               |       |
| -urban (realized / target)   | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -rural (realized / target)   | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -women (realized / target)   | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| -vulnerable (realized / target)  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| % reduction in NRW   |        |              |              |               |       |
| communities that have reached Open Defecation Free (ODF) status (realized / target)  | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| schools that have reached Open Defecation Free (ODF) status (realized / target)      | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| Reduced release of pollution water to groundwater recharge zones (realized / target) | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
|  |        |              |              |               |       |
| <b>Sustainability</b>  |        |              |              |               |       |
| infrastructure still functional at end the project period (share)                    | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |
| beneficiaries still using interventions at end of project period (share)             | <= 0.5 | =>0.5 x <0.6 | =>0.6 x <0.7 | => 0.7 x <0.8 | =>0.8 |



| Narrative about compliance with relevant water regulations and policy               | no progress on C&E      | preparatory meetings on C&E | Negotiations on C&E       | Signed agreements on C&E in wording | Signed agreements enforcement and compliance (E&C) with water policies |
|---|-------------------------|-----------------------------|---------------------------|-------------------------------------|--|
|   |                         |                             |                           |                                     |  |
| <b>Thematic indicators: WEI</b>   |                         |                             |                           |                                     |  |
| <b>Effectiveness</b>  |                         |                             |                           |                                     |  |
| Yearly agricultural yield of main crops (realized / target)                         | <= 0.2                  | =>0.2 x <0.4                | =>0.4 x <0.6              | => 0.6 x <0.8                       | =>0.8  |
| Water productivity crop yield per unit water (realized / target)                    | <= 0.2                  | =>0.2 x <0.4                | =>0.4 x <0.6              | => 0.6 x <0.8                       | =>0.8  |
| ha of agricultural area under improved practices (realized / target)                | <= 0.2                  | =>0.2 x <0.4                | =>0.4 x <0.6              | => 0.6 x <0.8                       | =>0.8  |
| surface water and groundwater users regulated (realized / target)                   | <= 0.2                  | =>0.2 x <0.4                | =>0.4 x <0.6              | => 0.6 x <0.8                       | =>0.8  |
| people targeted by water management interventions (realized / target)               | <= 0.2                  | =>0.2 x <0.4                | =>0.4 x <0.6              | => 0.6 x <0.8                       | =>0.8  |
| trans-boundary agreements (realized / target)                                       | <= 0.2                  | =>0.2 x <0.4                | =>0.4 x <0.6              | => 0.6 x <0.8                       | =>0.8  |
| agricultural area under improved practices (realized / target)                      | <= 0.2                  | =>0.2 x <0.4                | =>0.4 x <0.6              | => 0.6 x <0.8                       | =>0.8  |
| households and enterprises using water more efficiently (realized / target)         | <= 0.2                  | =>0.2 x <0.4                | =>0.4 x <0.6              | => 0.6 x <0.8                       | =>0.8  |
|   |                         |                             |                           |                                     |  |
| <b>Sustainability</b>   |                         |                             |                           |                                     |  |
| infrastructure still functional at end the project period                           | <= 0.5                  | =>0.5 x <0.6                | =>0.6 x <0.7              | => 0.7 x <0.8                       | =>0.8  |
| beneficiaries still using interventions at end of project period                    | <= 0.5                  | =>0.5 x <0.6                | =>0.6 x <0.7              | => 0.7 x <0.8                       | =>0.8  |
|   |                         |                             |                           |                                     |  |
| Progress made on environmental/climate related aspects                              | No plans for agreements | Plans on PPP agreement      | PPP agreement in progress | PPP agreement almost completed      | Signed PPP agreement   |
|   |                         |                             |                           |                                     |  |
| <b>Thematic indicators IWRM</b>   |                         |                             |                           |                                     |  |
| <b>Effectiveness</b>  |                         |                             |                           |                                     |  |
| km2 under improved water management (realized / target)                             | <= 0.2                  | =>0.2 x <0.4                | =>0.4 x <0.6              | => 0.6 x <0.8                       | =>0.8  |
| km2 land protected from extreme events like floods and droughts (realized / target) | <= 0.2                  | =>0.2 x <0.4                | =>0.4 x <0.6              | => 0.6 x <0.8                       | =>0.8  |
| people protected against extreme water events (realized / target)                   | <= 0.2                  | =>0.2 x <0.4                | =>0.4 x <0.6              | => 0.6 x <0.8                       | =>0.8  |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| management information systems developed   | no management information system                      | management information systems in place but not functioning                             | management information systems functions moderately functioning               | management information systems functions sub-optimal                          | well functioning management information systems                           |
| River basin plans / IWRM plans (realized / target)   | <= 0.2  | =>0.2 x <0.4  | =>0.4 x <0.6  | => 0.6 x <0.8   | =>0.8   |
| high level (stakeholder) meetings regarding water management                                     | no high level (stakeholder) meetings water management | less then 1 time per 2 years regular high level (stakeholder) meetings water management | 1 time per 2 years regular high level (stakeholder) meetings water management | 1-4 times per year regular high level (stakeholder) meetings water management | 4 times a year or more high level (stakeholder) meetings water management |
| communities that have reached Open Defecation Free (ODF) status (realized / target)              | <= 0.2  | =>0.2 x <0.4  | =>0.4 x <0.6  | => 0.6 x <0.8   | =>0.8   |
| surface water and groundwater users licensed or regulated (water governance) (realized / target) | <= 0.2  | =>0.2 x <0.4  | =>0.4 x <0.6  | => 0.6 x <0.8   | =>0.8   |
| effective river basin management organisations   | absent  | Not very effective  | Moderately effective  | Effective   | Very effective  |
| trans-boundary agreements on IWRM  | absent  | none functioning trans-boundary agreements on IWRM                                      | moderately functioning trans-boundary agreements on IWRM                      | functioning trans-boundary agreements on IWRM                                 | well functioning trans-boundary agreements on IWRM                        |
| people targeted by water management interventions (total/female/rural/vulnerable)                |   |   |   |   |   |
| -urban (realized / target)   | <= 0.2  | =>0.2 x <0.4  | =>0.4 x <0.6  | => 0.6 x <0.8   | =>0.8   |
| -rural (realized / target)   | <= 0.2  | =>0.2 x <0.4  | =>0.4 x <0.6  | => 0.6 x <0.8   | =>0.8   |
| -women (realized / target)   | <= 0.2  | =>0.2 x <0.4  | =>0.4 x <0.6  | => 0.6 x <0.8   | =>0.8   |
| -vulnerable (realized / target)  | <= 0.2  | =>0.2 x <0.4  | =>0.4 x <0.6  | => 0.6 x <0.8   | =>0.8   |
| <b>Sustainability</b>  |   |   |   |   |   |
| Narrative about development and/or ratification of a sustainable water policy                    | No progress on water policies                         | preparatory meetings on water policies  | Negotiations on water policies  | Agreements on water policies in progress                                      | Signed agreements on Water Policies                                       |
| Narrative about compliance with relevant water regulations and policy                            | no progress on C&E                                    | preparatory meetings on C&E   | Negotiations on C&E   | Signed agreements on C&E in wording   | Signed agreements enforcement and compliance (E&C) with water policies    |

Table 23: Evaluation Rubrics

## B. Document overview

For the purpose of portfolio analysis, the following documents -if available- were reviewed for all FDW projects:

- Project proposal
- Inception report
- Most recent progress report or final report
- Most recent M&E sheet

For the case studies, the remaining progress reports and other relevant project documentation were reviewed as well. The list below shows the sources reviewed at FDW programme-level.

| Document   | Year | Source / Author                          |
|--|------|--|
| A decade of RVO management FDW   | 2022 | RVO                                      |
| A hands-on guide to doing content analysis   | 2017 | Erlingsson & Brysiewicz                  |
| A portfolio scan of the Sustainable Water Fund (FDW)   | 2016 | PPP Lab Food & Water                     |
| Buitenlandse Handel en Ontwikkelingssamenwerking - Theory of Change – WATER - Narratief                              | 2018 | Ministry of Foreign Affairs              |
| Capacity Development in Public-Private Partnerships – Lessons Learnt from NL Funded Projects                         | 2023 | Hawkins, van Rij                         |
| Discussion paper FDW Program - Strengths, Challenges, Opportunities & Vision   | 2021 | RVO                                      |
| Evaluation of five projects co-financed by the Sustainable Water Fund (FDW), Secondary Conclusions                   | 2021 | Hafkenscheid                             |
| Evaluation of projects co-financed by the Sustainable Water Fund (FDW)   | 2020 | Cameron, de Jong, Pennink, van der Windt |
| FDW and FDOV in the broader Dutch funding and financing landscape.   | 2015 | PPP Lab Food & Water                     |
| FDW assessment framework 2017  | 2017 | RVO                                      |
| FDW impact & insight - Strategic session   | 2021 | RVO                                      |
| FDW Jaarrapportage 2021  | 2021 | RVO                                      |
| FDW Knowledge Management Outline Version 2.0   | 2020 | RVO                                      |
| FDW impact & insight - Strategic session   | 2021 | RVO                                      |
| FDW Jaarrapportage 2021  | 2021 | RVO                                      |
| FDW Knowledge Management Outline Version 2.0   | 2020 | RVO                                      |
| Fonds Duurzaam Water – FDW Mid Term Review   | 2016 | Van Woersem, Heun, Caplan                |
| Global and Regional Costs of Achieving Universal Access to Sanitation to Meet SDG Target 6.2                         | 2020 | UNICEF                                   |
| Lessons learned in NRW-reduction from 8 RVO-Sustainable Water Fund co-financed interventions with 19 water operators | 2021 | Doppenberg, de Blois                     |
| Memo: Outcome FDW-OO upscaling support   | 2020 | RVO                                      |
| Strengths, Challenges and Lessons Learnt FDW   | 2020 | Zwiers                                   |
| The Sustainable Water Fund's Public-Private Partnership Portfolio: Reflections through a partnership lens            | 2022 | RVO                                      |

Finally, the following sources are cited while discussing the case studies:

| Source  | Year | Source / Author                          |
|---|------|--|
| Bacteriological and Physicochemical Quality of Drinking Water in Adis Kidame Town | 2021 | Sitotaw and Mulu                         |
| Projected Mid-Year Population for Jenin Governorate by Locality 2017-2026         | 2023 | Palestinian Central Bureau of Statistics |
| Water resources assessment of Bolivia   | 2004 | US Army Corps of Engineers               |

## C. Interview partners

Below our combined list of interview partners is presented. For each interview, we have chosen the appropriate interview type to meet our qualitative research goals (i.e., semi-structured interview or in-depth interview).

### Lists of interview partners

The following partners have been interviewed on programme level.

| Type        | Organisation   | Role  | Who                  | Date                                     |
|-------------|--|---|----------------------|--|
| Implementer | RVO  | Programme director and project advisor      | Michiel Slotema      | 07-09-2022                               |
| Implementer | RVO  | Programme Coordinator PPP                   | Astrid Broekaart     | 20-10-2022,<br>27-10-2022                |
| Implementer | RVO  | Lead water programmes                       | Dennis van Peppen    | 14-09-2022                               |
| Implementer | RVO  | Project advisor                             | Ella Lammers         | 30-08-2022,<br>09-09-2022                |
| Implementer | RVO  | Project advisor                             | Gabor Szanto         | 07-11-2022                               |
| Implementer | RVO  | Project advisor                             | Jan Paul van Aken    | 04-08-2022,<br>08-08-2022,<br>11-08-2022 |
| Implementer | RVO  | Project advisor                             | Jan van Saane        | 02-02-2023                               |
| Implementer | RVO  | Project advisor & FDW programme coordinator | Sietske Boschma      | 30-09-2022                               |
| Donor       | MFA  | Previous policy officer                     | Pim van der Male     | 13-09-2022                               |
| Donor       | MFA  | Current policy officer                      | Jopy Willems         | 15-09-2022                               |
| Donor       | MFA  | Adviescommissie                             | Henk van Schaik      | 12-09-2022                               |
| Donor       | MFA  | Director Water sector                       | Karin Roelofs        | 08-09-2022                               |
| External    | Aqua4All   | Operations & Team Manager                   | Marleen Hasselerharm | 19-09-2022                               |
| External    | VEI  | Company representative                      | Adriaan Mels         | 09-09-2022                               |
| External    | Embassy of the Kingdom of the Netherlands in Jakarta | Delegated Representative Water              | Rien Dam             | 29-11-2022                               |
| External    | East Java Waterforum                                 | Head of East Java Water Forum               | Sasmito Hadi         | 24-11-2022                               |

The following partners have been interviewed on project level, to gather in-depth findings for the selected case studies. To respect the confidentiality arrangements with interviewees, only the names of RVO project advisors and lead partners are mentioned. We anonymized the names of other partners and stakeholders.

| Project                               | Type                    | Organisation                       | Role   | Who   | Date                                     |
|---------------------------------------|-------------------------|------------------------------------|--|---|--|
| FDW16050ET,<br>FDW14IN20              | Implementer             | RVO                                | Project advisor  | Ella Lammers  | 30-08-2022,<br>09-09-2022                |
| FDW12GH02,<br>FDW12OT01               | Implementer             | RVO                                | Project advisor  | Gabor Szanto  | 07-11-2022                               |
| FDW14RI4,<br>FDW16046RI,<br>FDW14BO11 | Implementer             | RVO                                | Project advisor  | Jan Paul van Aken   | 04-08-2022,<br>08-08-2022,<br>11-08-2022 |
| FDW17074BJ                            | Implementer             | RVO                                | Project advisor  | Jan van Saane   | 02-02-2023                               |
| FDW17109IN                            | Implementer             | RVO                                | Project advisor  | Michiel Slotema and<br>Fernanda van der Velde                           | 20-12-2022,<br>23-01-2023                |
| <b>FDW14MZ02</b> ,<br>FDW12SA01       | Implementer             | RVO                                | Project advisor  | Sietske Boschma   | 30-09-2022                               |
| FDW16046RI                            | Lead project<br>Partner | TU Delft                           | Programme Manager  | Maurits Ertzen  | 02-09-2022,<br>05-10-2022                |
| FDW14RI14                             | Lead project<br>partner | Ecoshape                           | Programme manager  | Fokko van der Goot  | 01-09-2022,<br>06-10-2022                |
| FDW14RI14                             | Project partner         | MMAF                               | Director for Coastal Protection &<br>Sub-coordinator disaster mitigation<br>and climate adaptation   |   | 29-11-2022                               |
| FDW14RI14                             | Project partner         | Witteveen +<br>Bos                 | Coastal engineering team lead and<br>NBS specialist  |   | 29-11-2022                               |
| FDW14RI14                             | Project partner         | Diponogoro<br>University           | Professor / PhD students   |   | 01-12-2022                               |
| FDW14RI14                             | Project partner         | Wetlands<br>International          | Project Coordinator,<br>Field facilitator  |   | 01-12-2022                               |
| FDW14RI14                             | Project partner         | Blue Forests                       | Environmental Technical Advisor  |   |  |
| FDW16046RI                            | Project partner         | ECOTON                             | CEO ECOTON   |   | 03-12-2022                               |
| FDW16046RI                            | Project partner         | PJT-1                              | Water quality department   |   | 05-12-2022                               |
| FDW16046RI                            | Project partner         | BBWS                               | Head of operations and<br>maintenance for water resources in<br>BBWS,<br>Management of water resources and<br>TKPSDA                                       |   | 06-12-2022                               |
| FDW16046RI                            | Project partner         | DLH Jatim                          | Division lead PKKL,<br>Sub coordinator for water pollution   |   | 06-12-2022                               |
| FDW17109IN                            | Lead project<br>Partner | Solidaridad                        | General Manager,<br>Assistant General Manager,<br>Programme Manager Cotton,<br>Assistant Manager Cotton  | Prashant Pastore,<br>Anukool Nagi, Mahesh<br>Solase and Ashray<br>Tyagi | 12-02-2023,<br>18-02-2023                |
| FDW17109IN                            | Project partner         | Biocare                            | Founder Director   |   | 13-02-2023                               |
| FDW17109IN                            | Project partner         | KVK Nagpur                         | Head, KVK, ICAR-CICR, Nagpur   |   | 13-02-2023                               |
| FDW17109IN                            | Project partner         | Welspun                            | Sustainability head of Welspun,<br>Assistant Vice President Sustainable<br>Cotton, Manager for organic cotton<br>project, Manager community<br>development |   | 15-02-2023                               |
| FDW17109IN                            | Project partner         | KVK Wardha                         | Head KVK, ICAR-CICR, Wardha  |   | 17-02-2023                               |
| FDW17074BJ                            | Lead project<br>Partner | Woord en<br>Daad                   | Project manager  | Lourens van Bruchem   | 28-02-2023                               |
| FDW17074BJ                            | Project partner         | Woord en<br>Daad                   | Project controller   |   | 07-03-2023                               |
| FDW17074BJ                            | Project partner         | Centre Saint<br>Famile de<br>Saaba | Local project manager  |   | 14-03-2023                               |
| FDW14BO11                             | Project partner         | PERIAGUA                           | Asesor técnico   |   | 05-12-2022                               |
| FDW14BO11                             | Project partner         | PERIAGUA                           | Asesor comercial   |   | 05-12-2022                               |
| FDW14BO11                             | Project partner         | Ex<br>AQUACRUZ                     | Asesor técnico   |   | 05-12-2022                               |

|            |                         |  |  |                    |            |
|------------|-------------------------|--|--|--------------------|------------|
| FDW14BO11  | Beneficiary             | COSPAIL                                    | Gerente                                  |                    | 05-12-2022 |
| FDW14BO11  | Beneficiary             | COSPAIL                                    | Asesor técnico<br>Personal clave         |                    | 05-12-2022 |
| FDW14BO11  | Beneficiary             | SAJUBA                                     | Gerente                                  |                    | 06-12-2022 |
| FDW14BO11  | Beneficiary             | SAJUBA                                     | Asesor técnico<br>Personal clave         |                    | 06-12-2022 |
| FDW14BO11  | Beneficiary             | COOPAGUAS                                  | Gerente                                  |                    | 06-12-2022 |
| FDW14BO11  | Beneficiary             | COOPAGUAS                                  | Asesor técnico<br>Personal clave         |                    | 06-12-2022 |
| FDW14BO11  | Project partner         | PERIAGUA                                   | Asesor Comunicacion                      |                    | 07-12-2022 |
| FDW14BO11  | Lead project<br>Partner | AAPS                                       | Director                                 | Karina Ordoñez     | 07-12-2022 |
| FDW14BO11  | Lead project<br>Partner | SENABSA                                    | Director                                 | Iván Albis         | 07-12-2022 |
| FDW14BO11  | Project partner         | Ex SENABSA                                 | Asesor técnico                           |                    | 07-12-2022 |
| FDW14BO11  | Beneficiary             | COSEPW                                     | Gerente                                  |                    | 08-12-2022 |
| FDW14BO11  | Beneficiary             | COSEPW                                     | Asesor técnico<br>Personal clave         |                    | 08-12-2022 |
| FDW14BO11  | Project partner         | SENABSA                                    | Asesor técnico                           |                    | 08-12-2022 |
| FDW14BO11  | Project partner         | FEDECAAS                                   | Asesor técnico                           |                    | 08-12-2022 |
| FDW14BO11  | Project partner         | FEDECAAS                                   | Asesor técnico                           |                    | 09-12-2022 |
| FDW14BO11  | Project partner         | PERIAGUA                                   | Coordinadora                             |                    | 09-12-2022 |
| FDW14BO11  | Lead project<br>Partner | PERIAGUA                                   | Director                                 | Jens Goetzenberger | 09-12-2022 |
| FDW12OT01  | Lead project<br>Partner | PWA  | Technical supervisor                     | Dr. Adel Yasin     | 31-01-2022 |
| FDW16050ET | Project partner         | Demelash<br>Alemu                          | Sales agent                              |                    | 04-03-2023 |
| FDW16050ET | Project partner         | Water Office                               | Head                                     |                    | 04-03-2023 |
| FDW16050ET | Project partner         |  | Three Health Extension Workers<br>(HEWs) |                    | 05-03-2023 |
| FDW16050ET | Project partner         | Regional Water<br>Treatment                | Team Leader                              |                    | 05-03-2023 |
| FDW16050ET | Project partner         | Regional Water<br>Born Diseases<br>Offices | Team Leader                              |                    | 06-03-2023 |
| FDW16050ET | Project partner         | East Gojjam<br>Zone Office of<br>Water     | Head                                     |                    | 03-03-2023 |
| FDW16050ET | Project partner         | East Gojam<br>Office of Health             | Head                                     |                    | 03-03-2023 |
| FDW16050ET | Project partner         | Amhara Credit<br>and Saving<br>Institute   | Head                                     |                    | 06-03-2023 |
| FDW16050ET | Project partner         | Harbu MFI                                  | Head                                     |                    | 07-03-2023 |
| FDW16050ET | Project partner         | Aqua 4 All                                 | Team Leader                              |                    | 07-03-2023 |

## D. Evaluation criteria

The OECD-DAC criteria (2019) is a leading framework for our evaluation of the FDW portfolio. The contribution of the projects is primarily assessed through these (context-adapted) criteria, supplemented by the criterion 'additionality' as defined by the DCED and adapted to the context of the FDW. In addition, we apply two cross-cutting criteria, significant to FDW, namely the PPP contribution and a gender lens.



Figure 15: Overview of the OECD-DAC criteria

The criteria as tailored to the evaluation of the FDW portfolio are defined as follows:

**Effectiveness (RQ 1):** Effectiveness is about the most closely attributable results of the intervention and how these weighed effects are distributed across different groups. It concerns examining the intervention's objectives on the results chain or causal pathway at the level of the **intervention's activities, outputs, and outcomes**. The theory of change is leading in assessing the results on intended activities.

**Impact (RQ 2):** Analysis of **impact** examines the extent to which the intervention has generated or is expected to generate significant positive or negative, intended or unintended, higher-level effects. This refers to higher-level and broader changes: it is about the *difference* the intervention makes and the "ultimate significance and potentially transformative effects of the intervention".<sup>15</sup> We primarily assessed this against our theory of change (impact pathways), the judgement criteria and indicators in the evaluation matrix and the project targets.<sup>16</sup> **Development impact** is analysed by looking at the contribution to improving the standard of living (incl. health, water access, food production, income) for target groups. Furthermore, FDW programmes and projects are aimed at achieving selected SDGs: SDG 6 (Ensure access to water and sanitation for all), SDG 8 (decent jobs and economic growth) and SDG 17 (partnerships for the goals)<sup>17</sup>.

**Unintended effects:** In addition to intended effects, the evaluation also looks at the extent to which the intervention is expected or generates unintended effects. This may include both positive as well as negative unintended effects (e.g. climate related effects and market distortion).

In assessing the impact criterion, we will also attempt to gain insights in the (realised) potential of the project to contribute to **systemic change** of the water sector. Systemic change can be defined as "holistic and enduring changes in systems or norms"<sup>18</sup>. RVO (2018) characterised system change by the following elements<sup>19</sup>:

- The project and PPP catalyse sustainable change at impact level, for instance by fuelling water sector changes or water sector approaches
- Scaling of the intervention, by replication of the intervention or spin-off (independent of donor money) for the good of the FDW policy objectives.
- Potential to attract new stakeholders/partners in project. To involve new partners in the sector or theme, new cooperation networks.

<sup>15</sup> OECD (2021), Applying Evaluation Criteria Thoughtfully, OECD Publishing.

<sup>16</sup> As well as incorporating standards and frameworks for assessing effectiveness in relation to food security, private sector development and systemic change and public private partnerships.

<sup>17</sup> Individual FDOV projects may be explicitly linked to other SDGs as well, such as SDG 5 and SDG 12 in the case of FDOV12MW01 and FDOV14MW16 (subjects of this evaluation).

<sup>18</sup> Ibid.

<sup>19</sup> RVO (2018). Draft Assessment framework subsidy applications FDW16

In assessing the systemic effects, we consider three main elements<sup>20</sup> :

- **Formation/embedding of the sector** - Projects with a system approach aim to realise results by influencing existing (local) systems consisting of local actors, or jointly realise a new inclusive business model or water management plan, drawing resources from the surrounding environment. Thereby existing roles and relationships are affected, and new ones are created. In the private sector development focus of FDW projects, we consider the structural changes realised to create new business models in the water sector.
- **Resource mobilisation** - When the results of the project within the sector, by affecting the broader environment (society/market), trigger mobilisation of additional resources, this is considered a systemic effect. This can consist of a demonstration effect (, but also closely relates to replication and scaling, which are signs of a systemic change. The project then has a catalysing effect, for example by taking away some of the risks for others to join in.
- **Institutional changes** - Lastly, and for FDW projects likely more indirectly, projects might affect norms, standards as well as regulations affecting the potential to realise the intended results and development effects. This might result from barriers encountered in for example introducing new products or practices. Such changes will allow the system to produce effects more easily moving forward.

**Sustainability (RQ 3):** The sustainability criterion covers the extent to which net benefits are expected to last over the medium and long term. This allows determining whether “the intervention’s benefits will last financially, economically, socially and environmentally”<sup>21</sup>. In analysing the sustainability of the intervention, the **FIETS criteria** (projects must be Financial, Institutional, Ecological, Technical and Social sustainable) as set-out by RVO.nl and **CSR performance** (ICSR requirements) play an important role. Hence, our approach to the criterion also covers sustainability in the sense of environmental sustainability. Institutional sustainability also includes the cross-cutting theme good governance. Environmental sustainability also includes the cross-cutting theme climate adaptation. Social sustainability also includes the cross-cutting theme gender.

**Potential for scaling** is another element related to sustainability. The project is assessed on the potential of scaling or leading to spin-offs. According to RVO (2018) the potential for scaling: “can involve upscaling of a concept, a business case, institutional upscaling. It assumes that the intervention strategy must be feasible and that project results must be sustainable to achieve substantial impact.”

**Efficiency (RQ 4):** Efficiency is evaluated by assessing the extent to which the intervention delivers, or is likely to deliver, results in an economic and timely way. This includes notions such as ‘value for money’ and proportionality in project spending. When possible, projects the cost-benefit ratio is calculated and assessed against relevant benchmarks.

**Relevance (RQ 5):** Relevance concerns the question whether the intervention is ‘doing the right things’ – from design but also when circumstances changed. This relates mainly to the extent to which the intervention responds to the beneficiary and stakeholder needs, policies and priorities. Because FDW’s approach particularly aims to include the private sector in the PPP approach, relevance is also regarded against the interests of private partners (**private sector relevance**). Is the intervention relevant to both public, private and societal actors? Additionally, relevance is evaluated on overall development relevance in the local context (**development relevance**). Is the intervention addressing a critical development issue in the chosen local context? . We also consider the compatibility of the intervention with other interventions, for instance in the country or market.<sup>22</sup> **Coherence** (in addition to relevance) examines the compatibility of the intervention with other interventions in a country, sector or institution.

**Additionality (RQ 6):** Additionality can be considered from two angles: from an input additionality angle and a development additionality angle. **Input (or financial) additionality** concerns the question whether the public input resources are “additional to what might anyway be invested or done by the applicant/partner company and other parties, as well as the timing of it”. **Development additionality** refers to the “expected development-

<sup>20</sup> Based around system change frameworks, including the USAID 5r approach.

<sup>21</sup> OECD (2021), Applying Evaluation Criteria Thoughtfully, OECD Publishing.

<sup>22</sup> OECD (2021), Applying Evaluation Criteria Thoughtfully, OECD Publishing.



relevant net results (...) that are expected to be achieved *as a result of 'additional' public inputs*".<sup>23</sup> The ex-ante additionality assessment (i.e., cash flow projections provided in the project plans) serves as a starting point for the evaluation of the input additionality. Regardless of the angle it will be important to assess in what way the project is new in the sense that it is different than what other projects are doing.

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<sup>23</sup> DCED (2014), "Demonstrating Additionality in Private Sector Development Initiatives", Donor Committee For Enterprise Development.

## E. Portfolio analysis template

| Criteria                       | Questions  |   |                             |          | Source   | Comments             |  |     |                             |                |
|--------------------------------|--|---|-----------------------------|----------|----------|----------------------|--|-----|-----------------------------|----------------|
| Main question<br>Effectiveness | To what extent did the PPPs within FDW contribute to the FDW-objectives (sustainable, inclusive economic growth by creating financially sustainable solutions to improve water security, water safety and flood resilience) in an effective, efficient, relevant and sustainable manner? |   |                             |          |          |                      |  |     |                             |                |
|                                | 1  | Can effectiveness of different projects be related to differences in approach (intervention & PPP forms)? |                             |          |          |                      |  |     |                             |                |
|                                | 1.1.1  | Core challenges reported (first choice)   | Limited management capacity |          |          | Project plan         | <p>The Bolivian water sector anchored the human right to water in their constitution and has set the objective to provide the Bolivian population with 100% water and sanitation coverage by 2025. The cooperatives and public water utilities responsible for the service as EPSAs are generally responsible only for the provision of water to its clients, and that public bodies invest in the physical infrastructure of the industry (such as piping, pumps and so on). A sense of ownership and incentive in maintenance is seldom embedded in the industry.</p> <p>The core objective of the project is firstly to strengthen the financial stability of the small and medium sized EPSAs. The main beneficiaries of the project will be the cooperative water utilities in SCZ. Approximately 70% of these provide water services to small and medium sized EPSAs. Through the Bench-AGUA project, the International Institute of Communication and Development (IICD) will use its integrated approach towards ICT to strengthen three key areas:</p> <ol style="list-style-type: none"> <li>1. small- and medium sized EPSAs. The main beneficiaries of the project will be the cooperative water utilities in SCZ. Approximately 70% of these provide water services to small and medium sized EPSAs.</li> <li>2. Through the Bench-AGUA project, the International Institute of Communication and Development (IICD) will use its integrated approach towards ICT to strengthen three key areas:</li> </ol> <p>Target: Strengthen the capacity of the 16 EPSAs to spearhead the utility-led benchmarking programme (through FENFCAA's and embedded in SENASRA) as a national pilot which PERIAGUA trained 282 workers from the 21 EPSA in training activities ranging from small workshops to structured courses (Technical Management of water supply networks) at least 10% women as target</p> <p>For indicators of WASH/IWRM/WEA see 'FDW total project overview.xlsx'</p> <p>Since the beginning of the project, AQUACRUZ has been supporting 3 utilities (COSAP, COSA, COSB)</p> <p><b>Target (project plan):</b> The aforementioned growth (in supply and demand) is hampered by</p> |     |                             |                |
|                                | 1.1.2  | Core challenges reported (second choice)  | Limited investments         |          |          | Inception report     |  |     |                             |                |
|                                | 1.1.3  | Type of intervention (first choice)   | Institution building        |          |          | Source               |  |     |                             |                |
|                                | 1.1.4  | Type of intervention (second choice)  | Capacity building           |          |          | Progress report 2017 |  |     |                             |                |
|                                | 1.1.5  | Which target group or organization benefitted from the FDW contribution under 1.1.1 (first choice)        | private institute           |          |          | Project plan         |  |     |                             |                |
|                                | 1.1.6  | Which target group or organization benefitted from the FDW contribution under 1.1.1 (second choice)       | public institute            |          |          | Project plan         |  |     |                             |                |
|                                | 1.1.7  | Number of institutions/organisations supported  | Baseline                    | Realized | Targeted | 21                   |  | 21  | M&E sheet                   |                |
|                                | 1.1.8  | Number of people trained or skills developed  |                             | 282      |          |                      |  | 150 | IATI indicators             |                |
|                                | 1.1.9  | Inclusion: How many were woman?   |                             | 57       |          |                      |  | 15  | Final report                |                |
|                                | 1.2  | Project results: To what extent have the intended project results been realized?                          |                             |          |          |                      |  |     |                             |                |
|                                | WASH   |   | Baseline                    | Realized | Targeted |                      |  |     | Source                      |                |
|                                | 1.2.1  | # improved safe drinking water facilities/sources   |                             |          | 21       |                      |  |     | IATI indicators             |                |
|                                | 1.2.2  | # improved sanitation facilities  |                             |          | 3        |                      |  |     | IATI indicators             |                |
|                                | 1.2.3  | # improved waste management facilities and/or services  |                             |          | 3        |                      |  | 2   | IATI indicators; Target fin |                |
|                                | 1.2.4  | % Non-Revenue Water (NRW)   | Baseline                    | Realized | Targeted | 28%                  |  | 23% | 25%                         | Source         |
|                                | 1.2.5  | Number of people reached with hygiene education and/or social marketing                                   | Baseline                    | Realized | Targeted |                      |  |     |                             | M&E sheet 2019 |
|                                | 1.2.6  | # of schools ODF certified  | Baseline                    | Realized | Targeted |                      |  |     |                             | Source         |
|                                |  |   |                             |          |          |                      |  |     | Not reported                |                |
|                                |  |   |                             |          |          |                      |  |     | Not reported                |                |

## F. Survey template

### Household and Intervention

#### Introductory text.

We are investigating if training and capacity building through the "Sustainable Water Services Beira" project has an effect on water deliveries and water quality in your household.

#### Consent of participation.

Do you agree to participate with this survey?

yes/no

If yes, continue, if no, pay a respectful farewell and proceed to the next interviewee

If yes, explain that If we refer to "the project" we refer to the interventions undertaken by the Sustainable Water Services Beira project.

| Date and Location |                      |             |                      |  |
|-------------------|----------------------|-------------|----------------------|--|
| Enumerator        | <input type="text"/> | Date        | <input type="text"/> | Name suburb/village <input type="text"/> |
| Street            | <input type="text"/> | Number      | <input type="text"/> | (Peri)Urban / Rural <input type="text"/> |
| Interviewee       |                      |             |                      |  |
| First name        | <input type="text"/> | Family name | <input type="text"/> | gender <input type="text"/>              |

| Code     | Question  | Answers              |
|----------|---|----------------------|
| <b>1</b> | <b>Household project participation</b>  |                      |
| 1,1      | How many family members belong to your household  | <input type="text"/> |
| 1,2      | To which categories do the members in your household fit?<br>(1 = Poor people, 2 = Women, 3 = Men, 4 = Youth, 5 = Persons with disabilities, 6 = Ethnic minorities)     | <input type="text"/> |
| 1,3      | Is someone in your household member of a Community-based Organisation?<br>(1 = yes, 2 = no)   | <input type="text"/> |
| 1,4      | Are you aware of the capacity building and training by FIPAG or WSUP staff between 2015-2019 under the "Sustainable Water Services Beira" project?<br>(1 = yes, 2 = no) | <input type="text"/> |
| 1,5      | If yes: Do you know the project name; AQUA for All (acronym of project)?<br>(1 = yes, 2 = no)   | <input type="text"/> |
| 1,6      | If yes, since when are you aware of capacity building through this project?<br>(dd/mm/yyyy)   | <input type="text"/> |

| Code | Question               | Answers |
|------|------------------------|---------|
| 2    | Intervention specifics |         |

### Household and Intervention

|     |  |  |
|-----|--|--|
| 2,1 | Were there any specific interventions by the project during the period 2015-2021 (1 = yes, 2 = no)   |  |
| 2,2 | If yes, what kind of intervention?<br>( <b>Interventions to</b> 1 = access drinking water,<br>2 = increase the number of hours of water availability,<br>3 = Improve water quality;<br><b>Training on</b> : 4 = women empowerment, 5 = hygiene promotion,<br>6 = payment for water services or related financial issues,<br>7 = Campaign on household water connection,<br>8 = House to house survey on satisfaction with project interventions, , 9 = Other, please specify ) |  |
|     | other  |  |
| 2,3 | If yes, what kind of intervention? II<br>(see 2.2)   |  |
|     | other  |  |
| 2,4 | If yes, what kind of intervention? III<br>(see 2.2)  |  |
|     | other  |  |

## Water

| Code   | Question   | Answers   |                                |                               |                      |                      |                      |                      |
|--|--|---|--------------------------------|-------------------------------|----------------------|----------------------|----------------------|----------------------|
| 3  | Effectiveness  |   |                                |                               |                      |                      |                      |                      |
| 3,1  | Your household has sufficient knowledge on water, sanitation, and hygiene (1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree)   | <table border="1"> <tr> <td>before WSUP / project training</td> <td>after WSUP / project training</td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table>  | before WSUP / project training | after WSUP / project training | <input type="text"/> | <input type="text"/> |                      |                      |
| before WSUP / project training                     | after WSUP / project training  |   |                                |                               |                      |                      |                      |                      |
| <input type="text"/>                               | <input type="text"/>   |   |                                |                               |                      |                      |                      |                      |
| 3,2  | Your household has sufficient / <b>easy access to</b> information about water, sanitation, and hygiene (through website, phone/sms, extension worker, or other office)? (1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree) | <table border="1"> <tr> <td>before WSUP / project training</td> <td>after WSUP / project training</td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table>  | before WSUP / project training | after WSUP / project training | <input type="text"/> | <input type="text"/> |                      |                      |
| before WSUP / project training                     | after WSUP / project training  |   |                                |                               |                      |                      |                      |                      |
| <input type="text"/>                               | <input type="text"/>   |   |                                |                               |                      |                      |                      |                      |
| Improvement of water supply (quantity and quality) |  |   |                                |                               |                      |                      |                      |                      |
| 3,3  | Number of hours of water supply? (hrs per day)   | <table border="1"> <tr> <td>before the project</td> <td>after the project</td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table>  | before the project             | after the project             | <input type="text"/> | <input type="text"/> |                      |                      |
| before the project                                 | after the project  |   |                                |                               |                      |                      |                      |                      |
| <input type="text"/>                               | <input type="text"/>   |   |                                |                               |                      |                      |                      |                      |
| 3,4  | Number of interruptions of water supply per day or month or year?<br><i>Indicate Unit: interruptions per Day/ Month/Year</i>   | <table border="1"> <tr> <td>before the project</td> <td>after the project</td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table> | before the project             | after the project             | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| before the project                                 | after the project  |   |                                |                               |                      |                      |                      |                      |
| <input type="text"/>                               | <input type="text"/>   |   |                                |                               |                      |                      |                      |                      |
| <input type="text"/>                               | <input type="text"/>   |   |                                |                               |                      |                      |                      |                      |
| 3,5  | How do you rate the water pressure of your household water system? (1 = Very poor, 2 = Poor, 3 = Moderate, 4 = Good, 5 = Very good)  | <table border="1"> <tr> <td>before the project</td> <td>after the project</td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table>  | before the project             | after the project             | <input type="text"/> | <input type="text"/> |                      |                      |
| before the project                                 | after the project  |   |                                |                               |                      |                      |                      |                      |
| <input type="text"/>                               | <input type="text"/>   |   |                                |                               |                      |                      |                      |                      |
| 3,6  | How do you rate the quality of your drinking water? (1 = Very poor, 2 = Poor, 3 = Moderate, 4 = Good, 5 = Very good)   | <table border="1"> <tr> <td>before the project</td> <td>after the project</td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table>  | before the project             | after the project             | <input type="text"/> | <input type="text"/> |                      |                      |
| before the project                                 | after the project  |   |                                |                               |                      |                      |                      |                      |
| <input type="text"/>                               | <input type="text"/>   |   |                                |                               |                      |                      |                      |                      |
| 3,7  | Does your household have a good connection to the drinking water system? (1 = yes, 2 = no)   | <table border="1"> <tr> <td>before the project</td> <td>after the project</td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table>  | before the project             | after the project             | <input type="text"/> | <input type="text"/> |                      |                      |
| before the project                                 | after the project  |   |                                |                               |                      |                      |                      |                      |
| <input type="text"/>                               | <input type="text"/>   |   |                                |                               |                      |                      |                      |                      |
| 3,8  | Does your household have a good connection to  | <table border="1"> <tr> <td>before the project</td> <td>after the project</td> </tr> <tr> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </table>  | before the project             | after the project             | <input type="text"/> | <input type="text"/> |                      |                      |
| before the project                                 | after the project  |   |                                |                               |                      |                      |                      |                      |
| <input type="text"/>                               | <input type="text"/>   |   |                                |                               |                      |                      |                      |                      |

## Water

the public waste-water system?  
(1 = yes, 2 = no)

|  |  |
|--|--|
|  |  |
|--|--|

- 3,9 How do you rate the quality of your household **drinking water facilities**?  
(1 = Very poor, 2 = Poor, 3 = Moderate  
4 = Good, 5 = Very good)

|                       |                   |
|-----------------------|-------------------|
| before the<br>project | after the project |
|                       |                   |

- 3,10 How do you rate **the amount** of drinking water available to your household?  
(1 = Very poor, 2 = Poor, 3 = Moderate  
4 = Good, 5 = Very good)

|                       |                   |
|-----------------------|-------------------|
| before the<br>project | after the project |
|                       |                   |

- 3,11 Did you experience **water-related illnesses** such as diarrhea? (1 = yes often, 2 = yes sometimes, 3 = no / never)

|                       |                   |
|-----------------------|-------------------|
| before the<br>project | after the project |
|                       |                   |

- 3,12 How do you rate the quality of your household **sanitation facilities**?  
(1 = Very poor, 2 = Poor, 3 = Moderate  
4 = Good, 5 = Very good)

|                       |                   |
|-----------------------|-------------------|
| before the<br>project | after the project |
|                       |                   |

- 3,13 Did your household experience water pipe bursts?  
(1 = Yes often (monthly), 2 = Yes sometimes (yearly), 3 = No / never)

|                       |                   |
|-----------------------|-------------------|
| before the<br>project | after the project |
|                       |                   |

## Payment

- 3,14 Does your household pay for water services?  
(1 = yes, 2 = no)

|                       |                   |
|-----------------------|-------------------|
| before the<br>project | after the project |
|                       |                   |

- 3,15 To what extent does your household experience payment issues?  
(1 = No, 2 = Some, 3 = Yes many)

|                       |                   |
|-----------------------|-------------------|
| before the<br>project | after the project |
|                       |                   |

## Water saving/harvesting

- 3,16 Do you practice water saving measures/techniques  
(1 = yes, 2 = no)

|                       |                   |
|-----------------------|-------------------|
| before the<br>project | after the project |
|                       |                   |

## Water

3,17 If 3.16 positive. What water saving measures and techniques are practiced? I  
*(1 = Shower 5 Minutes or Less, 2 = Close Taps Properly\ and Fix Leaking Taps, Pipes & Toilets, 3 = Water-saving Toilet Flush, 4 = Turn Off Tap While Brushing Teeth & Washing Hands, 5 = Close Tap While Washing Clothes/Utensils)*

| before the project   | after the project    |
|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> |

3,18 If 3.16 positive. What water saving measures and techniques are practiced? II  
*(see 3.14)*

| before the project   | after the project    |
|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> |

3,19 Do you practice water harvesting techniques?  
*(1 = yes, 2 = no)*

| before the project   | after the project    |
|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> |

3,20 If 3.19 positive, what kind of water harvesting techniques do you practice?  
*1 = Rainwater harvesting from rooftop catchments  
 2 = Rainwater harvesting in from hard surface  
 3 = Other, please specify*

| before the project   | after the project    |
|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> |

Other

### Traning

3,21 Did a member of your household participate in the women empowerment workshops / training?

|                      |
|----------------------|
| <input type="text"/> |
|----------------------|

3,22 If 3,21 positive, how do you rate the usefulness / quality of that training?

|                      |
|----------------------|
| <input type="text"/> |
|----------------------|

3,23 Did a member of your household participate in the hygiene-promotion workshops / training?

|                      |
|----------------------|
| <input type="text"/> |
|----------------------|

3,24 If 3,23 positive, how do you rate the usefulness / quality of that training?

|                      |
|----------------------|
| <input type="text"/> |
|----------------------|

## Sustainability

| Code | Question   | Answers              |
|------|--|----------------------|
| 4    | <b>Sustainability</b>  |                      |
| 4,1  | Are you still making use of the water facilities provided by the project to your household?<br>(1 = yes, 2 = no)   | <input type="text"/> |
| 4,2  | If 4.1 negative, why are you not making use of the water facilities in your household<br>(1 = Facilities not installed, 2 = Facilities not properly installed, 3 = Facilities never functioned properly, 4 = Facilities damaged, 5 = Facilities are not useful, 6 = Facilities are too expensive, 7 = Other (specify)) | <input type="text"/> |
|      | Other  | <input type="text"/> |
| 4,3  | Is your household actively involved in the maintenance of existing (drinking) water supply systems<br>(1 = yes, 2 = no)  | <input type="text"/> |
| 4,4  | If 4.3 positive, what kind of maintenance do you practice<br>(1 = flushing the pipe system, 2 = replacing tubes/pipes, 3 = others, specify)  | <input type="text"/> |
| 4,5  | Does your household invest in making new (drinking) water supply system using own time / funds / materials / labour?<br>(1 = yes, 2 = no)  | <input type="text"/> |

## Satisfaction

| Code | Question   | Answers              |
|------|--|----------------------|
| 5    | <b>Level of satisfaction</b>   |                      |
| 5,1  | Are you satisfied with the water system in your household<br>(1 = Not at all satisfied, 2 = Little satisfied, 3 = Satisfied, 4 = Very satisfied)             | <input type="text"/> |
| 5,2  | Does the water system comply with the WASH requirements<br>(1 = No, 2 = Somewhat, 3 = Mostly, 4 = Yes)   | <input type="text"/> |
| 5,3  | Concerning the water system, what would you like to improve?<br>(1 = secure water supply, 2 = improve quality, 3 = lower prices, 4 = others, please specify) | <input type="text"/> |
|      | Other  | <input type="text"/> |



## G. Example FGD template

### Focus Group Discussion Farmers India Maharashtra project

Versie 1.0

31-01-2023

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- **Type of group (per location):** Farmers group / 1 women's group and 1 men's group
- **Number of participants:** 10 people per group
- **Selection of participants:** Diverse representation of the community
- **Time:** About 2 hours per group
- **Method:** Conversation and interactive discussion with
- **Materials needed:** Posters + post-its + markers

**Note:** Refer to the project as *sustainable cotton project*

#### Introduction

**Welcome.** Welcome, thank you for coming today to talk with us about the sustainable cotton project project. As you might know, the Netherlands and India work together to promote good agricultural practices. We are doing research on the impact of the sustainable cotton project in Maharashtra to date. Your help is much appreciated. My name is Diederik / Myrthe / Ajay and today we will facilitate this session with you. The aim of this session is to gather learnings for the Dutch Ministry of Foreign Affairs and project partners, so they can improve their support to local communities in Indonesia with regard to water management. We want to know that we have a trustful setting today in which you are free to say what you would like to say. The project partners from are not here today, and the findings will also be anonymized. This means you can be sure that what you say will stay within the borders of this room and is treated confidentially.

**Questions in advance?** Are there any questions about what we are doing today? Do you know what a small group discussion is, or have you joined one before? [if not aware, explain]

**Short round of introduction from project team and participants.** Ask the women or men to introduce themselves [what is their occupation, where do they come from, what does their family situation look like, etc.]

**House rules.** Can everyone stay until 11h (group 1) or 13h (group 2) or does anyone need to leave early?

**Structure:** Explain the structure of the day

- Learning about your story
- Involvement in the project
- Changes after the project
- Personal challenges
- Recommendations for a new project

#### Questions

##### Knowledge of and involvement in the project

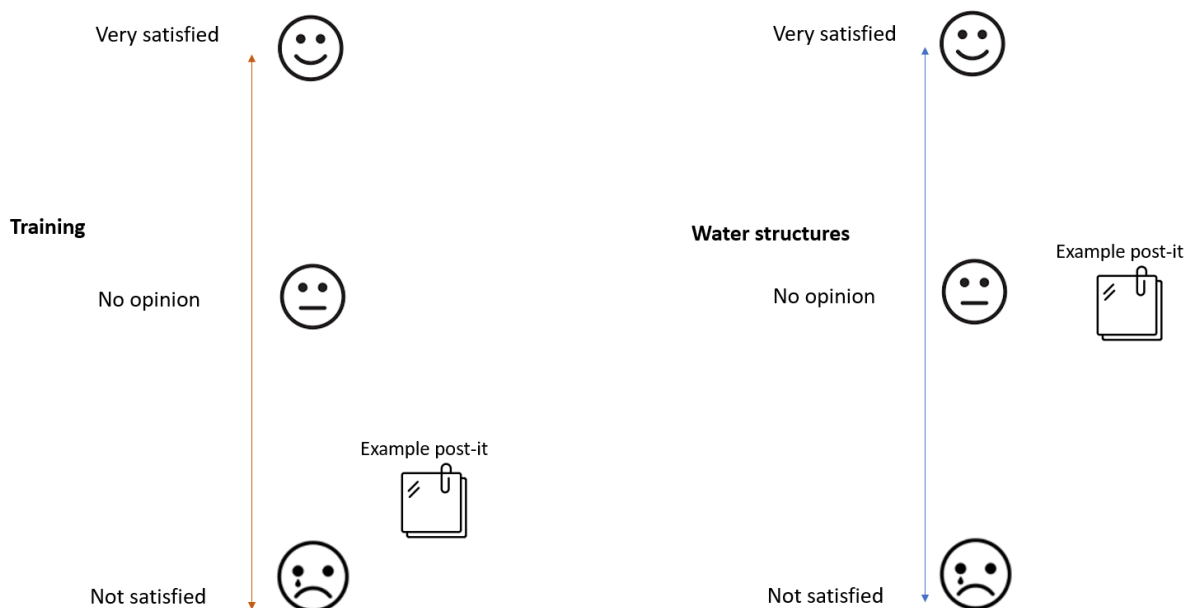
- How have you been involved in the sustainable cotton project? For instance, attending training on good agricultural practices, attending training on financial literacy, etc.
- For how many years have you been involved in the project?
- Are you part of a farmer group?
- [Introduce the poster] I would kindly like to ask you to think about two questions. Please place your post-it in the quadrant that marks your satisfaction with the community involvement and the project results.
- How satisfied are you with the project in terms of involving the community? i.e. to what extent could you or other community members provide input or feedback to the project?

How satisfied are you with the community involvement in the project?



- How satisfied are you with the project in terms of project results? i.e. 1) water structures and 2) sustainable cotton production

How satisfied are you with the project results?



### Intermediate outcome: training effectiveness

#### Men

- How many trainings did you attend?
- What have you learned about good agricultural practices? How do you use the knowledge gained from the training in practice? (i.e. adequate management of soil, water, pests and diseases, crop residues and adequate harvest and storage practices. For instance, replace harmful agrochemicals by integrated pest management and organic soil fertility management.)
- What percentage of your plot is now produced as sustainable cotton?

- Did you attend the training on the use, management and maintenance of infrastructure? If so, how do you use the knowledge gained from the training in practice?
- Did you attend the training on financial literacy and government subsidies? If so, how do you use the knowledge gained from the training in practice?

**[Information box 1]** *At least one training session in a village is carried out pre-monsoon as well as post-monsoon period, making a total of two trainings per village in a year. All the farmers, including women farmers, have received information through periodic village meetings and digital advisories on scheduling irrigation for cotton, benefits of using various water conserving and micro-irrigation techniques and proper management of land for maximum water usage and less wastage. Farmers have also been made aware of the benefits of alternate sources of water such as rainwater harvesting structures etc. along with awareness on available agricultural schemes and subsidies. So far, 12,500 farmers have adopted water efficient practices such as trash mulching, micro-irrigation and furrow irrigation on their farmlands. A total of 2,500 women farmers have been made aware of the latest and effective cotton production techniques, good agricultural practices, and information on agricultural schemes and subsidies.*

#### **Women:**

- How many trainings did you attend?
- What have you learned from the trainings? How do you use the knowledge gained from the training in practice?

**[Information box 2]** *Women received training on either:*

1. Good agricultural practices. In the two years of the FDW project implementation, the field training interventions have ensured that the 2500 women farmers connected with the project are aware on the GAP, water efficient practices and the benefits of biological and organic agricultural inputs including compost pits.
2. Micro business management > production and marketing of organic inputs and the management of village level compost pits. 40 women entrepreneurs were formed as a group and developed as women only FPO to develop as entrepreneur.
3. On-farm work practices including plucking, harvesting and storage

#### **Effectiveness of online training**

- Did you receive training in person or online (by SMS/WhatsApp video)?
  - If online training: According to you, how effective were the online trainings when compared to regular trainings?

#### **Intermediate outcomes: water efficiency and transition to sustainable cotton production**

##### Water structures

- Are you satisfied with your access to water structures for irrigation?
- Are you involved in the maintenance of the water structures?
- To what extent do you feel you can participate in discussions about water management and feel heard? Do the Water User Organisations help to give you a voice?

##### Financial literacy and awareness of government or private financing options

- Did you apply for an agricultural scheme / subsidy or safe loan from a bank?
  - If so, did you manage to receive a subsidy or loan?
  - If not, why not?

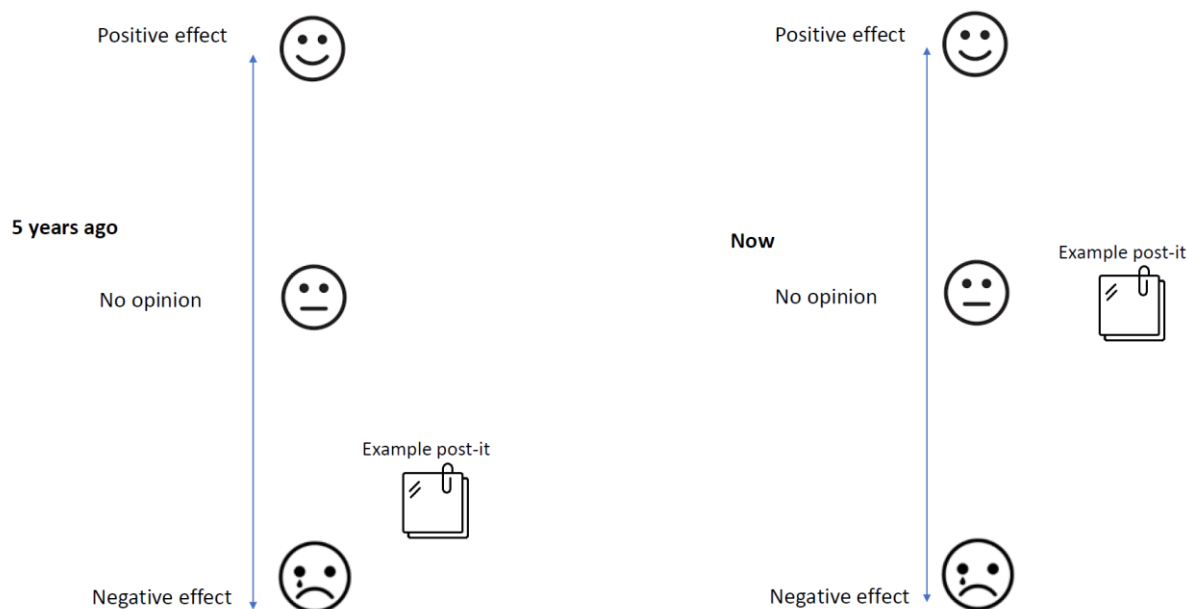
### Sustainable cotton production

- How did your agricultural input costs changes (decrease / increase, how much IDR per hectare?)
- How many kilograms of sustainable cotton did you produce this year?
- How much did your yield increase or decrease (in % per year)?
- How much did your income increase or decrease (in IDR per year)?
- How do you sell your cotton? Who do you sell to? How does your cotton get the 'organic cotton certification'?

### Impact: Improved livelihoods

- [Introduce poster] I would kindly like to ask you how your life as a farmer has changed.
  - How did you feel about being a cotton farmer 5 years ago? And how do you feel about this (either positive or negative feeling)?
  - How do you feel about being a cotton farmer now?
- Please mention the effect on a post-it, one per effect, and place the post-it on the scale.
- How did the sustainable cotton project impact your life and your community?

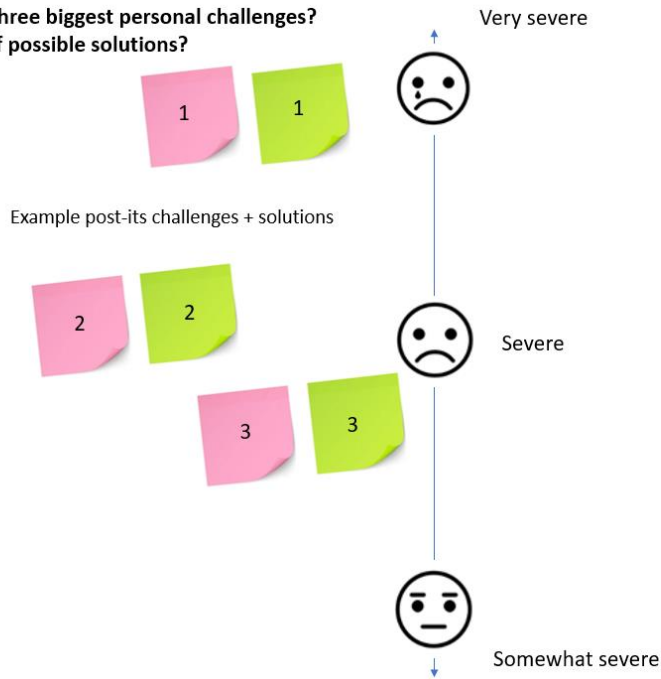
How has your life as farmer / entrepreneur changed? And how do you feel about this effect?



### Personal challenges

- [Introduce poster] I would like to kindly ask you to write down three things that are the biggest challenges for you. Please use one post-it for 1 challenge. We would then like you to answer to the following question:
- How severe was this challenge? Please place a pink post-it on the poster
- [Discussion] Why did you put this post-it there? Can you explain to us why this is a big challenge or difficulty for you? [Looking at the most severe challenges at the top]: How likely is it that this challenge will reoccur?
- What could be potential solutions? Please place a green post-it next to the pink challenge

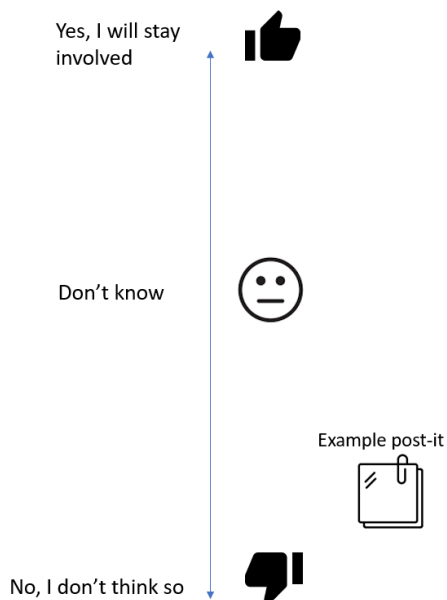
1. What are your three biggest personal challenges?  
 2. Can you think of possible solutions?



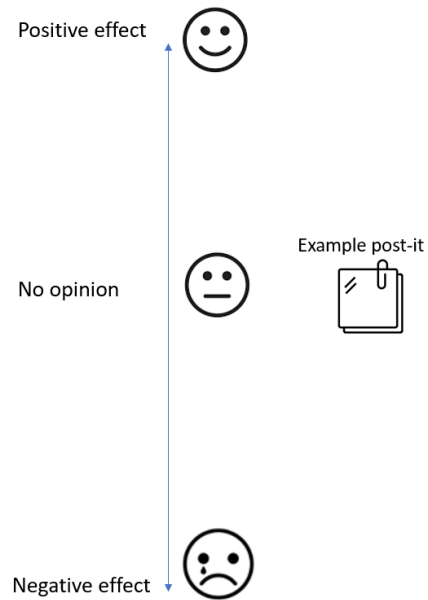
### Sustainability

- [Introduce poster] I would kindly like to ask you to think about two questions:
- Will you continue sustainable cotton production?
- How confident are you that your livelihood will improve in the coming 5 years?
- Please place your post-it in the quadrant that marks your satisfaction with both the community involvement and the project results.
- [Discussion]
  - Why do you / do you not stay involved? If so, how do you stay involved?
  - Why are you confident/ why not?

Will you continue sustainable cotton production in the coming 3-5 years?



How confident are you that sustainable production will improve your income / livelihood in the coming 3-5 years?



### Recommendations

- [Introduce poster] I would kindly like to ask you for recommended for the project. Please use one post-it for one recommendation.
- How could the project have helped you even better? What would you recommend to a new and similar project?
- Would you recommend other nearby villages to adopt the approach in this project?
- Is there anything else you like to mention that we have not asked before?

What would you recommend to a new project (like the sustainable cotton project)?



Is there anything else you like to mention regarding the project or the village?



## H. Effectiveness – detailed findings

This chapter describes the detailed findings for the evaluation criteria effectiveness. These findings are categorized into the reporting perspective, the stakeholder perspective and the beneficiary perspective.

### Reporting perspective

The reporting perspective can be further divided into a portfolio-level reporting perspective and a project-level reporting perspective.

#### Portfolio-level reporting perspective

##### Analysis of portfolio-level data

In the portfolio analysis, two sets of indicators are used to measure effectiveness - generic ones and theme-specific ones. For both types, data was missing for quite some projects. This implied that not all indicators are taken into account in the effectiveness assessment, and that the outcomes may depend on a small set of projects. Generic indicators used for the measurement of effectiveness include: (1) business cases by projects (realized/target), (2) beneficiaries of facilities (realized/target), (3) vulnerable people benefiting (realized /target), (4) female stakeholders in decision making process (realized /target), (5) Number of people trained (realized /target), (6) Number of jobs created (realized /target), and (7) people reached by communication activities. For the generic indicators, the averages over available projects are quite high (see figure 16), with scores close to or on the maximum for business cases, reaching vulnerable people and involving female stakeholders. For people trained and jobs created, IWRM scores less than the other themes, most likely since it is difficult to accurately attribute job creation to the project, and training takes place on institutional level. On the other hand, communication activities are most effective for WEA and IWRM projects.

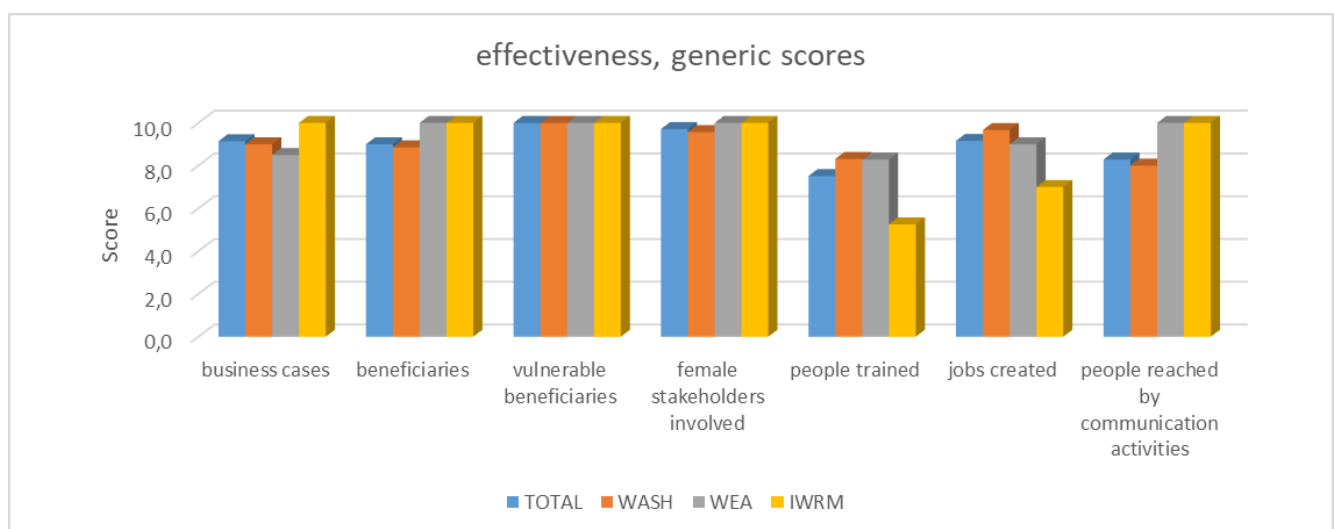


Figure 16: Scores for generic indicators for effectiveness, total and by theme

Coming to other associations, some two thirds of the trainees concern ongoing projects and the share of women is higher than in the previous, 37% as compared to 28% in projects that have been completed by July 1<sup>st</sup> 2022. By round, it seems that that the projects in the earliest round have the highest share of women (44%) with only 24% of female trainees in the second round projects and 39% in the third round. The WASH projects have most trainees, 63% of the total, while IWRM project have only few, 1% of the total. Regionally, projects in Eastern Africa (61%) and South America (25%) have the lion's share of the trainees. The regional shares of women range from 32% to 36%, remarkably close to the overall average of 35%. As regards PPP size, it stands out that the percentage of women trained in the small projects (64% of all trainees) is more than 2.5 times higher than in projects with a large PPP (24%). In between, in medium sized PPPs, this share of women is close to the overall average of about one third. This is also the case for mixed private-public PPPs and private PPPs, both types having practically the same share of women, close to the overall average.

For WASH, specific indicators include the number of people that have access to safe drinking water (realized/target), people with access to improved sanitation (realized/target), people reached by education or campaigns (realized/target) and reduction in Non-Revenue Water (NRW, physical losses and water not paid for). For safe drinking water access, on average, WASH projects score below par for females and rural populations (5.0. 5.3 respectively), while vulnerable populations are also reached less than on average with sanitation and education (score: 6.0 and 4.7 respectively). Reduction in NRW is quite good (8.0 out of 10).

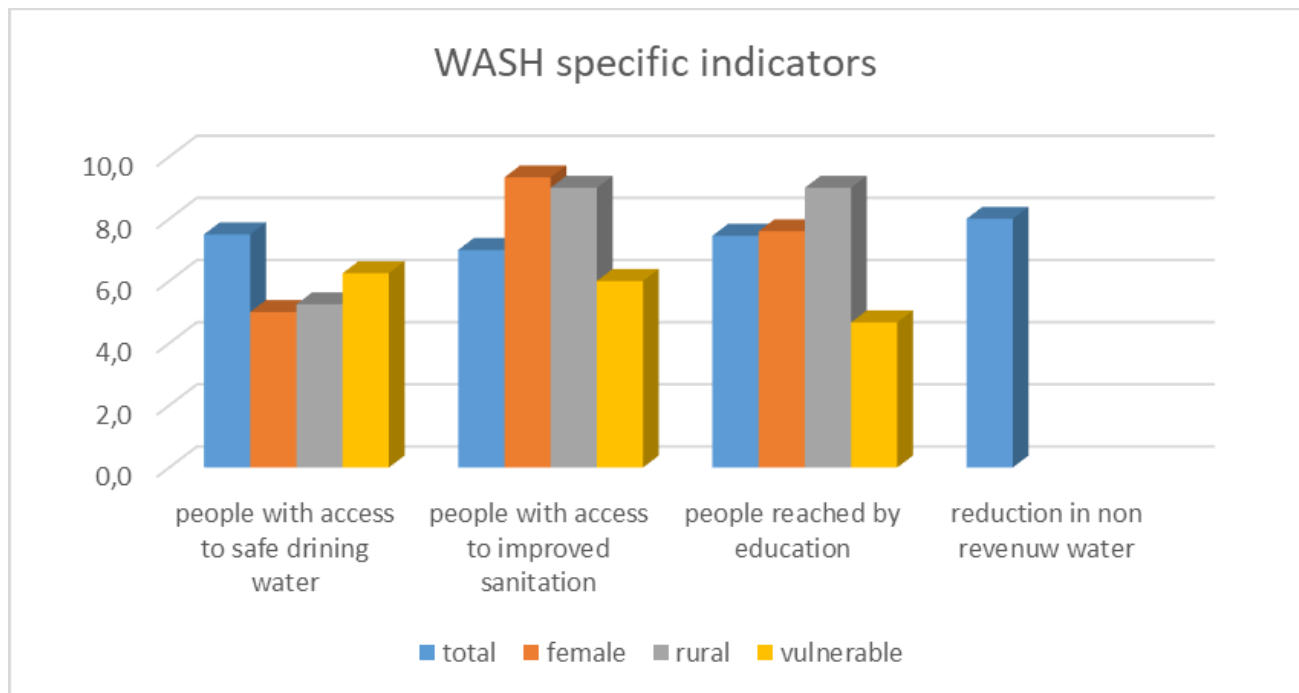


Figure 17: Scores for specific WASH indicators for effectiveness

For WEA, the only indicators available are the yield (realized/target), water productivity by crop (realized/target) and area under improved practices (realized/target). For yield, WEA projects score only a 3.6, while performance on the other two indicators is just sufficient (6). Hence, effectiveness of WEA projects when judged by the available data is limited.

For IWRM, specific M&E indicators are unreliable because only one project has reported on these. However, project documentation shows that to date, the effectiveness of these projects lags behind. Indeed, of the 10 IWRM projects, two have stopped prematurely, and two have experienced serious delays that have left the projects with few activities and project scopes to be adjusted. In the remaining six projects, project activities have been partially implemented, but have hardly led to community capacitation and technical solutions tailored to local challenges. As a result, alignment across institutions, and more inclusive and informed decision making, are to date nowhere satisfactory achieved. Yet, important to note is that 9 of the 10 IWRM projects started in FDW call III, hence 6 projects are still in progress.

### Analysis of programme level documentation

Previous evaluations shared several remarks on the design and effectiveness of the programme, summarized below.

**There appears to be a tension between the two main objectives of the programme.** The first MTR (2016) pointed out the tension between engaging the private sector and making development impact.<sup>24</sup> The two main objectives (1. development goals and 2. engaging private sector) are inherently different, which poses a challenge in aiming for both goals at the same time. RVO also acknowledged that “the FDW projects that focused on business cases kept struggling with the pro-poor boundary conditions (e.g. Vergnet), while more participative projects with strong social components in IWRM (e.g. BwN Indonesia) did not have a real business case component or market development approach”.<sup>25</sup> According to the first MTR (2016), development goals

<sup>24</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>25</sup> RVO. (2022). A decade of RVO management - The Sustainable Water Fund (FDW)



have insufficiently been prioritized in the programme and engaging the private sector remains challenging (51% of the funds were 'public' in character).<sup>26</sup>

Various evaluations also note that the definition of private is quite broadly defined, which could lead to an implicit comparative advantage for project proposals from water utilities (MTR, 2016) or lead to 'private' contributions consisting of CSR/foundation money.<sup>27</sup> 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).<sup>28</sup> RVO (2022) recommended to future programmes to 'keep Corporate Social Responsibility (CSR) driven interventions and commercially viable projects separate and not financed within a single programme' as 'CSR-driven interventions may have a limited effect on transforming core business/value change and should be financed via a more traditional subsidy programme'.<sup>29</sup>

The programme is ambitious in aiming for multiple goals. The programme has various criteria for the composition and focus of the PPPs. The partnership must include an NGO, a government party and a private sector party (with own financial contribution of 20-40%). At least one organization from the Netherlands and one from the country hosting the project. There are no conditions as to what type of organization this should be. The PPP should include a proposal on gender inclusivity and targeting the Bottom of the Pyramid (pro-poor). Additionally, the programme focuses on three sub-themes (WASH / WEA / IWRM). One of these, WASH, is already operating in 4 very different sectors (i.e. Drinking water, sanitation, hygiene, waste). The assessment framework requires focus on one or more themes and encourages combining themes as this 'may increase the activities' sustainability'. Previous evaluations questioned the effectiveness of this comprehensive design, as it reduces project focus. RVO also mentions that "IWRM should be an integrated component in all water-relevant projects – rather than maintaining the strictly siloed FDW thematic focus on WASH, IWRM, Water Efficiency – to ensure a holistic approach that considers not just the efficient use of water, but also water harvesting and the region's water balance as a whole".<sup>30</sup>

The distribution of projects is uneven.<sup>31</sup> In 2016, the sanitation (including waste management) sub-sector was underrepresented. In general, previous evaluations argued that the financial sustainability, risk-taking conditions and criteria for FDW grants favour the selection of less complex or more focused projects. This would result in a higher number of projects in the drinking water sub-sector (instead of sanitation / safe deltas). FDW wishes to select projects with a proven concept (but innovative in local concept) and is fairly strict in risk taking. There also seems to be a tendency to favour PPPs or partners that are already well established.

Attracting new players (or different kind of partners) seems challenging.<sup>32</sup> This has not been a major feature of the majority of projects, also as a possible consequence of the various criteria to the PPPs (barriers to entry). In general, FDW attracted more established organisations and some of these might also be included in multiple projects (such as VEI B.V., who have received a grant for 9 projects). Because RVO observed a pattern of recurring lead partners in the first three tender rounds, the FDW policy rules were refined in 2016.<sup>33</sup> FDW now only allows for two proposals per lead partner. In terms of composition, strategic partners are well represented. Yet, local government is often underrepresented.

The FDW requirements and fairly strict approach to risk-taking has the effect of favouring existing and tested partnerships, in addition to partnerships in certain sub-themes of the FDW. According to the previous MTR (2016), the FDW assessment framework is 'fairly strict in addressing issues of risk-taking', for instance by demanding the lead partner to provide a minimum contribution (of 20%) and take on risks (cover 30 to 40% of the eligible costs) as well as requiring a well-defined business case.<sup>34</sup> The FDW assessment framework has (both intendedly and unintendedly) favoured a selection of more established partnerships and projects. For instance, utility projects have been included in a large amount. This is because these partners have more experience in cooperating also under various other water partnership programmes. However, in other sub themes, partnerships are emerging and there is few experience with market based products or services. Consequently, FDW adopted more WASH projects in the first years of the programme. Moreover, the FDW

<sup>26</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report. p. 15

<sup>27</sup> PPP Lab Food & Water (2016). A portfolio scan of the Sustainable Water Fund (FDW). And Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review.

<sup>28</sup> PPP Lab Food & Water (2016). A portfolio scan of the Sustainable Water Fund (FDW)

<sup>29</sup> RVO. (2022). A decade of RVO management – The Sustainable Water Fund (FDW)

<sup>30</sup> RVO. (2022). A decade of RVO management – The Sustainable Water Fund (FDW)

<sup>31</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>32</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>33</sup> RVO. (2022). A decade of RVO management – The Sustainable Water Fund (FDW)

<sup>34</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

requirement of including at least one Dutch partner and the fact that FDW is a programme financed by the Dutch Ministry of Foreign Affairs may explain why the majority of lead partners is Dutch.

**The FDW programme has reportedly made progress on several indicators.** To date (2012-2021), most progress is seen on WASH indicators. IWRM indicators demonstrate a slower progress, possibly also as a consequence of the smaller number of projects in the first calls. No progress is measured on the WEA indicator yet. According to RVO, aggregated results on water utilization are not possible due to crop varieties and water use. "Each crop, soil type and technology has different efficiencies and the projects have not yet reported any significant results".<sup>35</sup> RVO writes that over 2 million people (2,309,094) have been reached and provided access to drinking water and facilities with 74,404 facilities established in total. This points to progress towards the target values for WASH indicators (80% of the target value for access to safe and drinking water and 63% for the target value for the number of improved facilities). The number of people benefitting from IWRM projects has increased from 64,584 to 127,025 in 2021. As a cumulative result, this means the programme has reached 26% of its target for 2026 (i.e. 734,786 people). More progress is therefore required in the coming years. Additionally, 10 out of a total of 23 plans have been developed in 2021. Almost 50% of the total target has been realised (12 plans compared to a target of 23 plans in 2026). The number of people gained access to improved sanitation facilities has increased but the increase is low in 2021 with an increase of 1.345 sanitation facilities and services. The reason for this is that projects often support the upgrade of household latrines (i.e. from a basic latrine to an improved latrine). To date, the programme reached 84% of its target value for improved sanitation facilities. In total, 635,983 people gained access to improved sanitation facilities (70% of the target value).

Overall, **the majority of projects is not on schedule** (context specific reasons / PPP issues / COVID / etc.)<sup>36,37</sup>. The RVO assessment of the performance of the projects (in 2021) provides a mixed picture.<sup>38</sup> A total of eight (8) projects were performing below average or poor, while 22 were performing average or above. Reasons for delay mentioned protracted inception periods, insecurities or conflicts, issues with partnerships, partner financing issues, and COVID-19. Some projects have considerable success on the short term (mainly WASH projects). However, for most projects, effectiveness can only be assessed on a longer term. Especially for IWRM projects (institutionalization). According to the previous MTR (2016), 'the likelihood that project results will be achieved in water utility (VEI) projects is substantially higher than in the non-water utility projects with special reference to the technical aspects and number of households reached'.<sup>39</sup>

**Key determinants of success mentioned in previous evaluations are: Shared objectives between partners, an equal partnership between local and Dutch partners and strong public sector commitment.** First, the potential success of a PPP is in the intention and motivation of the partners. A strong relationship as well as shared objectives between partners contributes to project success. PPP projects that are an instrumental part within a larger strategic objective, no stand-alone activity, work best. Hafkenscheid (2021) recommends focusing on project proposals that clearly use the opportunity of subsidy as an instrumental support in a larger, long/medium term plan, underwritten by all key-project partners.<sup>40</sup> The inception phase is crucial to establish a good working relationship within the partnership (especially in the case of IWRM projects). Therefore, the MTR (2016) mentioned this phase should focus on contents instead of just meeting the conditions. Second, an equal partnership between local and Dutch partners is considered important. In practice, many cases the Dutch partner is the lead partner (about 40% of projects, MTR, 2022). This is not always an ideal situation for reasons of ownership and sustainability. Third, a strong public sector commitment is crucial to long-term success.

**The challenges that were most frequently mentioned in previous evaluations are: A challenging environment, limitations of the subsidy framework, and COVID-19.** First, the projects operate in a complex, dynamic sector. The key challenge is a high turnover at public sector agencies, which makes alignment with public sector policies, as well as commitment more difficult. Second, the nature of the subsidy does not allow for additional financing and has little flexibility. FDW provides little flexibility whilst projects often change after the inception phase due to the dynamic local context. In previous evaluations it was often mentioned that private partners took a disproportionate amount of the risk. Meeting the obligations agreed during the inception phase of the PPP sometimes created problems, in particular concerning the public sector partner.<sup>41</sup> Developing a more flexible procedure for future programmes will allow (more) room for adjustments during the inception periods of

<sup>35</sup> RVO. (2022). A decade of RVO management – The Sustainable Water Fund (FDW)

<sup>36</sup> RVO. (2021). FDW Jaarrapportage 2021

<sup>37</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>38</sup> The ranking of a project's performance is a subjective assessment by RVO's project advisors based on their review of the project's annual reports and interactions with the project. It does not determine the ultimate outcomes of a project or its success.

<sup>39</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>40</sup> Hafkenscheid, R. (2021). Evaluation of five projects co-financed by the Sustainable Water Fund (FDW), Secondary Conclusions

<sup>41</sup> Hafkenscheid, R. (2021). Evaluation of five projects co-financed by the Sustainable Water Fund (FDW), Secondary Conclusions

contracted projects, and for better exploration of interesting new concepts and ideas that otherwise might be lost (too) early in the selection process. RVO (2022) also advised to adopt a more phased approach and in future follow-up programmes to secure quality proposals that are realistic and interventions that are sustainable. Finally, the International Centre for development oriented Research in Agriculture (ICRA) (2023) recommend RVO to strengthen PPPs' capacity to adapt and respond to changes in the PPP, by for example building in regular reflection and replanning events with all partners.<sup>42</sup>

**Two specific challenges to WASH and WEA projects are the NRW targets and drip irrigation.** First, in most interventions, NRW targets were set up without differentiating between commercial and technical losses. This presents a risk of agreeing on overly ambitious and unachievable NRW targets during the proposal phase. However, still substantial to moderate reductions in NRW (in \*1,000 m<sup>3</sup>/year or L/connection/day) were achieved at most operators.<sup>43</sup> Second, RVO (2022) argues that drip irrigation should not be an isolated intervention to save/conservate water, increase production, modernise agriculture and enhance economic development, but should be implemented as part of an integral package of practices (e.g. wide spacing, mulching, crop varieties), while taking into account socio-economic factors such as maintenance and entrepreneurial infrastructure.<sup>44</sup>

### Project-level reporting perspective

In this section, we provide information and insights of project effectiveness derived from project-level reporting for the selected case studies.

#### AQUACRUZ, Bolivia

Project reporting indicates that the project was effective at the output level, generating the tangible direct results expected from the project intervention. Project documentation does not report on noticeable changes at the outcome level.

The inception phase of the project elaborated 21 Project Implementation Plans (PIPs) for each of the participating EPSAs. Table 24 shows the baseline, realized and planned targets for the seven intervention areas that are aligned to the PIPs. Most of the targets were realized and completed. Highlights of intervention activities are briefly described below.

| Sub-result                                   | Unit | Baseline | End | Target |
|--|------|----------|-----|--------|
| <b>Non-revenue water</b>                     |      |          |     |        |
| NRW Index                                    | %    | 28       | 22  | ≤ 25   |
| Wells with reliable macro-metering 15 EPSA   | %    | 53       | 100 | 100    |
| <b>Water quality</b>                         |      |          |     |        |
| EPSA with minimum drinking water parameters  | #    | 0        | 15  | 15     |
| EPSA established procedures on water quality | #    | 0        | 21  | 18     |
| <b>Sanitation</b>                            |      |          |     |        |
| EPSA complying with water quality parameters | #    | 0        | 1   | 2      |
| EPSA with Wastewater testing and sampling    | #    | 0        | 5   | 5      |
| <b>Commercial Management</b>                 |      |          |     |        |
| Average increase in recuperation of invoices | %    | 13       | 20  | > 20   |
| EPSA with micro-metering rate of >85%        | #    | N/A      | 13  | 12     |
| <b>Financial-administrative Management</b>   |      |          |     |        |
| EPSA with positive operating balance         | #    | 15       | 10  | 17     |
| EPSA with valid five-year strategic plans    | #    | 7        | 10  | 17     |

<sup>42</sup> ICRA. (2023). Capacity Development in Public-Private Partnerships – Lessons Learnt from NL Funded Projects.

<sup>43</sup> Doppenberg, A. & de Blois, R. (2021). Lessons learned in NRW-reduction from 8 RVO-Sustainable Water Fund co-financed interventions with 19 water operators

<sup>44</sup> RVO. (2022). A decade of RVO management - The Sustainable Water Fund (FDW)

**Socio-institutional Management**

|   |   |   |                |     |
|---|---|---|----------------|-----|
| EPSA with percentage of customer satisfaction | # | 8 | 15             | 15  |
| EPSA developed communication plans            | # | 0 | 18             | 15  |
| <b>Capacity building</b>                      |   |   |                |     |
| Number of EPSA workers capacitated / trained  | # | 0 | 282 (57 women) | 150 |

Table 24: Summary of the final results of the AQUACRUZ project

Project reporting describes the following ways through which these results were achieved:

**Non-Revenue Waters** – AQUACRUZ follows NRW strategies based on quantification of water production, consumption and losses. EPSAs are equipped with meters; 6 EPSAs trained in hydraulic modelling.

**Drinking water quality** – EPSAs analyse physical-chemical parameters, of which 15 achieve conformity with norm. Non-compliance caused by (manual) chlorination 18 utilities fulfilled bacteriological norms.

**Sanitation** – AQUACRUZ cooperated with SAGUAPAC, the largest utility of Santa Cruz (1.5 million people) to improve O&M of sewage networks at the EPSAs involved in the project.

**Commercial Management** – The intervention concentrated on: 1) optimization of billing cycle, 2) improvement of consumption management, and 3) improvement in customer service.

**Financial-administrative management** – Supporting financial management focused on approval of five-year development by AAPS, including optimization of tariff structure and recategorization of water users.

**Socio-institutional management** – AQUACRUZ improved governance in service delivery by training in 1) prioritize public relations, 2) analyse communication, 3) planning and 4) adopt customer orientation.

**Training and capacity-building** – Human capacity development is key for all intervention areas. Therefore, a wide range of capacity development measures took place.

**Safe Drinking Water for Ethiopia, Ethiopia**

Insights from project reporting show that the effectiveness of the Safe Drinking Water for Ethiopia (SDWE) Project can be considered good to very good. The project was implemented according to six work packages (WP), the outcome of which shows the effectiveness of the project. Project reporting indicates the following results per work package.

- WP1 conducted administrative framework by (e.g.) establishing a partnership agreement and obtaining the necessary permits and licenses (importation and sales of Nazava filter, establishing a manufacturing facility in-country).
- WP2 increased knowledge and awareness of waterborne diseases and household water treatment and storage solutions (HWTSs). Almost all targets, were met- 424872 (target 400,000) women have knowledge of water related diseases and HWTS - 1991 (target 2000) Health Extension Workers trained on waterborne diseases and HWTS - 70812 (target 80,000) model women of the Women Development Army trained on waterborne diseases and HWTS - 354060 (target 400,000 women) trained on waterborne diseases and HWTS. Given COVID restrictions and the on-going civil war it has been a remarkable effort to complete with all targets.
- WP 3 deals with getting filters to consumers; the 50,000 rural households in Amhara. A smooth supply chain was planned, complemented by village events. Also here despite the devastating civil war the project was able to deliver: 3574 (target 50,000) rural households obtained HWTS - 3574 (target 50,000) rural households have daily access to safe drinking water - 2704 (target 4,000) safe drinking water events organized - 285180 (target 120,000) people attended safe drinking water events - 542 (target 4,000) health posts equipped with filter.
- WP4 improves access to micro-finance. 1489 (target 10,000) rural households have access to credit for purchasing water filter - Staff of 5 (target 10) Micro-Finance Institutions (MFIs) have knowledge of HWTS - 2

(target 2) loan products available for water filter - 41 (target 10) MFIs and informal credit organizations trained on HWTS and loan products - MFIs attending of 72 (target 1000) safe drinking water events.

- WP5 aimed at a functional water filter manufacturing facility, with a capacity of producing 25,000 units annually. The outputs (land lease - construction of building, employment and training of labourers, import and use of mould for housing of filters, assembly line and manufacturing candles) could not be realized due to the delay of a permits. The issue was resolved during the writing of this project.
- WP6 concerns the necessary closure activities of the project.

### Water efficiency in sustainable cotton production, India

Project documentation shows that up to and including December 2021, the project has shown steady progress at the output level. After about two years of project interventions, the project has trained 20,000 farmers twice a year on good agricultural practices, including 2,500 women farmers (who own land). The project also initiated ten Water User Groups (with four officially recognized by local governing bodies). Because of COVID-19, training continued via a hybrid mechanism for delivery of training of farmers (mainly via WhatsApp video and support WhatsApp groups). The rapid adaptation from physical to online training is a critical success factor that has enabled a continuation of activities. RVO already indicated that water efficiency projects seem to be better able to implement projects at a distance when compared to WASH projects.<sup>45</sup> Water efficiency projects were already adopting virtual learning and market linkage prior to COVID-19, whereas WASH projects still engage in more traditional approaches (i.e. house to house visits). The effectiveness of the training and uptake of the practices is something to closely monitor in the coming years.

In addition, project documentation reports that the project has rejuvenated about 1,500 existing water structures and trained farmers on the management of these structures. It also created 80 new farm ponds. Furthermore, the project has successfully established the linkage between 11 farmer-producer organisations (FPOs) and brands for procurement of about 900 Metric Tonnes of organic cotton, and about 5,200 Metric Tonnes of sustainably produced cotton has already been procured at the rate of 100 INR/kg from 5500 project farmers. Lastly, the project has also mobilized additional funding from Vodafone (EUR 750,000).

Progress is less evident on the topics of financial literacy, women entrepreneurship, the socio-hydrological assessment and multistakeholder dialogues. The training on financial literacy was supposed to have started in 2022. Also, while 40 women entrepreneurs have been trained, no business plans have been finalized yet. The aim is to support 75 micro-entrepreneurs by project end. The hydrological assessment of the project region has been completed by Solidaridad and TU Delft and is currently utilised for planning and implementation. However, TU Delft has not been able to conduct any further work on the ground in 2021 due to COVID-19, leading to delay. Multistakeholder workshops have not been organized after 2019 because of national COVID-19 restrictions.

### Building with Nature, Indonesia

Project-level reporting indicates that The Building with Nature (BwN) project has been effective at the output level and at the level of short-term outcomes. However, reporting also indicates that land subsidence due to groundwater extraction (up to 8 centimetre per year along the entire Demak coast) nullifies the potential to effectively combat coastal erosion, and there is a realistic risk that this land subsidence may completely overrun the aquaculture revitalisation and natural restoration process in Demak.

Ultimately, the BwN project realized 3.4 kilometres of the planned 9 kilometres of permeable structures in Demak. In total, 719 people followed either community trainings at the established Coastal Field Schools or BwN construction trainings. Herewith, the target of 370 trained people was reached amply. Furthermore, the targeted 10 community committees were established. The committees composed community development plans and are now organised in an ocean management forum called 'Bintoro'. With support from the local government, bio-rights microcredits have been granted to these 10 community committees as well. Finally, about 60,000 of the targeted 100,000 people were reached by communication activities.

Main determinants for realizing these results were strong communication and engagement between multi-level stakeholders and strong lead partners (Wetlands International and Ecoshape). Moreover, the academic project partner applied constant data driven monitoring, which allowed to respond to the natural dynamics. Besides, the project benefited from strong commitment of the involved Indonesian ministries and local governments of the Demak district and Central Java Province.

<sup>45</sup> RVO. (2022). A decade of RVO management - The Sustainable Water Fund (FDW)

### Water quality management in the Brantas River, Indonesia

Project reporting indicates some progress and some setbacks regarding project effectiveness at the output level. To date, the Brantas River project partners conducted an extended baseline assessment on the current water quality situation in the Brantas river and concluded an agreement to work together on the IWQMP. Furthermore, the water quality databases of the several project partners are compared by the TU Delft, and they made a plan to establish an integrated database in the coming years. The clean-industry hub (CIH) model was devised, but given a lack of interest from industries, this concept is now being reconsidered. The multi-stakeholder negotiation platform (TKPSDA) is established and now enables local communities to discuss the water quality in the Brantas with several stakeholders. Moreover, in 2022, it was agreed to start a stakeholder working group on water quality through this platform.

As interaction between partners, for example in (physical) campaigns and working groups, is an important aspect of this project, it experiences strong interference of the COVID-19 pandemic. This caused significant delay to the project activities. The (wrap-up of the) inception phase took six months longer than anticipated. Next to these delays, the project was influenced by a lawsuit concerning two cases of pollution in the Brantas river, filed by ECOTON against three public institutions, namely the MPWH, the Ministry of Environment and Forestry and the Governor of East Java Province. Due to this lawsuit, project partners could not fully dedicate their time to the project, and it caused tension in the partnership. Nevertheless, after some intensive discussions, all project partners remained fully committed to the project and its goals.

### Sustainable Water Services Beira, Mozambique

Project reporting also for this project indicates some progress and some setbacks regarding project effectiveness at the output level. The project has succeeded in improving the client database and revenue collection has increased substantially. The rehabilitation of the water network and purification plant has been severely disrupted by hurricane Irma that hit Beira in 2017, causing extensive damage to the water network. RVO has granted a shift in the budget and activities to enable VEI and VIPAG to repair the damage done, which has been successful. Within FIPAG, a separate unit was set-up to specifically deal with the reduction of NRW, and this is working well. The interaction with the communities in Beira has been more challenging, as FIPAG, being a water company, is ill-equipped for conversations and interactions with community members. The training WSUP provided to FIPAG staff was appreciated, but it did not lead to an embedding of a community-based approach in the organisation.

Although the project has ended, there are still good contacts between FIPAG, the Beira water company, and VEI. In fact, the partnership between these two organizations was already established before the start of the project. The project aimed at rehabilitating the water network and water purification plant to reduce water losses and increase water quality; at improving the database of clients of FIPAG and their capacity to collect revenues, - jointly with the physical reduction of losses, this would lead to reduction of Non-Revenue Water (NRW). Finally, the project was to improve the relation between FIPAG and the communities in Beira, specifically with respect to the management of the public water taps.

### A Green Sustainable and Safe Water Source, South Africa

Project reporting shows that, to date, 16 out of the 20 planned project sites have been finished. All systems are still functioning. However, the condition of the playing fields for schoolchildren differs widely between schools, and the housing of some purification systems has been subject to vandalism on the outside. The systems provide clear water to school children on a daily basis, and the playing fields are seen as a clear added value, as they are used to teach children social skills next to offering them a safe space to play in environments where playing grounds are scarce.

The ownership of the systems is transferred to the schools. During the project, the mode of operation in installing the systems changed. The first system was built on-site, within an existing building. However, this proved to be too time-consuming. Hence, a choice was made by the Dutch partners to install ready-made containers with the purification unit on the other sites. This enabled the project to achieve almost the targeted level of systems, which otherwise would have been a challenge.

The training of local staff (lecturers) to maintain the system (purification unit and fields) has been done, and trained staff are able to do simple repairs. However, as the turnover of staff at the schools is quite high and no protocol for transferring knowledge is in place, there are now few trained staff members. In addition, for more complex disruptions, Dutch specialists have to be called upon. The community training was done and was appreciated, but partly because of the disruption caused by COVID-19 related lockdowns, no effective action has followed from these, and there is little to no involvement of the communities with the systems.

The use of return water for irrigation of school gardens has not been very successful, again partly because of the effect of the lockdown during COVID-19, which caused a lack of caring for the gardens, but partly also because of lack of interest among stakeholders (parents, lecturers) in investing time and energy in the gardens. The business case that was envisaged (selling of bottled water or ice) has not materialized, as production costs are too high to be competitive. Hence, the project has been successful in supplying water to schoolchildren and their families and has led to more playing grounds. However, the dependency on the Dutch partners is a point of concern and the same holds for the lack of embedding in the local communities

### **Integrated water management, Ghana**

The project was completed in 2017. In the evaluation report written in 2020, this project was selected as a case study. This evaluation concluded that the project was successful in building the irrigation infrastructure, and in providing inputs and markets access for the smallholder farmers. Agriterra, partner in the partnership, trained the farmers on cultivation techniques and irrigation. The project established a new entity, IWAD, which is still functioning to date, although the government is no longer a shareholder in this company. The location – in the North of Ghana – has posed severe challenges to the project, as the farmers involved has a very low educational level, the area is very remote and dry. Hence, the project had to work very intensively with the farmers, which paid off in terms of the uptake of training efforts. At the end of the project farmers were using the improved seeds, and there also was a local seed company providing improved seeds. Infrastructure is still being built but the promised extra bridge over the White Volta river at WaleWale that would really open up the area is still not ready (now eight years after public tender).

### **Drops for Crops, Benin**

Due to the delays during the inception phase, the number of targeted farmers and covered hectares have been adjusted downwards, from 1442 to 1050 farmers and from 229 hectares to 179 hectares, respectively. To date, the PPP established 7 demonstration fields (total area of 7 hectares) for 157 farmers (98M + 59F), including solar pumps, plumbing networks, irrigation systems and storage tanks. Furthermore, 8 market gardeners were trained in the use and maintenance of the solar drip irrigation systems.

To date, the replacement of the two project partners has been the largest obstacle to the D4C project. Reportedly, this risk may have been mitigated if a capacity assessment of the cooperative had been done at the proposal phase. Furthermore, project reporting indicates that staff of Woord en Daad initially had limited oversight of the project, limiting their steering ability, and CSF had a number of internal challenges in aligning the board and staff with the project logic. Moreover, the technical teams at CSF, Dedras and Woord en Daad have seen a number of departures. Replacing them has been a major challenge, with losses in terms of finance, time and experience. Hence, selecting and starting up demonstration sites turned out to be more difficult than anticipated. Besides, the drilling strategy of the project had to be adapted as the aquifer was deeper than expected, resulting in lower number of wells.

On a positive note, reportedly there recently is a clear willingness of private entrepreneurs to join the project and/or adopt the approach. In addition, there is a beginning of synergy of actions and collaboration with other projects and organisations involved in the vegetable sector. Furthermore, the level of responsibility and commitment of municipalities in financing and monitoring D4C project activities has been improved.

### **West Bank wastewater reuse, Palestine**

Project documentation shows this project to be unsuccessful. The project consists of the installation and operation of a post-treatment facility in the Municipality of Jenin. A reservoir and piped distribution network should lead treated waste water to agricultural areas. This project is very innovative within the context of the Palestinian Territories, since it will be the first project to embark on full scale of wastewater reuse for agricultural purposes. The proposed project has the potential to create significant spin-offs. It can serve as the foundation for expanding wastewater reuse across the wider West Bank and even Gaza, using water from over 10 planned WWTPs in the Palestinian Territories. The PPP was unique for the Palestinian Territories and presented a balanced composition of technical, organizational and financial know how. One candidate private investor, a construction company, participated for the learning experience in the water sector and upscaling project findings elsewhere.

Yet, a blockage to the project's execution arose when the local municipality partnered with USAID, which caused friction within the partnership. The project finally failed because the private co-financer cancelled its financial commitment because of the (largely political) risks of a long-term concession.

## Sustainable water Akagera Valley, Rwanda

Project documentation shows that this project was cancelled. The above-normal rainfall in 2018, 2019 and 2020 played a major role in the cancellation of the SWIAMI project. The heavy rainfall in 2018 caused significant damage to some of drainage structures built in the area of the previous IITI project, making the restoration of drainage works in that area a top priority and halting the launch of the newly awarded SWIAMI project. Subsequently, with more heavy rains and flooding in 2019 and 2020, the SWIAMI proposal had to be redefined and proposed interventions adjusted. However, before implementation could begin, it was realized that the area originally earmarked for the project was no longer suitable for sugarcane cultivation (the cost of water management solutions became unrealistically high) and that a more viable option was to move the project to another area where sugarcane could be grown. A high-level risk analysis was performed through a pre-feasibility study based on historical weather data showing no signs of climate change continuing at such a rapid pace (i.e., leading in the short term to consecutive years of above normal rainfall). The assumptions made in that analysis, for example that there will not be as much rainfall in the short term as in 2018, turned out to be incorrect and the conditions were no longer suitable for sugar cane cultivation.

The Ministry of Agriculture (Government Apex agency, Rwanda) was responsible for sharing relevant data for design development of water management infrastructures, allocation of land to the smallholder farmers and good governance in land allocation process, land use and property rights. They were involved in the IITI project and were important in the development of the SWIAMI project proposal and in the engagement with RVO. They have not been involved, however, in the implementation of the SWIAMI project, as their contribution was scheduled later, in a phase that was not reached by the project. The Ministry of Agriculture was optimistic about the possibilities for this project and welcomed the opportunity to develop the sugar industry and reclaim land close to the existing factory. However, after the heavy rainfall of 2018, 2019 and 2020, when it was proposed to move the factory to another location with less risk of flooding, the interaction with the Rwanda Development Board - to find a new location for sugar cane cultivation - turned out to be a complex and lengthy process. Whereas the Ministry of Agriculture supported the project and was willing to make other land available, more powerful government entities with different agendas were involved in the land re-allocation process, and the discussion on the relocation never ended in an agreement. Moreover, during Covid, attention for the project shifted.

## Stakeholder perspective

The stakeholder perspective can be further divided into a programme-level stakeholder perspective and a project-level stakeholder perspective.

### Programme-level stakeholder perspective

The following paragraphs summarize the findings from in-depth interviews with various programme-level stakeholders from the Ministry of Foreign Affairs, RVO and external stakeholders.

**“Effectiveness is beyond indicators”** – Programme stakeholders did virtually not provide a direct answer to the question: *‘Can effectiveness of different projects be related to differences in approach towards interventions and/or partnerships?’* Stakeholders emphasized the need to assess projects individually, being mindful of the local context, instead of making a general statement. “Effectiveness is ‘beyond indicators’, it is (also) learning from mistakes”. Additionally, one interviewee mentioned that “if you look purely at results with respect to indicators, it could have been more effective, but that is not how the instrument was designed. FDW has been effective if you look at what has been additionally delivered, for example the learning component in the programme.” Furthermore, the interviewees themselves had a limited direct view of program implementation in the field and depended on the sharing of knowledge by their colleagues at local posts.

**FDW is not considered to be effective in engaging private partners in partnerships** – In total 7 people answered the question *“how effective FDW is in engaging private partners in partnerships”*, with one stating that FDW has been effective and six stating that FDW has not been effective. One respondent mentioned FDW is effective in doing so because of joint goals between private partners and local partners (such as VEI and water companies). For example, there is an increasingly better revenue model in sanitation. The other five respondents believed FDW is less effective in doing so because of the following reasons:

- **Effectiveness is “sector-dependent” / “revenue model-dependent”** – It is difficult to find business opportunities in the water sector. I.e., there is little profit to be made, and there is a lot of political interference. This especially holds for IWRM projects because there is basically no business



opportunity or this is “limited to the issuance of permits”. One respondent mentioned engaging private sector parties in commercial investments in the water sector is “partly challenging”. There are some projects where commercial companies have used FDW to develop markets for a new approach. For example, there is an increasingly better revenue model in the WASH (sanitation) sector.

- **Private contribution** – FDW asks for a contribution from private parties (50%), which automatically leads to larger parties in particular joining the program; it is not effective to involve smaller commercial companies.
- **Measurability of "commitment"** – The measurement of "commitment" (an indicator for "degree of engagement of partners") is very difficult.
- **Overestimation of the investment willingness of private parties** – FDW tends to overestimate the willingness of Dutch parties to truly invest risk capital in developing countries. Earning models often lead to complicated discussions, and some flexibility towards financial institutions would be welcome.

**An equal distribution of projects across themes, calls, and parties is still challenging** – As described earlier, previous evaluations reported that the majority of the participants in FDW projects are the more reputable, larger parties, and that in the first two calls more WASH projects (on access to water) have been allocated, compared to WEA and IWRM projects, while the projects that focus on waste (a thematic area of WASH) are fewer than expected. Below are some explanations from the interviewees for the unequal distributions in these various fields.

#### Reasons for dominance of large parties:

- **FDW has focus on impact, not necessarily on innovation** in the sense of involving new, creative parties.
- **Large organisations have more resources** (in terms of staff time to write proposals and implement projects and financial means to cover own contribution)

#### Reasons for dominance WASH projects:

- **WASH is well developed** with organisations in the Netherlands that have been working in this sector for years and PPPs that have been in existence for some time (e.g. VEI). IWRM and WEA organizations are less well represented in their respective sectors, with IWRM being a typical government issue so harder to develop PPPs for. In the last call, more has been deployed on IWRM and WEA
- **WASH business case is easier to develop** compared to WEA and IWRM business cases

#### Reasons for few "waste-related" projects:

- **No focus of FDW:** There was no specific call for waste projects in 2012 and 2014; solid waste collection or waste does not immediately fit within SDG6 and is considered a third generational problem often addressed only after sanitation is guaranteed
- **Little expertise in NL:** There are few organisations in the Netherlands that have the necessary expertise within this field (the project in Ghana with waste-oriented interventions is an exception)
- **Complexity of faecal sludge management through local government:** Faecal sludge management in urban areas is complex; there is high dependence on the services provided by the local authorities
- **Waste business case still under development:** The business case faecal sludge management is still being developed; the commercial value should be in the by-products (compressed natural gas and organic fertilizer), but so far almost no profit has been made.

**Programme results are mainly assessed along three SDG indicators** – Ideally, indicators at programme level are needed to answer the question ‘To what extent have the intended project results been realized?’. Yet, none of the respondents could give a direct answer to this question because there were no specific indicators or targets set at the programme level. The programme indicators were only published in the 2<sup>nd</sup> FDW call. Some general FDW KPIs are now being applied on the project level, yet also no targets are set for these KPIs. Reasons for not formulating indicators in advance related to the difficulty of making prior commitments on quantitative indicators, as some of these are beyond FDW's direct control. Moreover, the FDW program is not only about measuring program performance via quantitative indicators, it is also about the continuation of the partnership and the relationships that arise from it. As one interviewee explained “*FDW's main goal is impact in terms of poverty reduction and water security. Partnerships and private sector involvement are a means to achieve this goal*”. They facilitate sustainability in regions where financing alone is not feasible to achieve sustainability. Lastly, programme implementors were also hesitant to provide an opinion on effectiveness because they do not always have full sight on the effectiveness of their projects.

Programme stakeholders consider FDW's contribution to the SDG goals as crucial. There are three KPIs at PPP-level that are the same for all PPPs / projects because they lead to the SDGs. These are the high-level

indicators for which FDW annually provides data (and about which IGG reports annually to the House of Representatives of the Netherlands), but for which no targets (at program level) have been set:

- No of people using safely managed drinking water services - SDG 6.1.1 (WASH)
- No of people using safely managed sanitation services, including hand washing facility with soap - SDG 6.1.2 (WASH)
- Another indicator is about IWRM.

**Key determinants of success** – A diversity of factors contributes to (or detracts from) the effectiveness of FDW projects, including factors that relate to partnership, project management and implementation, (enabling) environment and policies, and impact (see Table 25). Some interviewees refer to factors of effectiveness while others refer to factors in a broader sense (relating to effectiveness and other OECD-DAC factors such as efficiency). In addition, some factors are mentioned under both success and failure factors (e.g., problem analysis and interventions, policy factors). Factors mentioned most frequently relate to partnership (n = 9), followed by those on environment and policies (n = 8) and project management and implementation (n = 8), and finally impact (n = 2).

For instance, programme stakeholders mentioned that partnerships based on a trusted relationship are generally more effective (than occasional partnerships) and adopting a holistic approach is considered to increase project effectiveness. According to the VEI, project partner in 13 FDW projects, some projects were successful and some were not. For instance, the 'Water Supply Bandung' project (FDW14RI15) stopped prematurely because there was too little commitment from the lead partner at high management level. Other projects were successful but there was not always a spin-off. This was usually down to the organisations' commitment (such as the case for Kenya - FDW14KE13). VEI does not always continue successful projects after project completion, such as the case for AQUACRUZ (FDW14BO11). The projects that were successful and had a spin-off were usually a successor to previous VEI projects based on an established relationship.

| Determinant category                           | Success factors   | Failure factors  |
|--|---|--|
| <b>Partnership</b>                             | confidence; good relationship; established, previous partnership experience; common interest; partner commitment; readiness to change (n = 8) | absence of commitment (n = 1)  |
| <b>Project management &amp; implementation</b> | good project manager; local presence; clear problem analysis and implementation strategy; focus on sustainability; holistic approach (n = 4)  | unrealistic assumptions and ideals; complexity of problem and intervention; failure to include upstream-downstream effects (n = 4)   |
| <b>Environment and policies</b>                | clear alignment with local/national policies; level playing field (n = 2)   | insufficient knowledge of local context; lack of household investment capacity; no enabling environment; difficulties with compliance with FDW guidelines; delay due to COVID-19; too much competition, not enough market (pull and push); (n = 6) |
| <b>Impact</b>                                  | number of people reached; possibility to scale up (n = 2)   | --   |

Table 25: Determinants of success and failure in realizing project results

## Project-level stakeholder perspective

In this section, we provide information and insights of project effectiveness derived from project-level stakeholder interviews for the selected case studies.

### AQUACRUZ, Bolivia

Below we report on effectiveness of AQUACRUZ interventions based on interviews with internal and external experts and focus group discussions (FGD) with EPSAs on themes: satisfaction, PPP, innovation, factors for success and failure, regulation, tariffs and factors for improvement.

**Approaches (intervention/PPP forms) applied** – The FDW project AQUACRUZ worked with 21 water utilities (so-called EPSAs) to contribute to a sustainable water and wastewater sector in Bolivia. The AQUACRUZ project spent its first year identifying prevailing problems at EPSAs. In the second year it was decided to

concentrate on seven intervention areas (Non-Revenue Waters, Drinking water quality, Sanitation, Commercial Management, Planning and financial-administrative management, Socio-institutional management, Training and capacity-building). Because of the detailed needs assessment the appropriate Dutch consultants could be selected to support the training and capacity building in the seven intervention areas. The Dutch expertise was considered to positively contribute to the achievements. The blended learning of theory and practical skills was well adopted.

**Extent to which results have been realised** – Concerning the improvement of Non-Revenue Waters the AQUACRUZ project following NRW strategies was able to reduce the NRW to 22% from a 28% of the baseline level. The results were realized by quantifying water production, consumption and losses. All EPSAs are equipped with macro-meters and 6 EPSAs were trained in hydraulic modelling. The project also aimed to ensure that 15 EPSAs comply with the quality standards for drinking water, which has been achieved. However, some EPSAs still do not comply due to manual chlorination, which is less secure compared to automated chlorine injections. Nonetheless, 18 EPSAs have fulfilled the bacteriological norms. AQUACRUZ aimed at improvement of existing wastewater treatment plants (WWTP), incrementing connection rates to centralized sewage systems and train the system operators in appropriate O&M of the infrastructure.

Using the 5 key parameters (Biochemical Oxygen Demand, Chemical Oxygen Demand, pH, faecal coliforms and dissolved oxygen). The three targeted EPSAs did not comply with the norms for the above mentioned parameters. After the intervention two EPSA complied with all norms, one EPSA with four out of five. AQUACRUZ cooperated with SAGUAPAC, the largest utility of Santa Cruz (1.5 million people) to improve O&M of sewage networks. Concerning commercial management, the intervention concentrated on: 1) optimization of billing cycle, 2) improvement of consumption management, and 3) improvement in customer service. An average increase of > 20% for all EPSA in recuperation of invoices in the first month was realized; a considerable improvement compared to the baseline of 13%. In 13 EPSAs (target 12) 8,081 micro-meters were installed for better assessment of domestic flows.

Supporting financial management focused on approval of five-year development by AAPS, including optimization of tariff structure and recategorization water users. Only 10 EPSAs (18 were targeted had a positive operating balance. In the socio-institutional management AQUACRUZ improved governance in service delivery by training utilities. There were 15 EPSAs (target 15) with percentage of customer satisfaction regarding their service delivery exceeding 80% and 18 EPSAs (target 15) that developed communication plans. About Training and capacity-building for human capacity development the 282 EPSA workers of which 57 women were capacitated / trained in topics on potable water and sanitation which improved their professional and working capacities.

**Determinants of success and failure** – The table below shows determinants of success and failure in relation to effectiveness of the project.

| Determinant       | Success   | Failure / Points for Improvement  |
|-------------------|---|---|
| Interventions     | <ul style="list-style-type: none"> <li>First project year used to detail needs assessment</li> <li>Dutch expertise tailored to needs of EPSAS Interim</li> <li>Self-evaluation increased independency and performance of EPSAs</li> <li>Shortening of commercial cycle (billing-payment)</li> <li>Training in self-analysis benefited the installation of a monitoring system.</li> </ul> | <ul style="list-style-type: none"> <li>Resourceful (Category B) EPSAs benefitted more as compared to smaller (category C) ones</li> <li>After capacity building, expectations could not be fulfilled within time/resources available.</li> <li>Expert missions were sometimes considered too short.</li> <li>Some partners (e.g. SENABSA) did not feel involved.</li> </ul> |
| PPP collaboration | <ul style="list-style-type: none"> <li>Collaboration was well organized</li> <li>Capacity building improved communication between EPSAs and partners AAPS</li> <li>High level of expertise and local knowledge within the partnership</li> </ul>  | <ul style="list-style-type: none"> <li>PPP confusing concept; EPSA as private partner is controlled financially by government.</li> <li>PPP did not comply with roles of private partner to develop business cases and public partners providing an embedding of new initiatives in an institutional network</li> </ul>   |

|                    |   |  |
|--------------------|---|--|
|                    | <ul style="list-style-type: none"> <li>Governmental institutions fully collaborated and appreciated interventions</li> </ul>  |  |
| Project management | <ul style="list-style-type: none"> <li>AQUACRUZ was embedded in the PERIAQUA project where much expertise was available from international and national counterparts.</li> <li>Project management was well organized</li> <li>Capacity building improved communication with AAPS and municipalities.</li> </ul> | <ul style="list-style-type: none"> <li>After capacity building, expectations could not be fulfilled within time/resources available.</li> <li>Fundamental problem of low tariffs and lack of investment was addressed at the end of the project under PERIAQUA 3.</li> <li>A process of large-scale merging could address prevailing inefficiencies.</li> <li>EPSAs cherish their independence and there is no active policy to merge with other water companies.</li> </ul> |
| Local involvement  | <ul style="list-style-type: none"> <li>EPSAs in Santa Cruz are politically solid organizations based on strong local cultural habits and traditional institutional connections.</li> </ul>  |  |
| External factors   |   | <ul style="list-style-type: none"> <li>Large scale merging remains cumbersome after the Cochabamba water war[1].</li> </ul>  |

Table 26: Determinants of success and failure in AQUACRUZ

**Factors for improvement** – Additional to the above-mentioned constraints, EPSAS as a cooperative may have the risk of staff changes according to election of new directors. Large EPSAs can institutionalise adjustments or changes, but small EPSAs rely on specialised individuals. This justifies the advocacy of merging smaller (C Category) EPSAs to larger units that can institutionalize the newly gained knowledge.

### Safe Drinking Water for Ethiopia, Ethiopia

A large proportion of the community in Amhara National Regional State is affected by water-borne diseases caused by drinking unsafe water. Nazava Trading PLC along with its partners introduced 'The Safe Drinking Water for Ethiopia' project with the purpose of helping the community to get access to safe drinking water through introducing water solutions. Based on interviews with internal and external experts we assess below the said project.

**Approaches (intervention/PPP forms) applied** – Nazava Trading PLC with its partners, Bureau of Health Amhara (public), Shayashone PLC1 (private) and iDE Ethiopia (NGO) have been engaged in the promotion and training of Health Extension Workers (HEW) and Women Development Army (WDA) and the community on water safety and water born diseases. In addition to this, Nazava Trading PLC has been demonstrating and distributing Nazava water filters and household water treatment and storage solutions (HWTSS) to the community. Interviewed experts referred to an incident with a sales agent (he didn't facilitate credit service as promised nor refunded the already collected money) hired by Shayashone caused distrust among community members. This could potentially affect the image of Nazava Trading PLC; it was recommended to solve these issues before awareness and promotion campaigns continue.

Furthermore, the necessary permits and licenses for establishing a manufacturing facility in-country were obtained, safe drinking water events organised and micro-financing organizations were informed on the benefits of water filters. MFIs developed two loan products for water filters. A functional water filter manufacturing facility has now a capacity of producing 25.000 units annually. The contribution of all these and other development actors has led to a decline of water borne diseases at household levels.

The PPP seems to be a well-balanced consortium with the necessary technical and organizational skills. Moreover, the local private partners are willing to contribute financially with 40% of the total budget. This is a clear sign of trust and willingness to make this undertaking a success.

**Extent to which results have been realised** – Most expected results have been realised by the project or are in the process of being finalised. A partnership agreement was established. Permits and licenses for importation

and sales of the Nazava filter were obtained and a manufacturing facility is being established. Awareness campaigns on waterborne diseases were held and women, Health Extension Workers and the Women Development Army were trained on waterborne diseases and household water-treatment and storage solutions (HWTSS). Given the COVID restrictions and the ongoing civil war in Ethiopia it has been a remarkable effort to complete with all targets. A supply chain was started to deliver the filters. The micro-finance organizations are well aware of the added benefits of labourers, import and use of mould for housing of filters. The assembly line and manufacturing candles could not be realized due to the delay of permits. The issue was resolved during the writing of this evaluation.

**Determinants of success and failure** – The table below shows determinants of success and failure in relation to “effectiveness”.

| Determinant        | Success  | Failure / Points for Improvement   |
|--------------------|--|--|
| Interventions      | <ul style="list-style-type: none"> <li>Integrated approach combining awareness raising with accessible treating and water storage techniques</li> <li>Filters and water storage devices are available and affordable</li> </ul>  | <ul style="list-style-type: none"> <li>Follow-up of progress of awareness creation and distribution of Nazava water filters seems not to continue at the same pace as during project</li> <li>Households who purchased water filters are complaining of lack of spare parts and maintenance services since the last four years.</li> </ul> |
| PPP collaboration  | <ul style="list-style-type: none"> <li>Established formal relationship between local partners</li> <li>Combining technical and entrepreneurial expertise with a large network of the public partners</li> <li>Contribution of private partners raises confidence in successful implementation of the project.</li> </ul> | <ul style="list-style-type: none"> <li>Public partner could not assure the permits for the production facility</li> </ul>  |
| Project management | <ul style="list-style-type: none"> <li>Development of a good business plan</li> <li>Local production of good water filters results in competitive prices</li> <li>Sound needs assessment at the beginning of the project.</li> </ul>   | <ul style="list-style-type: none"> <li>Lack of trust of Sales Agents among the community</li> <li>Relationships between Nazava Trading PLC and its sales experts and agents were sometimes cumbersome</li> <li>Make more use of social media</li> </ul>  |
| Local involvement  | <ul style="list-style-type: none"> <li>Massive awareness raising and training assured local involvement</li> <li>Public partners provided trusted access to local networks</li> </ul>  | <ul style="list-style-type: none"> <li>Transferring of responsibility to local communities is challenging</li> </ul>   |
| External factors   | <ul style="list-style-type: none"> <li>Successful adaptation to COVID-19 and civil war. Targets were barely affected by the lock downs.</li> </ul>   | <ul style="list-style-type: none"> <li>Competition from other water filters</li> </ul>   |

Table 27: Determinants of success and failure in Safe Drinking Water for Ethiopia

### Water efficiency in sustainable cotton production, India

Cotton farmers in the Nagpur region face both economic stress and water stress. This project aims to improve their livelihoods by improving water availability and improving economic viability of cotton farming.

**Approaches (intervention/PPP forms) applied** – Project partners focus on a holistic approach to improve the livelihoods of farmers in Maharashtra. Farmers face various challenges: high water scarcity and insecurity (while mainly dependent on rainfed irrigation), water inefficiencies, insufficient agricultural practices (often cotton monocultures based on inorganic practices) and lack of training/education. As a result, farmers experience low yield, low quality, crop losses, high input costs, health issues, and reduced income safety. The project activities primarily focus on 1) training farmers on good agricultural practices and 2) supporting the construction or rejuvenation of water structures.

It is especially considered important to convince farmers to pursue multicropping and crop rotation as the often-high dependence on monocultures makes farmers economically vulnerable. *“If we want to increase the income for farmers, growing only one crop is not sufficient.”* Moreover, organic practices are expected to reduce input costs, improve farmers’ health and increase productivity and income. The project also supports the establishment of water structures and tools and trains beneficiaries on efficient water management and the maintenance of the water structures. For instance, drip irrigation is the most efficient way to irrigate the land. *“If we promote drip irrigation, we can increase cotton production.”* To guarantee the sustainability of the structures, the project supports the establishment of so-called ‘water user groups’. Solidaridad and Welspun guide these groups for usually two to three years.

**Extent to which results have been realised** – In line with the project goals, the project has trained 20,000 farmers on good agricultural practices. Most of the farmers have received multiple training sessions and some of them have also received technical support (such as the establishment of a water pond or a drip irrigation system). The project also installed a weather station that helps farmers make informed decisions on irrigation (with support of additional funding from Vodafone). Farmers cooperating with Welspun have the opportunity to receive organic certification (after three years).

- To date, Biocare has trained about 3,000 farmers. They are providing organic inputs and advisory services to farmers. For instance, they developed a soil health maintenance kit with all required material and information combined in one kit for USD 20. The price of one advisory consult is INR 250 rupees.
- The KVKs have trained farmers on specific farming expertise. They have trained 2,000 farmers directly (and have reached about 5,000 indirect beneficiaries). For the entire project, one extension officer monitors 500 to 1,000 farmers.
- There are currently 10,000 organic certified farmers in the project and Solidaridad coupled 2,100 farmers with brands directly. Welspun is also procuring cotton from the farmers involved in the project. The uptake of 100 metric cotton amounts to almost 100% of their organic cotton volume. Welspun is currently cooperating with 5,000 farmers (total amount of beneficiaries in the Welspun organic cotton programme).
- Involving women is particularly considered effective. One project partner recommended increasing the percentage of women in agriculture because “they are more committed, honest and sincere”.

External challenges that reduce the effectiveness of the project are: Unavailability of non-GMO seeds; complication and high costs of the organic certification; access to organic inputs; fluctuating market prices; and water quality issues. Internal challenges that reduce the effectiveness of the project are related to staffing and resources. Supporting farmers with training and tools is labour and resource intensive, which requires more funding and time to achieve wider effects.

The TU Delft led activities have experienced a substantial delay due to an issue around wages of TU Delft staff members and COVID-19 travel restrictions. At this moment, the social hydrological model has been translated in the so-called ‘Makara’ app that can be used by farmers to support their decision-making on the farm. For example, the app provides advise on which crop to grow, what the estimated yield and profit will be at the end of the season and what good practices of fertilizer or irrigation can be taken up to reduce the risk. The unique selling point of the app is the predictive model (including time series) developed by TU Delft. By April 2023, TU Delft aims to reach 2,000 beneficiaries. According to Solidaridad, the project will try to integrate the weather resource station information with the TU Delft app in order to make the most benefit out of the two interventions. By the end of March 2023, TU Delft will complete the mid-term review of the project focusing on sustainable water management. Progress made on the organic cotton activities of the project are not included in the scope of this study. The OCFS platform as mentioned in the project plan was not known by the project partners. However, Solidaridad mentioned they are an active member of various multistakeholder platforms, such as the Organic Cotton Accelerator (OCA).

Project partners are satisfied about cooperation in the partnership. A success in the partnership was having shared goals related to a humanitarian motivation to support smallholder farmers in need. Additionally, some partners already had a good working relationship before the project, such as Solidaridad, Welspun and the KVKs. This established relationship has benefited the project. Every organization has a distinctive contribution to the project. However, this can also sometimes lead to “working in silos”. The organisations who work in the field mentioned they are successfully sharing knowledge and lessons learned. Solidaridad was taking the lead in organizing farmers and they were able to apply cross learnings from the FDW sugarcane and also other PPP projects.

The experience of working with farmers, government departments and private businesses in the sugarcane project helped in applying similar PPP based relationships in the cotton project as well. Solidaridad and Welspun divided training activities based on the location and their track record in the district. The KVK/CICR extensionists work for all locations with some other / specific topics. Cooperation with the other partners (TU Delft and Biocare) seems less frequent. Biocare seemed to have their own training programme. In terms of public involvement, there is officially only one Panchayat included as partner. However, partners mentioned “we are cooperating with multiple Panchayats because they are the representative body for all the 5,000 community members. For instance, if a community pond needs to be created we also need to discuss this with the Panchayat first.” The project does not directly involve national government but is ensuring alignment with national and local policies.

**Determinants of success and failure** – The table below shows determinants of success and failure in relation to “effectiveness”.

| Determinant        | Success  | Failure / Points for Improvement   |
|--------------------|--|--|
| Interventions      | <ul style="list-style-type: none"> <li>Holistic approach combining training and hardware support and combining conventional methods with IoT weather stations</li> <li>Groups-based approach to enhance learning</li> <li>Simplifying information by offering complete input kits</li> </ul> | <ul style="list-style-type: none"> <li>Unavailability of non-GMO seeds / topic not included in the intervention logic</li> <li>Organic certification process is complicated and expensive</li> <li>Access to organic inputs can be challenging</li> <li>Water quality is also an issue but not included in the intervention logic</li> </ul> |
| PPP collaboration  | <ul style="list-style-type: none"> <li>Established relationship between local partners</li> <li>Shared vision</li> <li>Complementary collaboration</li> </ul>  | <ul style="list-style-type: none"> <li>Distinctive project roles could lead to ‘operating in silos’</li> </ul>   |
| Project management | <ul style="list-style-type: none"> <li>Experienced lead partner</li> <li>Monthly progress meetings</li> <li>Exchanging knowledge and alignment of training activities</li> </ul>   | <ul style="list-style-type: none"> <li>Staff rate issue with TU Delft caused project delay</li> <li>Supporting and monitoring farmers in the field is labour-intensive and staffing is an issue</li> </ul>   |
| Local involvement  | <ul style="list-style-type: none"> <li>Project partners have knowledge on and experience with the local context</li> <li>Established network of extension officers with trusted relationship in communities</li> <li>Collaboration with local governance networks</li> </ul>                 | <ul style="list-style-type: none"> <li>Transferring of responsibility to local communities is challenging</li> </ul>   |
| External factors   | <ul style="list-style-type: none"> <li>Successful adaptation to COVID-19 by means of digital training</li> </ul>   | <ul style="list-style-type: none"> <li>Fluctuating market prices</li> <li>Climate change causing increased water scarcity and unpredictable rainfall</li> </ul>  |

Table 28: Determinants of success and failure in Water efficiency in sustainable cotton production

### Building with Nature, Indonesia

The coastal region of Demak is susceptible to flooding. This project aims to improve coastal defence through building-with-nature concepts, in this case allowing for mangrove forests to grow along the coast.

**Approaches (intervention/PPP forms) applied** – The project initially started as the Demak region often has to deal with floods. The project was intended as a demonstration project to rehabilitate mangroves, protect the coastal zones against floods and bring back aquacultures. The project included both technical and social intervention. As technical intervention, water-permeable dams were constructed, mostly with natural material. Subsequently, sea current then allows sand to accumulate through those dams, and mangroves can be replanted behind the dams. Furthermore, fishing ponds were established. Farmers received training on how to utilize the fishing ponds, and a regional discussion platform has been established to continue project activities

with. The concept of Building with Nature has been practised in the Netherlands for a longer period of time (e.g. the 'kwelders'), but in Indonesia this approach was still rather unique.

**Extent to which results have been realised** – Although the project realised only part of the permeable structures (3.4 kilometres of the planned 9 kilometres) and land subsidence resulted in an even less protected coastline, the project partners are generally satisfied with the project results. In total, the project trained 250 farmers in 10 villages through the Coastal Field Schools, who can further spread their knowledge to other farmers. Furthermore, the Bintoro forum has been set up to facilitate community groups to advocate their stakes at government level. Per village involved in the project, currently about 2-3 people (mostly the leaders of the community groups) are part of the Bintoro forum.

Moreover, the BwN project successfully demonstrated the concept of using natural systems to improve coastal protection. In that sense it can be considered a successful project. There was great involvement and positive results in terms of stakeholder awareness and inclusion of the BwN approach in policy and administrative decisions beyond the project region. Local universities and knowledge institutes incorporated the BwN-approach into their curriculum as well.

However, land subsidence from groundwater subtraction resulted in an even less protected coastline, and the region can be expected to become more prone to flooding in the coming years.

**Determinants of success and failure** – The table below shows determinants of success and failure in relation to "effectiveness".

| Determinant        | Success   | Failure / Points for Improvement   |
|--------------------|---|--|
| Interventions      | <ul style="list-style-type: none"> <li>Interim adjustment of project activities and goals; 'learning by doing'</li> <li>Integral approach containing both technical and social interventions.</li> </ul>  | <ul style="list-style-type: none"> <li>The rapidity with which the interventions are useful is insufficient to solve the problems</li> <li>Nature based physical structures are fragile and need a lot of maintenance</li> </ul>   |
| PPP collaboration  | <ul style="list-style-type: none"> <li>Strong commitment of the project partners</li> <li>Presence of a shared vision</li> <li>High level of expertise and local knowledge within the partnership</li> <li>A lot of fruitful discussions between partners</li> </ul>  | <ul style="list-style-type: none"> <li>MMAF and MWPH are not well versed at local level, national policies are not always in line with the project</li> <li>Governmental institutions need to be accountable, so they don't have a lot of 'flexible' budget for these kinds of interventions.</li> </ul> |
| Project management | <ul style="list-style-type: none"> <li>Constant coordination, with a weekly coordination meeting with the local partners and monthly communication with all project partners</li> <li>A highly involved project leader</li> <li>Both Wetlands and Blueforests had an office in Demak, near to each other</li> </ul> |  |
| Local involvement  | <ul style="list-style-type: none"> <li>At the end of the project, strong involvement of and collaboration with local communities</li> <li>Finding and actively engaging local leaders helped to keep local communities motivated</li> </ul>   | <ul style="list-style-type: none"> <li>At first it was difficult to convince farmers of the BwN-concept and the importance of maintaining the structures. It took more than 5 years before most farmers were convinced.</li> </ul>   |
| External factors   |   | <ul style="list-style-type: none"> <li>Land subsidence is occurring faster than once anticipated</li> </ul>  |

Table 29: Determinants of success and failure in Building with Nature



### Water quality management in the Brantas River, Indonesia

The Brantas River suffers from pollution from various sources. This project aims to monitor water quality and engage local communities, various government institutions, and the private sector to clean up the river and prevent further pollution of the water.

**Approaches (intervention/PPP forms) applied** – Throughout the Brantas river, several parties are involved in water quality monitoring. Although some parameters are the same for all project partners involved in water quality monitoring, approaches differ in time of measurement, treatment of the samples and ways of analysing data, which leads to different monitoring results. Hence, together with TU Delft, the project partners seek to align water quality monitoring in some specific areas of the Brantas river.

Furthermore, through the TKPSDA platform, the project partners hope that there can be taken more action to enhance the water quality by aligning public-sector institutions. Indeed, both BBWS, PJT1 and DLH do not have the power to take decisive action after water monitoring. Thus, the TKSPA platform must be the voice and the place to take joint decisions. In addition, multi-level stakeholder meetings are organized to enhance cooperation between parties.

Besides, WP4 of the project focused on empowerment of the communities. The involved communities monitor the water quality every week, are encouraged to enhance the waste system and promote zero waste. For example, they try to push industries to acting more responsible and decreasing their liquid waste and pollution.

**Extent to which results have been realised** – The inception phase of the project started in 2018 and was completed in April 2022. Partly due to Covid-19, cooperation between project partners is heavily delayed. At the end of the inception phase, agreements on how to work with each other were set out in the consortium agreement and the TKSPDA platform was set up. Ecoton (the NGO working with local communities) is not part of this platform. In July 2022, the project partners formed a working group for water quality monitoring, to divide tasks and responsibilities. The working group consists of 11 members in total, which are the parties that are the most involved on water resources. Yet, to date this working group did not lead to a shared plan of action. Discussions were held on how to establish joint water quality monitoring methods, but to date the project partners do not actively compare their data.

The Clean Industry Hub has not been established, mainly due lack of interest from local industries and immaturity of ideas for products and services. It is now transformed to the Clean Industry Initiative, which can be seen as a truncated version of the initial concept, offering an online webpage with guidance and suggestions to private-sector actors operating along the river.

Ecoton has mobilised several local communities in an attempt to involve them in collecting plastic waste from the river and monetising it and to encourage a mindset that prevents further pollution of the river by local communities – which relies heavily on the involvement of youth. Ecoton has also been involved in a gender participation study from a researcher of the Surabaya University, which resulted in community groups of wives of fishermen. Here, Ecoton builds the capacity of women to speak more confidently in public.

**Determinants of success and failure** – The table below shows determinants of success and failure in relation to “effectiveness”.

| Determinant       | Success   | Failure / Points for Improvement  |
|-------------------|---|---|
| Interventions     | <ul style="list-style-type: none"> <li>Including NGO's in the TKSPDA platform, as they have more time and human resources</li> <li>Establishing a multistakeholder working group for water quality</li> </ul> | <ul style="list-style-type: none"> <li>Lack of interest from local industries</li> <li>Legal challenges of sharing of water quality monitoring data</li> <li>Roles of partners have overlap but lack of mandate sometimes hinders effective cooperation</li> <li>National government is not actively involved in the project</li> </ul> |
| PPP collaboration |   | <ul style="list-style-type: none"> <li>Conflicts of interest between Ecoton and the local public project partners</li> <li>Interventions are too much 'academic focused'</li> </ul>   |

|                    |   |  |
|--------------------|---|--|
| Project management | <ul style="list-style-type: none"> <li>Restructuring of the project meeting structures, allowing more fruitful discussions to occur</li> <li>TU Delft has a clear communication system</li> </ul> | <ul style="list-style-type: none"> <li>Many rotations of staff within project partners' organizations</li> </ul>   |
| Local involvement  | <ul style="list-style-type: none"> <li>Establishing the gender strategy led to greater involvement of women</li> </ul>  | <ul style="list-style-type: none"> <li>Local communities are not involved actively enough by the project partners</li> <li>Lack of societal priority for river clean-up activities/policy</li> </ul> |
| External factors   |   | <ul style="list-style-type: none"> <li>Delay of project meetings due to Covid-19</li> </ul>  |

Table 30: Determinants of success and failure in Water quality management in the Brantas River

### Sustainable Water Services Beira, Mozambique

**Approaches (intervention/PPP forms) applied** – The project is distinctive in its focus on Non-Revenue Water (NRW, i.e., water that has been produced and is "lost" before it reaches the client; it is not used or paid for) and its holistic approach, including all aspects of water services from water treatment plant to water distribution to commercialization and working with customers.

**Extent to which results have been realised** – In general, most outputs have been achieved, including KPIs at FIPAG level. However, the reduction of NRW has not been completely successful (from 44% at the start of the project to 37% in September 2021) and the intended production capacity has not been fully realized. The cyclone in 2019 had a major impact: Offices no longer had roofs and the drinking water supply was severely affected. After the cyclone, the system was quickly and successfully rebuilt. The lessons learned from NRW reduction activities have been shared with other (FIPAG) offices in Mozambique and interventions have been scaled up to other regions.

Expansion of the water supply system was the main project goal rather than improving services. However, the expansion was insufficient and led to the exclusion of people, because there is no more inflow at Motua due to capacity constraints and an increase in the number of clients. Upcoming projects will expand current production via a new line with 15,000 m<sup>3</sup> water per day, and rehabilitation of the intake will increase the production from 50,000 to 60,000 m<sup>3</sup> per day. To be connected to the water network, people must provide a copy of their ID, proof of payment of municipality tax and documents proving that they live somewhere. The taxes collected by FIPAG are partly transferred to the local government. The clients can see the taxes on their invoices. Those who cannot pay taxes, cannot get a water contract. When the client's documents are complete, the technicians check whether the distance from the household or company to the water supply pipe. If the distance exceeds 25 meters, it is not possible to get a connection. People living in the slums or in low-income areas are serviced through a total of 7,000 water taps. Water services are heavily subsidized: While the water-service fee is normally 48 Mtcas per m<sup>3</sup>, the fee for the poor has been reduced to 10 Mtcas per m<sup>3</sup>. **Less than 10% of the poor are paying for the drinking water from the taps.** Those who cannot pay will **not be banned** from the taps.

More targeted solutions, including technical ones and spaghetti networks, are needed to address issues such as illegal connections, deliberately broken meters, and secretly splitting of houses (and water supply). The communities manage the taps together with FIPAG. At the awareness level, FIPAG held community gatherings but due to the Corona pandemic; now only community leaders are approached. WSUP provided training to FIPAG personnel, for example, about getting the readings from the meters and to give the invoices to people. The training was judged by FIPAG staff to be very useful. Leadership change has been successful and had a positive effect on local parties. However, people who are trained also become attractive to other employers, where they may earn more.

**Determinants of success and failure** – The table below shows determinants of success and failure in relation to “effectiveness”.

| Determinant                    | Success  | Failure / Points for Improvement   |
|--------------------------------|--|--|
| Water pipelines and water taps | <ul style="list-style-type: none"> <li>• Extension of pipeline network and 7,000 water taps</li> <li>• Fast rebuilt after 2019 cyclone, with extra budget released by RVO</li> </ul>   | <ul style="list-style-type: none"> <li>• Damage due to cyclone in 2019</li> <li>• Target production capacity not fully achieved</li> <li>• Inlet capacity constraint excludes people</li> <li>• Illegal water connections and meters</li> <li>• Houses located over 25 m from water supply / pipeline not connected</li> </ul> |
| Project and partner management | <ul style="list-style-type: none"> <li>• Small, efficient partnership</li> <li>• Good partner cooperation</li> <li>• Partners well known in area</li> <li>• Holistic approach</li> <li>• Successful leadership change</li> </ul>   | <ul style="list-style-type: none"> <li>• Project is not known (by name)</li> <li>• Trained staff look for other better paying jobs and leave organisation</li> </ul>   |
| Training                       | <ul style="list-style-type: none"> <li>• WSUP training rated by FIPAG as very important and useful</li> </ul>  | <ul style="list-style-type: none"> <li>• Trained staff look for better paying jobs and leave the organisation</li> </ul>   |
| Social component               | <ul style="list-style-type: none"> <li>• Adjusted drinking water fees for the poor (10 Mtcas per m<sup>3</sup>)</li> <li>• Those not paying are not banned from taps</li> <li>• Local communities co-manage the taps with FIPAG</li> <li>• Successful adaptation to COVID-19: direct contact with community leaders</li> </ul> | <ul style="list-style-type: none"> <li>• Drinking water fees relatively high</li> <li>• Empowerment of women not sufficiently addressed</li> <li>• Corona pandemic hampered community gatherings</li> </ul>  |
| Business case                  | <ul style="list-style-type: none"> <li>• FIPAG has insight into NRW</li> <li>• Reduction of NRW</li> <li>• Those who consume less than 5 m<sup>3</sup>, pay no tax; those who consume more, pay 15-20% tax</li> <li>• Drinking water fee: 48 Mtcas/ m<sup>3</sup></li> </ul>   | <ul style="list-style-type: none"> <li>• Willingness (rather: Ability) to Pay is low</li> <li>• Less than 10% of the poor are paying for the water from the taps</li> <li>• NRW reduction partially successful (from 44% at start to 37% in September 2021)</li> </ul>   |

Table 31: Determinants of success and failure in Sustainable Water Services Beira

## A Green Sustainable and Safe Water Source, South Africa

**Approaches (intervention/PPP forms) applied** – GreenSource offers a decentralized solution through local interventions that bring together sports and water through the so-called “plug and play” containers for drinking water purification and the associated sport fields serving as rainwater catchment, both located near schools. Moreover, the ABCD training formula makes social development part of the project.

**Extent to which results have been realised** – COVID-19 has had a major negative impact on project implementation. Interviews indicate that in practice “getting the PPP to work” got more attention than achieving development goals: The project had a strong engineering focus, at the expense of the social component. The greatest asset of the Green Source System is the sports field for holding competitions and sports lessons. The ring around the direct target group has not yet been reached. That calls for new actions, for example implementation of bottle installations. Lack of wider involvement may explain why the security of the sites is still an issue (e.g., theft of materials such as pipes).

The project has implemented 16 out of the 20 planned GreenSource systems and intends to still complete the remaining four. Management transfer of sites is not yet fully successful. All systems are still working, but maintenance has been a problem as in many cases the trained maintenance personnel have left the schools and the materials used are not of the right quality, especially where the GreenSource system was first set up. Moreover, the effectiveness of the maintenance training could have been better, as the training was only aimed at solving simple problems, so the Dutch partners must be called in for major malfunctions. Some stated “*there must be cheaper and simpler solutions that could have reached more people; this would have enabled local maintenance*”, such as “*redesign the system, including much more water harvesting and storage and reduce the complexity of the filtration system*”. The projected lifespan of the GreenSource purification system is 10 years, and so far, little provision is made to replace worn-out parts after this time. There are contacts with private (mining) and public (local government) partners, but no concrete commitments yet.

Using return water to irrigate school gardens has not been very successful, partly due to the lockdown during COVID-19 resulting in a lack of care for the gardens, but also partly due to a lack of interest from stakeholders (parents, teachers) to invest time and energy in the gardens. The same goes for the maintenance of the playground and the GreenSource systems: parents are reluctant to invest time in maintenance because “education is free” (at least for quartile 1, i.e., the poorest, children) and/or their homes are located far away, while teachers indicated that “they are willing to do the work if they are paid to do it”.

Training is very important to stimulate local involvement of children and the surrounding community, which is why the community development (ABCD) training started from the very beginning. The training sessions (for schoolchildren grade 9 to 11 and/or community households) were received with great enthusiasm and experienced as very instructive. In one location, the poorest households learned to develop their own business plan and define their own solutions, with a grant of ZAR 15,000 made available to implement the plan. However, the budget was too small to cover the costs of the plans, which, in turn, had a negative effect on community ownership.

**Determinants of success and failure** – The table below shows determinants of success and failure in relation to “effectiveness”.

| Determinant  | Success   | Failure  |
|--|---|--|
| GreenSource water supply system, filtering technology and playground | <ul style="list-style-type: none"> <li>Combination of sports fields and clean water supply</li> <li>Playground for competition and sports lessons</li> <li>Reaching households through children is effective; teachers highly regarded</li> <li>Excitement of children getting water</li> </ul>   | <ul style="list-style-type: none"> <li>Too complicated and expensive technology</li> <li>Pipe materials of suboptimal quality</li> <li>Key materials imported from Netherlands</li> <li>Location not always optimal (e.g., far away)</li> <li>Upscaling needs more attention</li> <li>Gender imbalance: mostly boys are spotted on the GreenSource fields</li> <li>Poor quality water is still used: clean GreenSource water far away, limited impact of training, effects of dirty water not visible</li> </ul> |
| GreenSource system maintenance                                       | <ul style="list-style-type: none"> <li>Ensuring ownership is with local users</li> </ul>  | <ul style="list-style-type: none"> <li>Dependence on Dutch experts for key maintenance work</li> <li>Poor maintenance</li> <li>ToT idea failed (trained people left for work elsewhere); distances are too great for trainers to train more people</li> <li>No unpaid maintenance work by teachers and parents</li> <li>School has no funds for maintenance</li> <li>More active school participation expected, but participation varies among schools</li> </ul>  |
| Project management / partners  | <ul style="list-style-type: none"> <li>Committed core project team</li> <li>Large network and contacts of Dutch partners</li> <li>Own investment into project to keep it running</li> <li>Good connection between governments of Netherlands and South Africa.</li> <li>Same time zone helps</li> <li>Some cultural similarities between ZA and NL</li> </ul> | <ul style="list-style-type: none"> <li>Virtually no follow up survey of baseline</li> <li>Lack of funds for proposal development, a bottom-up approach and risk assessment</li> <li>Lack of commitment among large partners / investors</li> <li>Board meetings not being inclusive (often in Dutch, poor communication infrastructure)</li> <li>Long distance is a disadvantage</li> </ul>  |
| Social component   | <ul style="list-style-type: none"> <li>ABCD training received with much enthusiasm</li> </ul>   | <ul style="list-style-type: none"> <li>Too small budget and insufficient attention to social aspects</li> </ul>  |

Table 32: Determinants of success and failure in A Green Sustainable and Safe Water Source

## Integrated water management, Ghana

The project has made a real difference for the region in terms of irrigated area and the training of farmers to apply irrigation. The government's decision on the location of the project has presented the project with additional challenges, as farmers had a very low educational level and the infrastructure in the area was very poor. In addition, farmers in this area were not used to all-year round farming (because of lack of water), and therefore the introduction of irrigation which enables all-round production required a substantial change in the way the farmers planned their activities throughout the year. The effectiveness of the interventions was restricted by the extreme weather events that characterize almost the entire project period, but particularly also by the substantial delay in the realization of infrastructure by the government that would have provided much better access to the area, with obviously much better prospects for the area to be integrated in value chains. Finally, within the project, SADA did not provide the high-quality water reservoirs that were expected – the resulting reservoirs were too small and badly constructed.

Despite all these additional challenges and setbacks, the project was effective in delivering the infrastructure, training and inputs that were envisaged in the proposal. Table 33 summarizes the main factors of success and points of improvement. The main reasons why the project was able to overcome the challenges were the fact that a professional management team was on site – although even they had not seen such a succession of adverse weather conditions -, the strong partnership and the fact that a Ghanaian, independent entity was established (IWAD). In addition, the strong commitment of the coordinator, who remained involved in this project even when "his" firm withdrew, was a clear asset.

The table below shows determinants of success and failure in relation to “effectiveness”.

| Determinant        | Success                                 | Failure / Points for Improvement  |
|--------------------|---|---|
| Interventions      | Professional management team on site    | Low educational level of farmers was underestimated;  |
| PPP collaboration  | Long standing contacts between partners | Wienco redrawing from partnership, African Tiger coming in as Wienco did not see sufficient commercial opportunities  |
| Project management | Initiation of independent entity (IWAD) | Tensions between partners since SADA was unable to supply the committed financial co-financing, and high dependence on individuals at SADA in terms of willingness to cooperate |
| Local involvement  | IWAD as entity                          | The openness to all farmers led to inclusion of farmers not ready for a transition  |
| External factors   | No external effects reported            | Decision of government to change the location. Lagging of investments by the government in infrastructure (dam, bridge).<br>Extreme weather conditions                          |

Table 33: Determinants of success and failure in Integrated Water Management

## Drops for Crops, Benin

**Approaches (intervention/PPP forms) applied** – Initially, the proposal for this Drops for Crops project was submitted to RVO in 2017. The proposal was first rejected, but resubmitted and approved in 2018, with a changed approach and consortium. After the start of the project, local NGO Dedras was appointed as the local coordinator. However, as Protos had some bad experiences with working with Dedras in the past, they decided to leave the PPP. This came as a surprise, as a grant advisor of Dedras was already involved in preparing the application and bringing the parties together.

Afterwards, in 2019, it was noticed that URCoopMA was not performing its duties properly. After several conversations/warnings, they were expelled from the consortium. In retrospect, an assessment of the corporation could have prevented this. After the removal of URCoopMA, the other project partners decided to establish a farmers' cooperative (ESOP) itself. ETD already worked with the model of ESOP in several places, so they were asked for help to establish an ESOP in Benin as well. They made the preparations and created the plan, but the follow-up was insufficient. After a period of waiting for ETD, Dedras and Woord & Daad took

the lead in making the ESOP operational. Despite ESOP now being involved instead of URCoopPMA, the target group of farmers remained the same. All activities related to the cooperative in the partnership now run through Dedras and CSF. Woord & Daad has no local presence in Benin.

**Extent to which results have been realised** – Currently, the project is in the relaunch phase. In 2022, operational activities started, and 7 demonstration fields of one hectare each (larger than initially conceived) have been established. Water supplies and basins have been installed, the land has been tilled, and 70 to 80 farmers were trained to use the water pumps. Each field is divided into four sections, with a different application of technology for each section. However, the project budget is now an important issue for the next activities of the project. It turned out that the initial project budget was far from sufficient, hence the municipalities have to commit themselves to contribute financially to the project. As the municipalities are only willing to contribute to investments in their own community, and the costs for the demonstration fields are higher than expected, a total revision of the project plan took place.

Therefore, a funding target was set for each municipality in proportion to the number of participating farmers and size of fields within the municipalities. Dedras is currently preparing the revised investment budget per municipality according to the new vision. Thus, the PPP awaits the outcome of this new budgeting process and has to wait and see how the harvest and sales will turn out this year. If this works out positively, the project intends to connect about 160 hectares of land to the irrigation systems in 2023.

**Determinants of success and failure** – The table below shows determinants of success and failure in relation to “effectiveness”.

| Determinant        | Success   | Failure / Points for Improvement  |
|--------------------|---|---|
| Interventions      | <ul style="list-style-type: none"> <li>The PPP can use practical lessons learned from the Drops for Crops project in Burkina Faso</li> </ul>                                      | <ul style="list-style-type: none"> <li>ESOP has only just been established, thus has no experience, and limited staffing, logistics and financial resources yet</li> <li>The PPP should have started earlier with implementing the demonstration fields</li> <li>Benin is a new market for CSF</li> </ul> |
| PPP collaboration  | <ul style="list-style-type: none"> <li>The current project partners are all actively involved in the PPP</li> <li>Project partners are still committed after the delay</li> </ul> | <ul style="list-style-type: none"> <li>Changes in the partnership</li> <li>Project partners did not know each other well before the start of the project</li> </ul>   |
| Project management |   | <ul style="list-style-type: none"> <li>Initial local project leaders lacked capacity, so they are replaced</li> <li>Project budgeting was not accurate</li> </ul>   |
| Local involvement  | <ul style="list-style-type: none"> <li>Active practical involvement of the 5 municipalities</li> <li>Enthusiasm of the farmers</li> </ul>   | <ul style="list-style-type: none"> <li>Long inception phase made it difficult to keep the local project partners motivated</li> <li>Lack of financial commitment of the 5 municipalities</li> </ul>   |
| External factors   |   | <ul style="list-style-type: none"> <li>Security condition in Northern Benin deteriorates</li> </ul>   |

Table 34: Determinants of success and failure in Drops for Crops

## West Bank wastewater reuse, Palestine

**Approaches (intervention/PPP forms) applied** – The West Bank Wastewater Reuse Project focused on management of a water treatment plant including the installation of a tertiary sand filter. The treated waste water would be marketed for irrigation to small farmers in the region. Two strategic sectoral changes were aimed at with this: (i) multiplication of the Jenin business model for all wastewater treatment plants, and (ii) reduction of pollution of surface waters to decrease the number of environmental fines imposed by Israel. The project ended as one of the brilliant failures and below we evaluate the effectiveness of the project design and seek the determinants for its non-fulfilment.

**Extent to which results have been realised** – The project failed because of various reasons. First, the private co-financer cancelled its financial commitment because of the (largely political) risks of a long-term concession. Moreover, reusing wastewater is common in Israel, but not in the Palestinian territories where sewerage coverage is and people are not willing to pay for a sewage system. Another reason for the failure was the unexpected decision of the city councils to start a similar project with the USAID. Notwithstanding the brilliant failures there are lessons to learn on effectiveness from this project. The selection of Royal Haskoning as project leader was based on its operational contacts and network as well as the available expertise. Two private investors were interested to upscale the project findings and were willing to contribute financially, as co-sponsors to the project budget. Yet, it was also observed by the interviewees that mutual relationships between partners were not always good.

Summarized, factors that contributed to the failure are:

1. A municipality that is no longer on board and is going to work with USAID
2. Mutual relations were not always good
3. The West Bank is a conflict state. The political situation hampered the project in many ways.
4. The lost confidence of the investment party. Local co-financing concessions may have been too restrictive due to the inherent political risks of providing services in the West Bank. The local private parties were concerned that they would not be able to honour contractual agreements.
5. Change of personnel within the company of the investment party

**Determinants of success and failure** – The table below shows determinants of success and failure in relation to “effectiveness”.

| Determinant        | Success  | Failure  |
|--------------------|--|--|
| Municipality       | <ul style="list-style-type: none"> <li>• First part of the PPP</li> </ul>  | <ul style="list-style-type: none"> <li>• Siding with USAID to conduct a similar project</li> </ul>   |
| PPP                | <ul style="list-style-type: none"> <li>• Balanced composition</li> <li>• Experienced team leader</li> </ul>  | <ul style="list-style-type: none"> <li>• Tensions between partners over management and progress of project</li> <li>• Private investor withdrew</li> </ul> |
| Project management | <ul style="list-style-type: none"> <li>• Business plan had a sound financial basis</li> <li>• Farmers were willing to pay</li> <li>• Change of personnel within the company of the investment party</li> </ul> | <ul style="list-style-type: none"> <li>• Politically fragile situation impedes an efficient implementation pathway</li> </ul>                              |
| Social component   | <ul style="list-style-type: none"> <li>• ABCD training received with much enthusiasm</li> </ul>  | <ul style="list-style-type: none"> <li>• Too small budget and insufficient attention to social aspects</li> </ul>  |

Table 35: Determinants of success and failure in West Bank wastewater reuse

### Sustainable water Akagera Valley, Rwanda

**Approaches (intervention/PPP forms) applied** – The SWIAVI project was proposed by Kabuye Sugar Works (KSW), Rwanda Ministry of Agriculture, Royal Haskoning DHV and TechForce Innovations, all partners that had successfully collaborated on an earlier FDOV project ‘Sugar: Make It Work’ (IITI) between 2013-2018. The IITI project reclaimed land that had been submerged due to uncontrolled flooding of River Nyabarongo. The project constructed drainage canals, culvert bridges, outlets, non-return gates, and riverbank fortifications and developed value chain support for farmers. Similar approaches were proposed for the SWIAVI project in the Akagera Valley, including interventions that would benefit independent smallholders and KSW by reclaiming approximately 800 additional hectares of land for sugar cane cultivation. The socio-economic conditions of independent farmers would be improved by growing food crops as an intercrop to take advantage of the reclaimed land allocated mainly for sugar cane cultivation.

**Determinants in project cancellation** – The project was cancelled because of various reasons. Below we summarise the perspectives of project stakeholders on these reasons.

- **Unexpected heavy rainfall leading to high reclamation costs** – above-normal rainfall in 2018, 2019 and 2020 played a major role in the cancellation of the SWIAVI project. The heavy rainfall in 2018 caused significant damage to some of drainage structures built in another area under the previous IITI project, making the restoration of drainage works in that area a top priority and halting the launch of the newly awarded SWIAVI project. Subsequently, with more heavy rains and flooding in 2019 and 2020, the SWIAVI proposal had to be redefined and proposed interventions adjusted. However, before implementation could begin, it was realized that the area originally earmarked for the project was no longer suitable for sugarcane cultivation (the cost of water management solutions became unrealistically high) and that a more viable option was to move the project to another area where sugarcane could be grown. A **high-level risk analysis was performed** through a pre-feasibility study based on historical weather data showing no signs of climate change continuing at such a rapid pace (i.e., leading in the short term to consecutive years of above normal rainfall). The assumptions made in that analysis (for example that there will not be as much (or more) rainfall in the short term as in 2018) would be tested by an in-depth risk analysis as part of a feasibility study based on the actual implementation. However, it never came to an in-depth analysis, because the assumptions turned out to be incorrect and the conditions were no longer suitable for sugar cane cultivation.
- **Need for reallocation of project and the role of government entities** – The Ministry of Agriculture (Government Apex agency, Rwanda) was responsible for sharing relevant data for design development of water management infrastructures, allocation of land to the smallholder farmers and good governance in land allocation process, land use and property rights. They were involved in the IITI project and were important in the development of the SWIAVI project proposal and in the engagement with RVO. They have not been involved in the implementation of the SWIAVI project, as their contribution was scheduled later, in a phase that was not reached by the project. The Ministry of Agriculture was optimistic about the possibilities for this project and welcomed the opportunity to develop the sugar industry and reclaim land close to the existing factory. After the heavy rainfall of 2018, 2019 and 2020, it was proposed to move the factory to another location with less risk of flooding. However, the interaction with the Rwanda Development Board - to find a new location for sugar cane cultivation - turned out to be a complex and lengthy process. Whereas the Ministry of Agriculture supported the project and was willing to make other land available, other government entities with different priorities were involved in the land re-allocation process, and the discussion on the relocation never led to an agreement. Moreover, during Covid, attention for the project shifted.
- **Role of RVO and Royal Netherlands Embassy in Kigali** – RVO and the Royal Netherlands Embassy could have had more interaction with the government of Rwanda to make the impact of the project clear. They are doing it now, but it would be good if they had done this earlier. Whereas RVO has been supportive and understanding, it is not good to say “no” too soon if a project is not going well and keep the conversation going. On the side of the embassy, more interaction could have been possible; at present it is not clear why the embassy did not do more to get the government of Rwanda on board.

## Beneficiary perspective

The beneficiary perspective outlines the findings of beneficiaries for each case study.

### AQUACRUZ, Bolivia

A household survey was conducted from 25-29 January, 2023, in Santa Cruz, Bolivia, among 201 households stratified over the service area of four water units (EPSAs). The objective of the survey was to evaluate the effectiveness and impact of the AQUACRUZ project from the perspective of the end-users of the water system. The results deliver means of verification and sources for triangulation exercise, a core element of the attribution of determinants for the success or failure of the project. Moreover, the household survey ensures a contextual understanding of project activities within the political, socio-economic environment and cultural environment. Our local experts were given a strong role and responsibility in the substantive aspects of the end-user surveys including the design, testing, conducting the interviews and preparation of results in interpretable synoptic tables and figures. Occasionally we will refer to a baseline study among the water users of the EPSAs in 2019 (Focaliza, 2019. Satisfacción usuarios EPSa Santa Cruz).



**Profile** – The majority of the households (60%) has 4-6 members, 19% 1 to 3 members and 22%, 7 or more. This member of household distribution is more or less the same over the four EPSAs. Concerning the sex distribution, 70% of the respondents were female, 30% male. Distribution of sexes over the EPSAs was about 64% female, except for COSMOL where 84% of the respondents was female. The distribution of age groups follows an expected pattern (Figure 18). A vast majority (75%) of the respondents lived in residences of an average (normal) size. The other housing facilities (rooms, emergency houses and small houses) indicate a lower income status.

There is a high satisfaction rate (74%) for the functioning of the water system an increase compared to the baseline study in 2019 (54%). Explicitly not satisfied were 14% of our respondents. Water users of COSMOL (23%) and COSPAIL (20%) had a somewhat lower satisfaction rate as compared to COOPAGUAS (10%) and COSEPW (4%). The overall satisfaction rates for the functioning of the drinking water (64% satisfied and 6% very satisfied) was higher as compared to the baseline study (57% good). The sewer system (79% satisfied and 5% very satisfied) and water for personal hygiene (80% satisfied and 7% very satisfied) were also high. No large deviations of these data distributions were found when the results were calculated for individual EPSAs.

There is a remarkable high participation (48%) of the respondents in the maintenance of the water system. About 46% of the participating respondents was involved in changing of tubes and 7% in rinsing of the tubes. Other participants indicated a large range of maintenance activities. Interviewees indicated that they were willing to invest in a new and improved water system (49%). Yet, Bolivia has a long history of water borne diseases and still 68% of the respondents bought its drinking water from a private service.

Few (4%) knew about a capacity building program (AQUACRUZ) nor was the name PERIAGUA known. Therefore, it was decided not to mention the project name but to refer in the introduction explicitly to changes that occurred after the project period (2016-2020).

**Effectiveness** – Concerning effectiveness, we conclude that water use customs did not change, the use of modern media for communication increased significantly, occurrence of water supply interruptions improved somewhat for water pressure, water quality and sanitary facilities. Improving the billing cycle and the earlier payments were somewhat less popular with invoiced clients. We conclude that it is not easy to directly relate the effectiveness of the AQUACRUZ project to the end beneficiaries, yet, trends of changes are in general positive and the project complied with all its working activities.

The AQUACRUZ project targeted primarily an improvement of the services of the EPSAs through capacity building of the staff. This makes it difficult to measure the effectiveness of the project on end beneficiaries. After all effectiveness measures the extent to which the intervention is achieved, or is expected to achieve, its objectives, and results. The claim that the number of people with access to improved safe drinking water sources equates the resident population in the service area of the 21 EPSAs (a total of 81,662 persons) remains largely a desired but untested objective. Hence, to facilitate evaluation of effectiveness at household level, we asked questions on functioning of the water system before and after the AQUACRUZ project. The results are used to analyse whether marked changes can be attributed to the AQUACRUZ interventions or not.

**Interventions** – According to 9% of the respondents there was an intervention in their water system during the project period. The interventions mainly concerned technical and logistical improvements to the water network.

**Results** – A vast majority of respondents did not change its customs on water use after the AQUACRUZ project was finished. More than 90% of the respondents retained its habits concerning drinking water, sanitation, laundry, showering and garden use, water savings and personal hygiene.

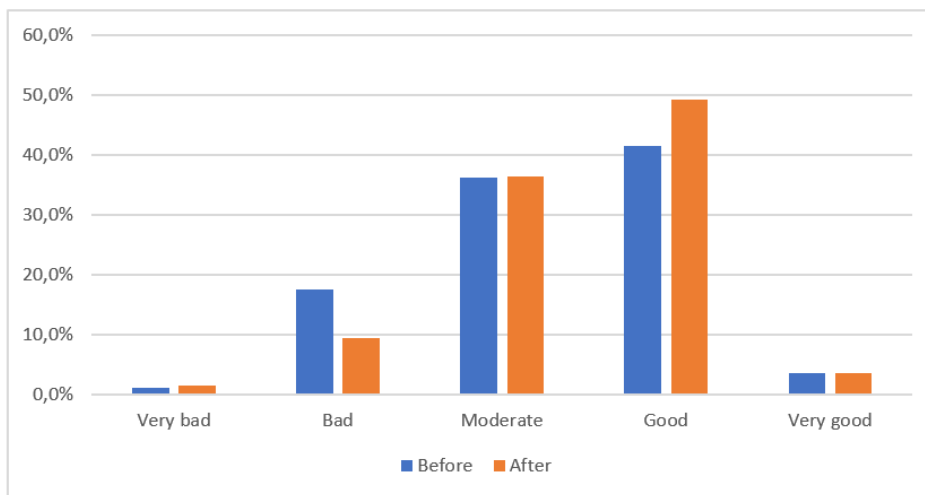


Figure 18: Water quality appraisal before and after the AQUACRUZ project

About the means of communication, we observe substantial changes after the AQUACRUZ project stopped its activities. Improvement of communication was one of the main project targets. Use of project-related web pages and WhatsApp groups increased by 38% and 21%, respectively; increase in participation of workshops was remarkable (33%). Concerning water quality, we observe a shift from 18% to 10% for ‘bad’ water before and a higher share of good water, moving from 42-49%, after the AQUACRUZ project (Figure 18). According to respondents, 99% had a good connection to the water network which was an important improvement to the 95% before the project. A remarkable<sup>46</sup> high percentage (87%) reported that they had a ‘good’ connection to the public sewer system which was a small improvement compared to the 81% before the project. Possibly the high percentage could be explained by people that are connected to septic tanks or other water collection methods. Concerning delivered services, in 26% of the cases EPSA staff solves technical problems of the water system in the households while own orchestrated interventions (33%) or private plumbers (37%) are asked otherwise. A majority of the respondents is satisfied (50%) or very satisfied (4%) with the communication of the EPSA which is higher than the baseline study in 2019 (41%).

### Safe Drinking Water for Ethiopia, Ethiopia

We can conclude that the Safe Drinking Water For Ethiopia project from a beneficiary perspective was effective at the output and outcome level in implementing its strategy.

Below we report on the beneficiary perspective on the effectiveness of the Safe Drinking Water Project in Ethiopia, based on a household survey among 387 households conducted in rural (Baso Liben, Yilmana Densa, Machakel) and urban (Debre Markos City and Bahir Dar City) Woreda's .

Nazava Trading PLC has been engaged in the promotion and training of Health Extension Workers (HEW), members of the Women Development Army (WDA), agents and communities on water safety and water borne diseases. In addition, Nazava Trading PLC has been demonstrating and distributing Nazava water filters to the community. These activities deepen the understanding that unsafe water should be treated even when it is water delivered through a piped system. The effectiveness of these interventions became clear from the results of the survey. The percentage of households that treat water is currently 50% which is an increase of 10% in the last five years. The share of people that practiced water storage also improved over time. Five years ago only 7% of the households stored water on (safe) constricted neck containers, after the awareness initiatives, this percentage increased to 67%. The clear need for safe water comes from 15% of the households that experienced water-borne diseases. The effect of the awareness campaign also came to the fore when households were asked why they purchased water filters. The main reasons were unsafe drinking water (91%) and increased incidence of water-borne diseases (Figure 19).

<sup>46</sup> The World Bank assessed the sewage coverage at 49% ([available here](#))

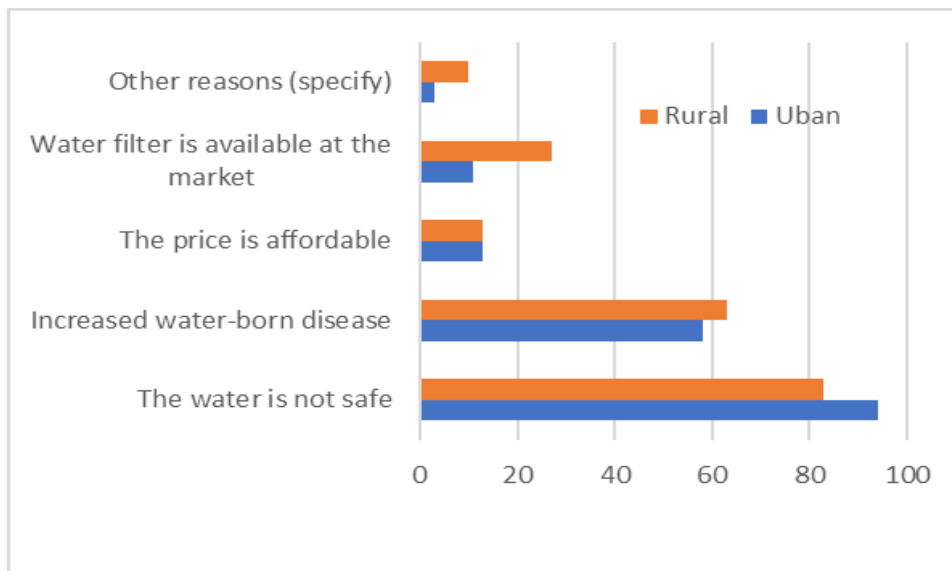


Figure 19: Reasons why households purchased and used water filters

The mechanisms which households adopted to minimize water borne diseases are: Avoiding consumption of uncontaminated food (90%) and drinking water (86%), chlorination (77%), washing hands (70%) and use of filters (36%). Of the households that used filters 89% found it very useful for drinking safe water and witnessed a decline of occurrence of water-borne diseases in the family. The filters also had a clear economic advantage over boiling of water (7%) where people had to spend 121 Birr per week for fuel.

The highest proportion of households who bought water filters came from urban areas (74%) and only 12% was sold in rural sites. Households purchased different types of water filters, the common ones being Nazava, Tulip, Korea King and Sawyer. Of the households who bought a water filter, 93% purchased these in the last four years. This is associated with Nazava Trading PLC awareness activities which started its operations in 2018. There was no water filter introduced to rural areas prior to the project.

Nazava Trading PLC developed a strategy for accessing finance for households who cannot afford to purchase in cash. One of the financial sources are the saving and credit associations established within a community. According to the survey findings, 37% of the households were members of saving and credit associations. Respondents indicated that 67% of the households had experience of taking credit from financial sources. Hence, Nazava Trading PLC can encourage households to purchase Nazava water filters through credit services. Saving and credit groups were important sources of credit for urban households (64%) while MFIs were important sources for rural households (67%).

Households made suggestions to make water filters more convenient for use; 54% suggested the size of water filters to be increased to filter an adequate quantity of the water a 49% found the existing model with a wide shaped top and narrow bottom not stable.

### Water efficiency in sustainable cotton production, India

Focus-group discussions and farmer interactions with approximately 200 project beneficiaries indicate that this project is quite effective at the output level, training farmers on organic cotton farming and general good agricultural practices, and establishing and rehabilitating water structures. However, at output level the project is less effective in organizing and positioning water user groups, and the water structures only improve the water situation for part of the year. Consequently, at outcome level the project is less effective, with maintenance of the water structures remaining and certification of organic cotton farming key challenges towards sustainability of project benefits.

The farmers are generally satisfied with the way the community has been involved by project partners (Welspun and Solidaridad). Both Welspun and Solidaridad seem to have a long track-record in community involvement and have a substantial number of field officers dedicated to building a trusted relationship in the village. While the project is making great efforts to address issues to farmers, some important challenges

remain. Most farmers indicate they are “somewhat satisfied” with the project results overall. Key challenges that limit the effectiveness and impact of the project are: Water scarcity; marketing and market linkages; fluctuating market prices; limited availability of high-quality organic seeds; and labour issues / shortage.

Most recommendations from the farmers focused on providing more technological support, such as constructing more water structures (and deepening existing wells), supporting the maintenance of the individual farm ponds (not part of the project yet), sharing tools with more beneficiaries or create a tool bank for basic machineries (such as drip irrigation systems, solar pumps, cotton processing machines, biogas units etc.), providing more organic seeds, and building a fence to protect the land from crop raiding. The farmers also asked for more training on marketing and non-agricultural topics, as well as helping them establish more market linkages. A couple of them asked for a better arrangement with Welspun, a fixed base price and preferably also sell other organic crops to Welspun.

**Training** – In general, the project is effective in training farmers on Good Agricultural Practices (GAP) and constructing and rehabilitating (community or individual) farm ponds. Beneficiaries typically have attended at least one GAP session. Farmers seem to (partly) adopt organic practices on their farm, such as producing and using organic inputs, intercropping and cultivating mushrooms. While most of the cotton farmers have converted from inorganic to organic cotton cultivation, only half of them are aware of the organic certification process. The level of awareness seems to depend on the level of involvement of Welspun. When farmers are not part of the Welspun arrangement for the procurement of organic cotton, they are usually not aware of the certification process. Based on the discussions with about 125 beneficiaries, training on water management is not very effective to date. Whereas farmers mentioned they learned about micro-irrigation and water conservation, beneficiaries do not conduct water budgeting and their responses indicated little knowledge on sustainable water practices.

**Water structures** – The water structures supported by the project are partly effective. Unfortunately, much more support in terms of water structures and irrigation systems is needed to address the scope of the problem in this region. From the end of February until June, the ponds are dry, and farmers do not have access to water. Furthermore, the established water user groups lack structure and organisation. Water group members explain that there is little structure to their group activities, except for intentions to meet occasionally. To date, beneficiaries are also not trained on the maintenance of the water structures or appear to understand the coordination and (financial) management involved. Consequently, the water user groups do not seem to have the capability of effectively addressing water management issues.

### **Building with Nature, Indonesia**

Focus-group discussions (FGDs) with members of coastal communities in Demak indicate that this project is effective at the output level, as the permeable structures have been put in place and community members have been trained to maintain them. Also, fishing ponds have been implemented behind the line of mangrove forest, and community members have been trained in conducting aquaculture and maintaining the ponds.

FGDs also make clear that community members do not feel safer compared to years ago, and that they think the risk of flooding has increased. Even though the mangrove forests are supposed to mitigate flooding risk, rapid, large-scale land subsidence increases the propensity of the region to flood.

**Training** – All participants in the FGDs joined the Coastal Field School and received training on sustainable aquaculture and mangrove rehabilitation (referred to as RA/LEISA<sup>47</sup> and AMA<sup>48</sup> practices). The participants are satisfied with the training and apply most of the obtained knowledge in practice. They mentioned several examples of what they learned: How to make compost, how to create microorganisms, how to cultivate shrimp and milkfish in a sustainable way, how to measure the pH and salinity of the water, how to spot fish, how to manage waste, and more. The women mostly mentioned specific examples of RA/LEISA practices, the men also mentioned they learned how to make a green belt and what the benefits are (also referred to as AMA). The knowledge is applied in practice and especially the microorganism leads to great benefits in terms of increased yield and income. Yet, one respondent mentioned the market for compost is not considered good, so he stopped making the compost.

Before this project, women were usually not involved in water management or able to receive training. They would usually take care of the household and family, while the men are involved with farming and fishing. The

<sup>47</sup> RA = revitalization aquaculture by implementing environmentally friendly cultivation techniques (LEISA-Low External Input Sustainable Aquaculture)

<sup>48</sup> AMA = rehabilitation of mangroves on the riverbanks using the Associated Mangrove Aquaculture (AMA) approach

women in the FGD expressed their gratitude towards participating in the women's training groups and thereby being able to increase their knowledge. Other positive effects from the project trainings mentioned are: An increased bargaining position between husband and wife, increased confidence in general and increased confidence to speak in public.

**Permeable structures** – The permeable structures (and green belt) are intended to protect the community against flooding. Some of the men were also involved in building and maintaining the permeable structures, the women were not involved in this part of the project. The structure was considered 'good, but it is not functioning well' according to various men and women (mentioned by 5 participants). The structure does not always protect them sufficiently and the abrasion is still severe (see also paragraph 'Impact – End beneficiaries'). This is because of because of large-scale land subsidence, and because of the indirect impact of the construction of a toll road that crosses Demak.

### **Water quality management in the Brantas River, Indonesia**

Focus-group discussions with members of communities along the Brantas River point to some effectiveness of the project at output level. The communities that have been engaged by the NGO ECOTON report on more awareness of river pollution, water quality and ways through which their community can improve on the health of the river. However, effectiveness at outcome level remains contingent on other project outputs being effectively realized, to which key challenges currently remain.

In general, the beneficiaries that have joined the focus group discussions are satisfied with the project in terms of their cooperation with ECOTON. The project is effective in training people how to reduce plastic waste, how to conduct water quality testing and teaching people the importance of forest conservation. All FGD participants mentioned they had gained knowledge on one or more of these topics and use this knowledge in practice. Their mindset has changed, and they are more aware of their actions and the impact on their environment.

For instance, community members explain that they do not buy snacks in plastic anymore, preferring to bring food from home in reusable containers and refillable water bottles. Most participants were engaging in water quality testing to monitor the condition of the Brantas River, and several participants contributed to waste management and river clean ups/ waste audits, while other participants were protecting the riverbanks by reporting illegal building to village government and making gardens. Two participants were involved in forest conservation activities in the upstream area of the Brantas river.

### **Sustainable Water Services Beira, Mozambique**

This project has been effective in raising household-level awareness on WASH practices, and in increasing the access to water as well as the quality, yet has been less successful in dealing with the challenges of the poorest consumers, who face substantial challenges in paying for the water.

To assess the effectiveness of the interventions done in Beira, a survey has been conducted among 356 families from 6 settlements in Beira, a sample representing about 1% of the beneficiary population. The survey was supervised by Emilio Magaia from the Universidad Eduardo Mondlane, Maputo. The settlements are located along different sites within the scope of the project, namely, Chingussura, Chipangara, Macurrungo, Mananga, Matadouro and Vila Massane. A semi-structured survey was carried out in these suburbs which benefited from the FIPAG/WSUP project between 2019 and 2021. In each of the suburbs about 60 families were selected for the inquiry about in house connection, public tap users and the public tap managers; all of this process was complemented by recording of pictures of the water system infrastructure status. Among these respondents, only a small percentage (10%) had been directly reached by project interventions. Within that 10%, 89% had been given a home connection. Almost 44% of the respondents had taken part in trainings offered by the project.

With respect to the specific fields of intervention, four fields of effectiveness were probed in the survey: knowledge, improvement in water supply, quality of drinking water facilities and payment.

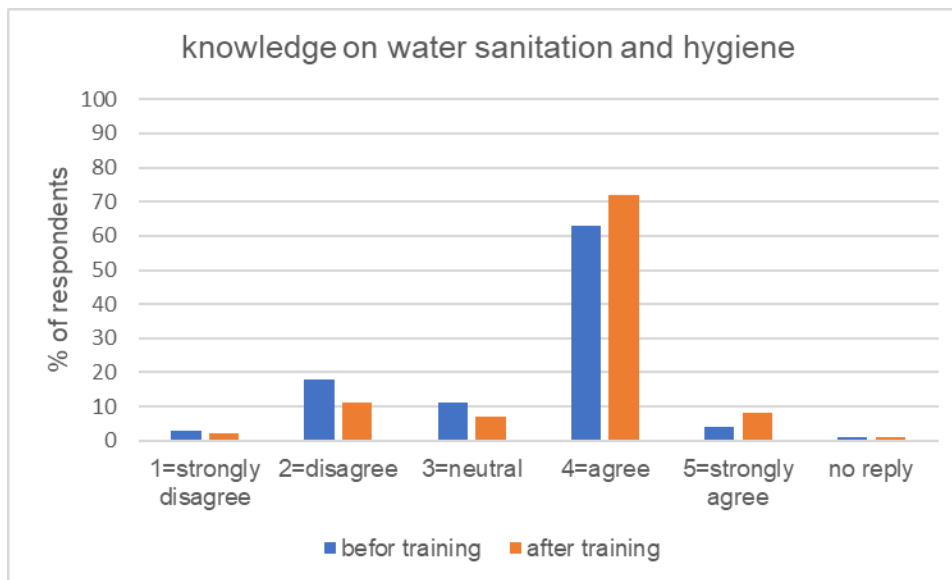


Figure 20: "I have good knowledge on water and sanitation", % of responses before and after training

72% of the respondents agreed that they increased the knowledge on water and sanitation by 9% due to project intervention. Water supply increased from an average of 7 hours per day to 11 hours per day. The water quality has improved: 7% of households qualified the water quality as "good" before the intervention and 34% did this after the intervention (see figure 20). In addition, the quality of drinking water facilities significantly improved as well.

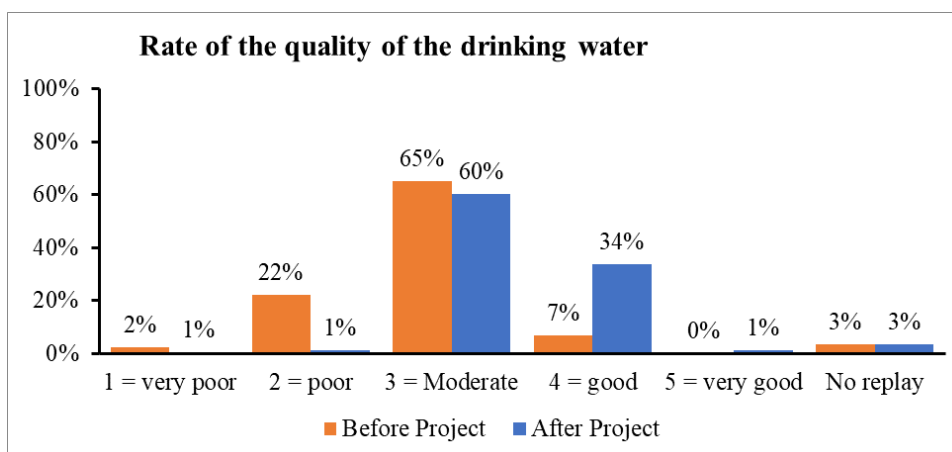


Figure 21: Household rating of water quality before and after the project

Finally, the percentage of people paying for water has increased from 72 to 86%, with 91% of the respondents paying the low "social tariff". Despite this, still many households experience payments problems, where it is worrying that the percentage of households experiencing *many* payment issues has remained unchanged (15%), while the percentage of households having some issues has been reduced from 61% to 54%, still an alarming high figure.

## A Green Sustainable and Safe Water Source, South Africa

This project has been effective in raising household-level awareness on WASH, while improving the access to clean water.

A survey was carried out among beneficiaries of the two projects visited. In total, 160 beneficiaries were selected and interviewed by a team led by Emmanuel Ojo of the University of Witwatersrand. In general, there was a high familiarity with the project. With respect to the specific fields of intervention, three fields of effectiveness were probed in the survey: knowledge, improvement in water supply, and payment.

The projects have been effective in increasing knowledge on WASH: households indicate a significant increase in knowledge.

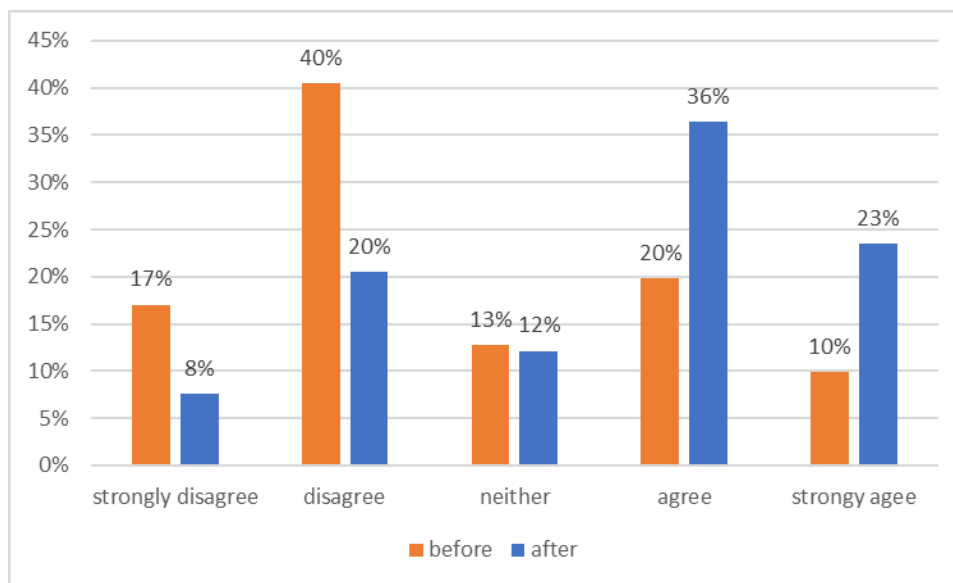


Figure 22: “I have good knowledge on water and sanitation”, % of responses before and after training

The water supply has increased, from 9.6 hours per day to 12.4 hours per day, while also the quality of the water increased substantially. When asked to label the water quality, 16% labelled the water to be “good” or “very good” before the intervention, while after, this increased to 50% of respondents. With respect to water payments, the percentage of households paying for water decreased, from 81% to 62%, maybe because the children now bring home the water from their schools, which is provided for free, and households no longer have to buy bottled water. The percentage of households reporting payment problems remained roughly unchanged; about 25% of households have some or many issues.

## I. Impact – detailed findings

This chapter describes the detailed findings for the evaluation criteria impact. These findings are categorized into the reporting perspective, the stakeholder perspective and the beneficiary perspective.

### Reporting perspective

The reporting perspective can be further divided into a portfolio-level reporting perspective and a project-level reporting perspective.

#### Portfolio-level reporting perspective

##### Analysis of portfolio-level data

For the portfolio analysis, it is difficult to find direct indicators for impact, as it is hard to capture in M&E indicators, and estimates on the number of beneficiaries may vary widely depending on the definition used. Since for WEA and IWRM projects, it is even more difficult to define the number of beneficiaries, the portfolio analysis presented below will only cover WASH projects. Figures 23 to 25 summarize the average number of facilities established, the average number of beneficiaries reached and the share of specific target groups in the total number of beneficiaries reached, specified by round of the call, region, PPP size and type. The three indicators give a different picture with respect to the impact of the projects. Whereas the number of facilities is highest in call II (around 10 thousand facilities improved against 6 thousand in call I and 3 thousand in III, with an average of around 6400), the highest number of people are reached in call I (120 thousand, against 85 thousand in call II and 89 thousand in call III, and an average of around 100 thousand). Of course, projects in call I would be expected to have the largest impact, given the fact that they have been completed for longer periods of time. Asia performs better than Africa on number of facilities, but less on access, specifically when it comes to the inclusion of women (19% against 49% in Africa) and rural populations (2 against 63%). The performance of differently sized PPPs is very differentiated, while private PPPs specifically outperform mixed ones in reaching the target population.

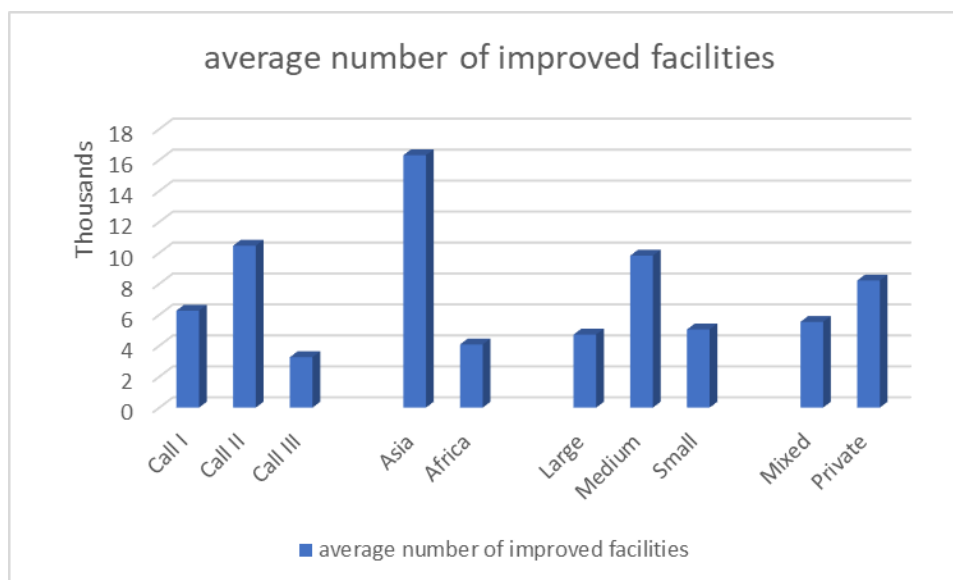


Figure 23: Average number of improved facilities realized



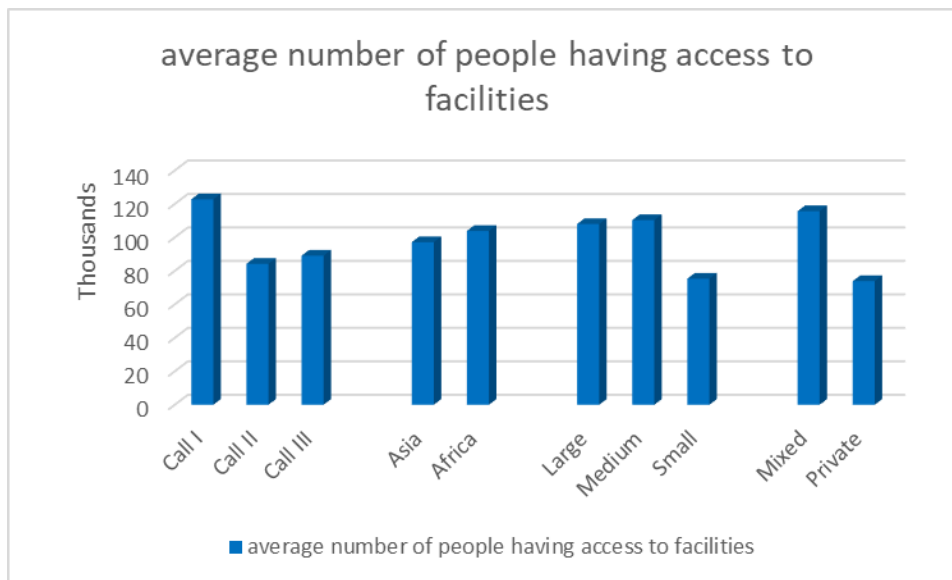


Figure 24: Average number of people having access realized

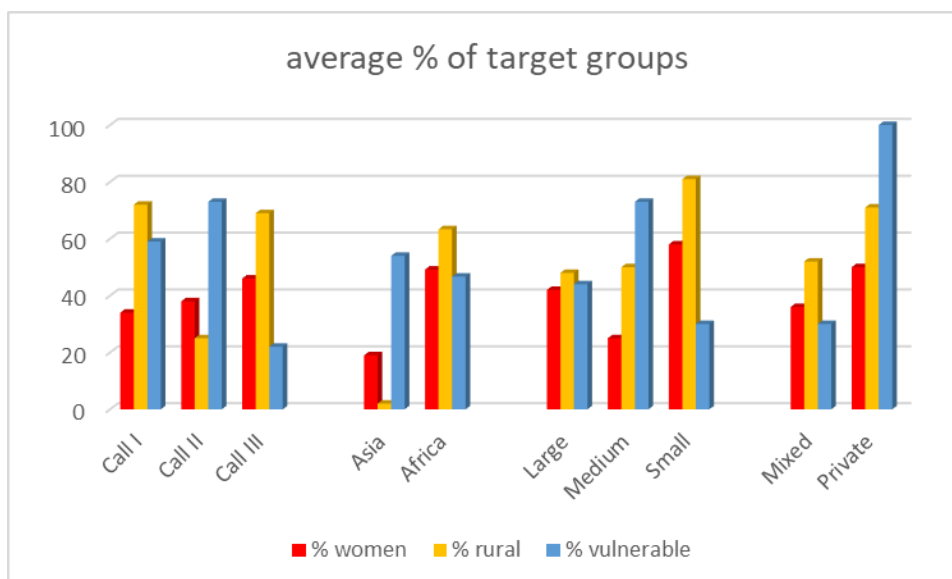


Figure 25: Average share of target groups in total population reached

### Analysis of programme level documentation

**Development impact** – FDW aims to generate local impact in various ways, yet all projects should contribute to improving the living conditions of vulnerable groups. RVO assesses FDW projects ex-ante on a focus on contributing to improved living conditions for vulnerable groups. Vulnerable groups are defined as: the poor, children, women and girls, ethnic marginalised groups, disabled people and other socially or economically marginalised groups.<sup>49</sup> Projects can target households, small scale farmers and fishermen, local SMEs, entrepreneurs, and local government.

**The link between FDW projects and development impact to local communities is most evident in WASH projects.** The previous MTR (2016) made a preliminary and indicative assessment of the result chains to understand the potential FDW contributions to DGIS outcomes. Outcomes in the drinking water and sanitation sub-sector are mainly expected to be achieved in the field of capacity development and infrastructure

<sup>49</sup> RVO. (2017). Assessment framework 2017.

development.<sup>50</sup> Up to 2016 (and to a great extent still in 2021), sanitation, wastewater treatment and solid waste management projects were significantly underrepresented in number and consequently on the expected outcome level. Outcomes in the agricultural sub-sector were expected to be achieved in all three dimensions (institutional structure, capacity development and infrastructure). IWRM projects usually impact the livelihoods of the local community more indirectly as there is a larger focus on the strengthening of local institutions. In 2016, the portfolio scored well with respect to institutional structure and infrastructure but rather low on capacity building indicators (such as ‘timely warning of the population in case of water related emergencies’).

**FDW aims for a sustainable ‘business case’ but also accepts socio-economic business cases.** I.e. benefits are improved livelihoods, income and regional development, but not necessarily leading to direct return on investments.<sup>51</sup> Overall, the Return on Investments<sup>52</sup> confirm that low-cost strategies do have high impact on the reduction of Non-Revenue Water (NRW). Pay-back periods of less than 10 years in the public water sector are still considered favourable. Improved financial returns enable these water utilities to improve their service delivery standards for existing and new consumers, including the urban poor.<sup>53</sup>

**Projects could pay more attention to a clear identification of ultimate beneficiaries and their specific needs and demands.** The aim of the FDW is to contribute to improving the standard of living, especially for vulnerable groups and with attention to gender inclusion. Previous evaluations indicated that the pro-poor focus of PPPs has, on average, not been detailed very strongly.<sup>54</sup> According to the previous MTR (2016), most projects demonstrate adequate knowledge of the local context. As one of the threshold criteria, the project should also be demand driven, complementary with local policies and aim at improving the living condition of vulnerable groups.<sup>55</sup> Yet, projects seem primarily focused on the business aspects with only an indirect link to vulnerable and marginalized groups. *“The majority of projects have no direct link to or primary and significant emphasis on vulnerable and/or marginalized groups as target group. Whilst most projects, particularly in agriculture, will provide opportunities for poor households, few are actively working towards a clear pro-poor overarching objective”* (MTR, 2016: 49). Projects could pay more attention to a clear identification of ultimate beneficiaries and their specific needs and demands.<sup>56</sup>

This is mostly relevant and recommended for WASH projects. For these projects, the differentiation between urban and rural beneficiaries could also gain more attention.<sup>57</sup> RVO indicated that a rural /urban separation in the WASH portfolio will be incorporated in further monitoring/evaluation and knowledge agenda activities. The 2022 evaluation from the Netherlands Enterprise Agency especially recommended to take into account that inclusive design and in-depth understanding of social, economic and cultural contexts is a prerequisite to healthy business cases, as it was observed that overly tech-driven FDW innovations that do not explicitly relate to (local) user/client needs struggle to realise uptake of services.<sup>58</sup> A needs assessment before the start of the project is essential to gather these insights, including an analysis of customer payment needs (also including the ability and willingness to pay).<sup>59</sup> This can help in improving the affordability and consequently impact of the business model. For instance, the available sanitation options are too expensive for the poorest.<sup>60</sup> Sanitation loan packages for vulnerable groups in society could be combined with the FDW interventions.

**The MTR 2016 showed a mixed picture of the impact on gender inclusion.** First, the MTR noted that the RVO framework does not clearly indicate the need for a poverty analysis and gender differentiation in the problem analysis. The project *preferably* has a positive impact on women and may not lead to a deterioration. *“On the one hand, attention for gender in the assessment framework and proposals seems to be limited, while on the other hand specific attention for women’s access to land and credit is substantial in a handful of visited projects.”* Gender equality issues were addressed in a fairly ad-hoc manner.

**Systemic change – So far, previous evaluations of FDW have not discussed the topic of systemic change.** In general, FDW intends to induce systemic change although it is not a clearly defined and independently monitored objective. Systemic change was not mentioned in the 2014 assessment framework. In 2017, the

<sup>50</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report, p. 40

<sup>51</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>52</sup> Benefits a private investor will receive in relation to their investment costs

<sup>53</sup> Doppenberg, A. & de Blois, R. (2021). Lessons learned in NRW-reduction from 8 RVO-Sustainable Water Fund co-financed interventions with 19 water operators

<sup>54</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>55</sup> RVO. (2017). FDW assessment framework 2017.

<sup>56</sup> Hafkenscheid, R. (2021). Evaluation of five projects co-financed by the Sustainable Water Fund (FDW), Secondary Conclusions

<sup>57</sup> Zwieters, M. (2020). Strengths, Challenges and Lessons Learnt FDW

<sup>58</sup> RVO. (2022). A decade of RVO management - The Sustainable Water Fund (FDW)

<sup>59</sup> Zwieters, M. (2020). Strengths, Challenges and Lessons Learnt FDW

<sup>60</sup> Zwieters, M. (2020). Strengths, Challenges and Lessons Learnt FDW

framework included a ‘potential to induce systemic change’ as one of the ranking criteria for an assessment of the expected policy contribution.<sup>61</sup> System change is characterised as: ‘*The project and PPP catalyse sustainable change at impact level, for instance by fuelling water sector changes or water sector approaches; Scaling of the intervention, by replication of the intervention or spin-off (independent of donor money) for the good of the FDW policy objectives; and Potential to attract new stakeholders/partners in project, in the sector or theme, new cooperation networks.*’ This definition shows that system change is closely related to ‘scaling’ and ‘sustainability’. The latter being specifically monitored in annual progress reports, while system change is not yet quantified and monitored. FDW’s annual report 2021 also mentioned a lesson learned to “*include system level contributions (i.e. sanitation market established) in policy monitoring frameworks, in addition to quantitative contributes (i.e. number of people reached), to demonstrate a programmes contribution to sustainability*”.<sup>62</sup>

In a 2021 discussion paper, RVO recognized that projects aimed at system change are often iterative and non-linear. This takes time. RVO describes that in practice, it is challenging to have projects focus on the enabling environment and to quantify (and monitor) systemic change. For RVO it is too early to tell whether projects are really inducing systemic change as it also depends on public sector commitment. RVO considers engagement of (semi-)public actors to be necessary as public authorities can play an important facilitating role and are often in the position to stimulate wider (system) change.<sup>63</sup> Yet, RVO acknowledges that engaging the public sector is challenging, thereby constraining systemic change and scaling potential. Public partners often have limited capacity, are bureaucratic and it is difficult to change the mindsets (also when no financial incentive is provided).<sup>64</sup> Furthermore, ICRA (2023) shows that PPP projects implemented by RVO often lack capacity development elements at organisational and institutional level, thus could be improved by a more systematic and balanced analysis of the integrated capacity development needs.<sup>65</sup> This will enhance the potential for systemic changes as well.

**Unintended effects – The focus on a business model financed by FDW is sometimes challenging as it may involve the risk of market distortion.** Therefore, each proposal for FDW projects must provide a risk and mitigating analysis and make clear that the project will not lead to market distortions in the partner country or in Europe.<sup>66</sup> According to RVO, there are limited revenue models for sanitation because of market distortion and heavy regulation in other countries due to over subsidy.<sup>67</sup> Similarly, market distortion is a potential challenge for water efficiency projects because of the high requirement on investments in hardware. The challenge of market distortion is less apparent for IWRM projects. The business case remains limited or even not applicable because of the focus on public dialogue and policy improvements. However, because of this public focus, there is a noticeable bias in partnerships with public and knowledge institutes, consultancy firms and NGOs.

## Project-level reporting perspective

In this section, we provide information and insights of project impact derived from project-level reporting for the selected case studies.

### AQUACRUZ, Bolivia

The FDW project AQUACRUZ contributes to a more sustainable water and wastewater sector in Bolivia through partnerships with 21 water utilities local and national institutions. Concerning the project impact, the project planned consolidation activities to level the impact of the project. One activity that should assure the impact is to implement mitigation measures to answer the ICSR (international corporate social responsibility) risk analysis.

The explicit impacts of the AQUACRUZ project were defined as:

1. Stable water deliveries (quality and volume) improves economic activities and increases participation of women in the community. Increased self-reliance of water suppliers,
2. Increased number of people with access to drinking water,

<sup>61</sup> RVO. (2017). Assessment framework 2017

<sup>62</sup> RVO. (2021). FDW Jaarrapportage 2021.

<sup>63</sup> PPP Lab Food & Water (2016). A portfolio scan of the Sustainable Water Fund (FDW)

<sup>64</sup> RVO. (2021). Discussion paper FDW Program - Strengths, Challenges, Opportunities & Vision

<sup>65</sup> ICRA. (2023). Capacity Development in Public-Private Partnerships – Lessons Learnt from NL Funded Projects

<sup>66</sup> RVO. (2017). FDW assessment framework 2017.

<sup>67</sup> RVO. (2021). Discussion paper FDW Program - Strengths, Challenges, Opportunities & Vision

3. Reduction of water-borne diseases,
4. Poverty alleviation and improved quality of life and
5. Improved potable water services and management will have a positive effect on other sanitation services (less pollution of water resources and environment). Better management will attract investors, funding.

The project impacts are considered as achievements that are obtained through the project activities on the long run. All activities by the AQUACRUZ project were aligned to the five defined project impacts. Stable water deliveries were reported in the household survey that was conducted four years after the project closed. According to respondents, 99 % had a good connection to the water network which was an important improvement to the 95% before the project. No research has been reported as to if this also would lead to improved economic activities and increased self-reliance of water suppliers. Increased participation of women could result from the training of 57 women out of 282 EPSA workers who were capacitated in topics like potable water and sanitation.

Impact 2 is closely related to the observed impact 1 on improved water deliveries. Impact 3 most likely is not realized as Bolivia has a long history of water-borne diseases and still 68% of the respondents bought its drinking water from a private service. Impact 4 was not measured. Because of the many confounding factors it is also difficult attribute 'poverty alleviation' and 'quality of life effect' to the AQUACRUZ project. Impact five 'Improved potable water services and management and the related positive effect on sanitation' was confirmed by our household survey. Positive effect on investors is not likely to occur when the tariff structure remains unchanged.

### **Safe Drinking Water for Ethiopia, Ethiopia**

Project-level documentation indicates that the 'Safe Drinking Water for Ethiopia Project' has a large impact on the communities in the Amhara Region in Ethiopia.

The project expressed its commitment to address water-borne diseases through introducing water filters that provide technically simple and financially affordable water purification solutions. The project believes that market-driven technologies empower households to purify water at the point of use and are most effective sustainable solution for providing safe drinking water. The project, jointly with partners, such as Bureau of Health, several NGOs have been making efforts to sensitize the community to prevent water-borne and hygiene and sanitation related diseases. Nazava PLC in collaboration with its partners has made its contribution for this impact in creating awareness and by promoting the benefits of using filters for safe drinking water. Indeed, the progress made in the last five years has a huge impact on the community. Bureau of Water and some NGOs have also been supporting the community in constructing private and public tap water facilities.

Project reporting indicates that, since starting the use of Nazava water filters, the community has witnessed decline of water-borne diseases among family members. In line with this, medical costs of the family decreased. This was one of the goals of the project and it has been achieved,

Addressing safe drinking water is one of the priority problems of the region and contributing to achievement of one of the SDG goals. The impact of awareness creation and establishment of tap water facilities made by project counterparts on water safety and health care is reflected by the 90% of beneficiaries who witnessed that water-borne diseases among family members have decreased in the last five years.

The training and awareness campaigns were considered very useful to assess water quality. In 2021, 384 HEWs were trained, adding to a total number of 1,991 HEWs or 99.6% of the overall target. Pre- and post-training tests were done to test the effectiveness of the training. On average, the trained HEWs increased their score on knowledge of water borne diseases from 63/100 to 79/100, and their score on knowledge on household water treatment systems from 67/100 to 76/100 in 2021. It is suggested that the training should be closely followed by a monitoring scheme, review meetings, and support by experts from Nazaba to strengthen capacity building. In addition, woreda health office should provide training on waterborne diseases and water safety twice a year.

Not all community members are using the Navaza water filters. The reasons why some members of the community are not using Nazava water filters widely are lack of supply, and loss of trust by the community. One of Nazava employees collected advance payments with the promise to facilitate credit services. However, he

did not facilitate credit services nor refund their money back. This has created some upset from the community and has to be resolved to assure the impact growth of the project.

### **Water efficiency in sustainable cotton production, India**

Project documentation does not report on impact indicators. The project specifically targets a demography of marginalized and low-income farmer groups (20,000) who are significantly disadvantaged. In addition, the inclusion of women has gained specific attention, by including women farmers in training sessions on GAP as well as women specific trainings for micro-entrepreneurship. In total, 2,500 women are part of the project farmer group by 2021.

About 12,500 of the farmers trained have adopted one or more good agricultural practices on their landholding. For 5,500 of the surveyed project farmers, the overall increase in cotton production has been 500 kgs per hectare (in the third cultivation cycle as compared to the baseline). After two years of the project interventions, the FPOs connected with the project have successfully sold 1,420,000 kilograms of sustainably produced cotton. 52000 quintals (5200 metric tons) of sustainably produced cotton, including 100 metric tons of organic cotton, has been procured from the Wardha project region by Welspun India Limited. Moreover, about 1,060 farmers have been able to secure safe loans or government subsidies

### **Building with Nature, Indonesia**

Project documentation reports development impact for the small coastal communities of aquafarmers. The BwN project achieved a net increase in natural mangroves of 60 of the targeted 90 hectares until 2018. Mangrove seedlings were observed behind 12 permeable structures (out of 19 monitored). Due to project efforts, all mangroves are better protected against deforestation. However, only at one location there was a substantial increase of sediment bed level and actual mangrove settlement. This could be the case due to the mud still being consolidating, or because subsidence is counteracting mangrove recovery. Besides, as supported by the trainings received and the bio-rights financial incentive mechanism, farmers implement best practices to revitalise aquaculture and restore mangrove in about 450 hectares of ponds. The target here was 300 hectares of ponds. These best practices helped farmers to achieve more than a fivefold increase in aquaculture productivity and tripled income.

Next to the development impact, the BwN project raised awareness for its nature-based approach in both Indonesia and abroad. Knowledge gained was shared broadly, amongst other through policy briefs, publications and (inter)national conferences. Hence, the approach is now embedded in several national policies and standards, such as the ministerial guidelines by the MMAF. BwN has also been integrated in the curricula of 10 universities and research institutes. Moreover, Wetlands International, MMAF and Ecoshape set up the Building with Nature Asia initiative, which facilitates new demonstration projects in Indonesia, Philippines, India, Malaysia and China.

Unintendedly, in Demak, the permeable structures were damaged faster than anticipated, despite material testing and design optimization before and during the project. Hence, annual replacement of these structures is required often. Another unintended effect was the issue of land ownership. The strategy of the Building with Nature Indonesia project is to buy land from farmers and restore aquaculture/create natural dams as a means to combat land erosion. However, during the project land ownership turned out to be an unanticipated issue. When large scale landowners found out of the project, they started speculating on land in nearby locations. Additionally, it was often hard to track the original land rights as this is not well documented in Indonesia.

### **Water quality management in the Brantas River, Indonesia**

As the inception report of the Brantas river project was not approved until April 2022, the project is still in the early stage of operations. Hence, the available project documentation does not yet describe impact of the project. In the coming period, the project intends to achieve integrated regulation of water quality of the Brantas river, an increase in women delegations with access to multi-stakeholder coordinating platforms for river basin management, and finally more resilient river basins that fulfil their functions regarding biodiversity and (clean) water availability.

Furthermore, the project intends to contribute to systemic changes in the institutional framework, so the project currently focuses on strengthening dialogue among the various project partners and stakeholders, amongst others through the established stakeholder working group. As next step, these dialogues should turn into concrete policy and/or guidelines. For this purpose, a working group within the TKSPDA platform was established in early 2022. Project reporting does not describe any unintended negative effects at this moment.

### Sustainable Water Services Beira, Mozambique

The impacts of this project, formulated in both its project plan (not dated) and inception report (Progress Report R1 2015), are 1) to improve health situation through improved access to clean drinking water and improved sanitation, stimulating school access; 2) reduction of the productive time lost to ill health, supporting reduced poverty; 3) reduced burden on women and increased participation and empowerment of women; 4) reduced climate change footprint; 5) financial sustainable, future proof water company that can leverage the project results for obtaining future external financing; and 6) sustainable inclusive economic growth for individual water consumers, SMEs and industries with increased availability of fresh water.

Nevertheless, the project does not report at the impact level, i.e., references to indicators of health, productive time, burden on women, women's empowerment, climate change footprint and sustainable inclusive economic growth are missing. Indirectly, references are made to some indicators that may be of (future) impact relevance, such as the 23 women (55% classified as vulnerable) trained on leadership in water service provision, the percentage of water bills paid (from a baseline of 71% to 63% in 2021, i.e., a reduction due to the COVID-19 pandemic), the number of people in low-income areas covered by the project with improved access of water (161,830, with a target of 110,000), and some FIPAG-related indicators: a NRW at company level of 39% (from a baseline of 44%; the target was 34%), a revenue increase of 76% (target was 18%), a debt coverage of 381% (the baseline was 0%) and a revenue/operational cost ratio of 83% (baseline was 80%, no target provided). The evaluation report of Aqua for All (2021, final version 13 April 2022) also does not report on impact.

### A Green Sustainable and Safe Water Source, South Africa

The "Total GreenSource project" plan (2012) refers to project impact that is expected to be significant at the village or settlement level, as the Green Source system primarily serves a local function by providing schools and their surrounding communities with access to safe water and a playground. The 20 sites targeted by project were in a mining area where the water has been polluted for a long period of time with the wastewater of the mines. The project plan explains the impact in terms of reduced distance to water collection points, reduced costs for the Water Supply Authority, high-quality water freely available for communities, independence from boreholes and surface water, prevention of intake of unsafe water, and positive effects on health care costs, infant mortality due to diarrhea and infectious diseases, and specific job knowledge and increases in career opportunities for those trained (175 persons) through the project.

Unfortunately, the project fails to report on the indicators related to the above-mentioned impact at village level; moreover, the M&E sheets are missing for most reports. Indirectly, reports refer to the system's maintenance by the local partners being only partly realised implying the need for more attention to training, and also investment by the Netherlands partners so that local partners become independent. Likewise, the tariffs and agreements with the water authorities seemed not realistic and are to be addressed as part of the exit strategy (not available yet). Since 2021, the Gaopotlake site has been piloting with the bottling of water for sale to generate additional incomes (and cover operational and maintenance costs) for its Green Source system (Green Source year report 2021) but an update is needed to verify its feasibility as part of a business case.

### Integrated water management, Ghana

This project has been evaluated in 2020 (Cameron et al., 2020). This evaluation was moderately positive with respect to the impact of the project, as summarized in Table 36, where we note that this evaluation concentrated on different criteria than the current program evaluation.

| Effects on:            |              |
|------------------------|--------------|
| Poverty alleviation?   | Satisfactory |
| Sustainable growth     | Moderate     |
| Self-reliance          | Satisfactory |
| Food security          | Satisfactory |
| Safety + public health | Mixed        |

Table 36: Impact of 'Integrated water management, Ghana', reproduced from Cameron et al., 2020, Table 7.1, column 2

According to Cameron et al. (2020), significant increases in yields were accomplished because of improved irrigation and input use. However, incomes did not increase at the same pace. The self-reliance impact has been related to the training sessions that were included in the project, while food security impacts were assessed using availability of meals (increased) and anthropometric measures (no impacts). Finally, the report concluded that for IWRM projects, the relation with safety and public health is less clear.

### **Drops for Crops, Benin**

While the long-term development goal of the Drops for Crops project is to increase efficient water use, the availability of vegetables and thus the food balance, no development impact has been described to date. As the 7 demonstration fields were only started last year, it is too early to determine the impact they have. Furthermore, project documentation does not yet describe contributions of the project to systemic change, although institutional sustainability of the project is guaranteed by strong involvement and participation of the Town Hall in decision-making and operationalization of project activities. The project does not seem to lead to any unintended negative effects at this moment.

### **West Bank wastewater reuse, Palestine**

The project aimed to further treat the wastewater from a recently renovated wastewater treatment plant in Jenin to enable the re-use of the wastewater for agricultural irrigation purposes, in particular orchards and grassland. However, the municipality of Jenin decided to conduct a similar project with USAID and the Palestinian private partners in the project withdrew from the consortium.

### **Sustainable water Akagera Valley, Rwanda**

As this project has stopped preliminary (has not started), the project's impact cannot be assessed.

## Stakeholder perspective

The stakeholder perspective can be further divided into a programme-level stakeholder perspective and a project-level stakeholder perspective.

### Programme-level stakeholder perspective

The following paragraphs summarize the findings from in-depth interviews with various programme-level stakeholders from the Ministry of Foreign Affairs, RVO and external stakeholders.

**Development impact is hard to assess on programme level** – The few answers (N=4) to the question on FDW's development impact correspond to the answers to the effectiveness questions: Assessing the contribution of FDW projects to improving living standards is difficult due to the lack of development-impact indicators; the KPIs indicators that are provided do not relate to development impact. Reasons for the lack of the impact indicators include the difficulty of linking the development impact directly to the FDW projects due to the many external factors that also influence it. Moreover, a general statement is not considered possible: Achievement of impact objectives varies greatly from project to project and there are many differences between the PPPs in the FDW portfolio (not a homogenous group). FDW is especially successful in multi-stakeholder approaches, less success with private sector involvement (N=2).

**The balance between development impact and the business case** – Interviewees generally agreed that the balance between development impact and the development of a commercially viable business case can be challenging, yet their perspectives differed in three ways. One perspective argued that *“involving the private sector is a necessary means to achieve impact: it would not be such a point of discussion because one goal is clearly above the other and, to maintain cooperation, private sector involvement (subordinate) should never be at the expense of development impact”*. The second perspective considered the tension between the goals almost as inevitable. It is always difficult in the domain of development cooperation to link these two objectives. Especially remote places where most people need development are not very attractive for private investment. However, one respondent called FDW “not quite” demand-driven compared to other, more demand-driven instruments such as the Dutch Risk Reduction Team and the BlueDeal. The third perspective mentioned that a better definition of objectives, implementation and results is necessary. Definitions of both concepts ('development impact' and 'the business case') should be formulated not only as a goal but also as a value in implementation.

Some interviewees pointed out that the balance between the two goals is assessed in the project proposal and monitored during implementation. In the first stage, a preliminary check is made to see if the proposal has the right balance; whether the project is sustainable or 'affordable' in the local context and with an understanding of some profit margin for the private party. It should always be calculated what the business model means for the target group (e.g. farmers). *“If there is too much struggle, it is not the right proposal for FDW.”* In addition, an assessment framework has been created for the pre-assessment. For instance, to check whether there is a lasting business case *“we ask for a 10-year business model upfront”* (N=1). It should also be clear in advance what costs will be spent on machinery, training and support (N=1). Additionally, conditions for the selection of PPPs were drawn up that helped in evaluating proposals. For instance, *‘To what extent do we reach the BoP?’* Once implementation has started, RVO is responsible for ensuring that the original objectives are achieved.



**Approach to the critique of broad objectives and narrow focus on development impact** – Previous research has shown that the objectives of the program are broad and that development impact has received only limited attention. When asked how and with what impact this criticism was addressed, the following answers were given:

The broad formulation of FDW’s program objectives encourages participation from – and collaboration with – various stakeholders; it opens up the program to many actors and stakeholders and stimulates cooperation between parties that would not easily do so without FDW. In addition, the broad approach is to look beyond just ‘outcomes’, for example also to look at the institutional changes brought about by projects and their impact on local stakeholders.

**FDWs contribution to development values (pro-poor, inclusiveness, gender)** – According to programme stakeholders, projects are committed to making a pro-poor impact. This is evidenced by the pro-poor targets and strategies in different projects (e.g., VEI projects). However, it is not possible to aim only at the very poorest, since the revenue models are mainly targeted at the middle-income groups. The most vulnerable (poorest) are sometimes only reached at a later stage (beyond the project phase) through so-called graduated “fees” for water services or after capacity building of water companies. For example, VEI projects often focused on improving the operational effectiveness of local or national water companies. However, this focus did not directly lead to better pro-poor services because “*institutional capacity takes a long time (about 10 to 15 years), even for companies*”.

Projects also pay attention to inclusiveness, but in practice also encounter difficulties (opposition, lack of interest and commitment). Involving women in projects in particular proves difficult, as men dominate in the water sector in many countries. Nevertheless, inclusiveness is increasingly being discussed within partnerships and some steps have been taken in projects (for example with Sumavi), such as setting up an awareness process and a self-evaluation to test inclusiveness within organizations.

**More flexibility can be provided under certain conditions** – According to various stakeholders, FDW could have more impact if there was more flexibility in the program. The structure is sometimes experienced as ‘rigid’, which is not appropriate for a project in a dynamic context and can hinder the iterative process of the partnership. The question to the programme-level interviewees was whether they share this opinion and to what extent FDW can offer more room for flexibility. Respondents generally recognize the critique on a lack of flexibility, and often mention this is a problem for other development programs as well. RVO representatives mentioned that there is a misunderstanding about the subsidy rules in partnerships. Partners often have “*the misperception that everything is fixed, nothing can change*”. However, this means that questions are sometimes not even asked to RVO (and as a result no adjustments could be made). Under certain conditions the FDW approach has been relaxed, such as under COVID-19 (providing project extension or a top-up to carry out additional activities). Second, the Ministry of Foreign Affairs indicated they understand tailored advice is desirable but lack the time to investigate flexibility options. The ministry must (also under COVID) meet certain conditions and administrative burdens – especially when it comes to accountability to the House of Representatives. Because they do not have the time to assess projects in detail they depend on embassies and local contacts of implementing parties.

**Recommendations to increase impact in the water sector** – One respondent provided clear recommendations to increase impact in the water sector: Work with local parties as this creates most local impact; work demand-driven and act as a catalyst; offer customization and a rather pragmatic attitude; realize investments because change doesn’t happen automatically; and allow for more risk-taking. Recommendations for more flexibility in a future program include the provision of more space for partner development and attention to more discussion and exploration of possibilities in preliminary project phase.

**Systemic change is not considered a focus of FDW** – A total of six interviewees responded to the question ‘*To what extent (and how) did FDW projects contribute to systemic change?*’. One response is that “*there should be more focus on system change*”. FDW has “*always focused on project sustainability ... and contains elements that can lead to system change*”. Overall, none of the respondents could provide an answer because of the following reasons:

- **There is no common definition on systemic change.** To what extent “*there really is a systemic change*” also depends on the definition. One interviewee explained “*a PPP construction is used to achieve more than just a business case and outcomes. A social issue is tackled differently by structurally changing a particular component in a chain. This can be defined as ‘systemic change’*”. So, if something is changed in the existing system by FDW and this is an improvement, it can be referred to as ‘systemic change’.

Others refer to systemic change being mainly about working methods<sup>68</sup>, or meaning market transformations and changing partnerships or a change in legislation or regulation, over which FDW has little influence.

- **No focus on systemic change within FDW.** In the early years of the programme, systemic change was not explicitly named as a focus point but “*it was always an ambition*”. There is a focus on reaching people and increasing access to water and sanitation rather than working on systemic change.
- **Systemic change in public local utilities is often dependent on national ministries.** However, there are examples in the portfolio where systemic change did happen<sup>69</sup>.

Interviewees expressed the need for the Ministry to look at certain trade-offs, make choices and set priorities because:

- More focus on business models means more sustainability but less systemic change.
- More public partners, more focus on systemic change; more private partners, more focus on business case.

**No unintended effects** – Specific examples of unintended negative effects are not mentioned by the interviewees, except one that refers to asbestos sometimes been excavated from the ground (during water infrastructure establishment), requiring action to be taken. But this example is reported as an unexpected incident rather than an effect.

## Project-level stakeholder perspective

In this section, we provide information and insights of project impact derived from project-level stakeholder interviews for the selected case studies.

### AQUACRUZ, Bolivia

Below we report on the impact of the AQUACRUZ project on the beneficiaries, systemic changes and externalities based on the interviews with stakeholders.

**Development impact** – The interviewees indicated that end users noticed the technical impact of the project.

*“ Yes, in two ways. Internally, with AQUACRUZ, technical and economic aspects were improved for the use of resources (water and service collection), which allowed them to improve infrastructure such as having new wells or improving offices, for example. Additionally, the quality of service improved and this has been noticed (fewer user complaints, cutting capacity, continuity, timely payments, etc.).”*<sup>70</sup>

Water quality improved, water supply/ production became more stable and was assured. Concerning adjustments in the commercial approach, the transparency of collection (showing the user the composition of his payment receipt) was improved and was met with approval and appreciation. Moreover, the new rules described the definition of default and related condition to close the water supply. On the negative side, the early billing caused major complaints about increased and earlier charging than usual.

**Systemic change** – Various changes to systems were induced by the AQUACRUZ project. The earlier mentioned improvement of the billing cycle was widely adopted and sustained by the EPSAs. An increased willingness of the EPSAs was reported to further digitize and increase the efficiency of their operations.

The improved communication of the EPSAs with the AAPS was considered by the experts as a positive systemic change. A better communication will facilitate the support of AAPS to develop and finalize the Five-Year-Development Plans including the optimization of the tariff structure that aims to increment the amounts to pay per unit water by large consumers. In the long term these improved contacts could lead to a control of tariffs and approval of annual development plans by AAPS.

A systemic change for EPSAs in Santa Cruz to address prevailing inefficiencies by forms of collaboration or a fusion are far from realistic and largely impeded by political and cultural idiosyncrasies. Processes of large-scale merging are, anyway, politically cumbersome after the Cochabamba water war. Yet, the EPSAs in Santa

<sup>68</sup> The Kenya project (FDW14KE13) did work at a higher level by seeking out the association of water companies and bringing about change in work processes. This changed the role of the organisation in the market. This does constitute systemic change

<sup>69</sup> INISH in Kenya has created a sanitation market that was not there before, in Ethiopia water pricing is being worked on, in the Philippines new forms of partnerships between utilities and social enterprises are being developed, in Indonesia the BWN approach is being adopted

<sup>70</sup> Entrevista 10\_FS

Cruz are also afflicted by a strong politically solid organization that is based on strong cultural habits and traditional institutional connections. Additionally, EPSAs cherish their independence and there is no active policy to merge with other water companies.

A systemic change is needed to improve coordination between EPSAs and the municipal governments that are responsible for water services. The current mutual distrust between EPSAs and local governments is also considered a blockade for future expansion of the water and sewage connections, the plans of which need to be approved by municipalities.

The nationally and culturally accepted public stance that Bolivians have the right to water impede tariff increases. EPSAs, with their cooperative character, are under pressure to keep tariffs low and the AAPS imposes requirements to file for legal approval of a tariff increase.

**Unintended effects** – The joint training of the EPSAs staff also created an improved communication among the staff members that benefitted a greater cooperation. Additionally, there was sometimes an exchange of personnel to help each other out on specific topics. One example was the exchange of a monitoring app that was developed for a particular EPSA. Due to the improved exchange of information the app, with small modifications, will also be used at other EPSAs. An unintended negative effect was that SENABSA did not increase its staff because part of their job was done by the intervention of the AQUACRUZ project.

### Safe Drinking Water for Ethiopia, Ethiopia

Below we report on the impact of the Safe Drinking Water for Ethiopia (SDWE) Project on beneficiaries, systemic changes and externalities based on the interviews with stakeholders.

**Development impact** – The awareness campaigns had a clear impact on the water users who realized that tapped or conventionally treated water is not always safe water. One of the interviewees confirmed that

*“Even though we made a lot of activities to make drinking water clean and available to many communities in the woreda, various water borne diseases such as typhoid, amoeba, giardia and diarrhea are still seen in our woreda.”<sup>71</sup>*

Furthermore, the awareness training was complemented by the training and extension of adequate water treatment techniques and use of water filters. The Health Extension Workers informed us that the benefits obtained from the training were improved health care services of the community, protecting the family from various waterborne diseases, knowledge on water treatment methods and deepened the understanding that even clean water might be polluted and that even tapped water is not 100% safe. The awareness and training nicely aligned to the introduction of the Nazava water filters. For this, Nazava has employed four sales experts who pursued promotion activities. Furthermore, in total training was provided to 1,991 Health Extension Workers (HEWs) 99.6% of the overall target. HEWs cascaded their training to, in total, 70,812 model women of the Women Development Army (89% of overall target). WDAs again trained their fellow women and other neighbouring community members.

Out of those households who participated in surveys, 29% of them have purchased Nazava water filters in the last five years. This was the result of different methods of promotion and awareness raising activities implemented by Nazava Trading PLC and its partners. The experts indicated that due to the extension campaigns and increased use of water filters and loan facilities the incidence of waterborne diseases reduced significantly in the last five years. This trend can, of course, not be fully attributed to the project, but project activities are much in line with the ongoing extension campaigns and certainly contributed positively to the end result.

**Systemic change** – The awareness, informed assessment of water quality, and use of filters, can be considered as a systemic change that positively contributed to the decreasing incidence of waterborne diseases. Some concerns were voiced that the contribution of Navaza filters requires attention concerning the availability of spare parts, presence of trained technician for maintenance, improvements of design (e.g. seat, lid cover, ceramic candle breaks easily) and size (increase to 20 litres) and adequate supply. About the loan facility,

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<sup>71</sup> Entrevista 10\_BW

stakeholders comment positively on the community getting adequate explanation of the conditions and associated information.

**Unintended effects** – Although subsidizing the Nazava water filters might lead to unwanted competitive advantages the reality proves somewhat more complicated. Especially, Tulip has imposed competition on Nazava. Tulip is using government structure (especially Zonal and Woreda Office of Water) to obtain trust from the community and facilitate distribution easily. Furthermore, Aqua For All. An NGO is also promoting Tulip water filters. Because of these, Tulip is getting popular in the region. The locations where Nazava and Tulip are being distributed are also the same. Experts even observed that after Nazava creates awareness of the community, Tulip takes advantage of Nazava supply shortage and distributes its devices (Tulip water filters) to this same community. It is good for Nazava to know such challenges so that it can design its own strategies on how to manage the competition and reveal itself better than others.

### **Water efficiency in sustainable cotton production, India**

Below we report on the impact of the Water efficiency in sustainable cotton production Project on beneficiaries, systemic changes and externalities based on the interviews with stakeholders.

**Development impact** – According to project partners, the project mainly creates impact by increasing farmer income. By adopting organic farming practices, farmers are able to reduce their input costs and receive a premium price. Welspun offers farmers a 10% premium price for organic cotton. Usually they expect a 12% to 15% increase of income on farmer level. However, widespread materialization of this type of impact is contingent on the organic cotton being certified, which is according to stakeholders is a long, cumbersome and expensive process. Also, project partners all mention that the project would need at least an extension of 1.5 years to create more impact and compensate for the delay caused by COVID-19. It is too early to tell the impact of the TU Delft Makara app. This app is still in the initiating phase and would need at least five more years to deliver visible impact.

**Systemic change** – As the project is still in progress, it is too soon to evaluate the project on systemic change. However, there are several positive signs that systemic change may be created. First, if farmers notice the benefits of organic farming and share knowledge with other community members, this may result in a systemic change that enhances the livelihoods of farmers. Secondly, the project has established a market linkage between the farmers and Welspun as buyer. The project partner has committed to continuing the procurement of organic cotton. This may indicate a systemic change that benefits farmers as well as Welspun. However, it is essential that (more) farmers are supported in obtaining the organic certification as this allows them to receive a premium price for their products. The certification is a point of attention as the farmers are currently mainly dependent on the relationship with and support from Welspun. For systemic uptake of organic cotton farming in the region, project success on outcome level is contingent for a demonstration effect to occur.

**Unintended effects** – Project partners did not mention any unintended effects.

### **Building with Nature, Indonesia**

Below we report on the impact of the Building with Nature Project on beneficiaries, systemic changes and externalities.

**Development impact** – Project partners explain that the project did only improve the standard of living on local level. Aquacultures have returned due to the project, and most of the fish farmers who participated in the project did benefit from the interventions, mainly through increase production of fish. The fish is primarily consumed locally, thus can contribute to improvements in the local livelihood. Increase in income have not been described by project partners. Besides, the intended impact is not specifically focused on vulnerable groups.

Furthermore, despite the interest in the concept, impact on coastline protection has remained minimal. After a couple of years, the physical interventions count not keep up with the rapid increase in land subsidence. As the permeable structures are only established at a small scale, project partners recognize that the project has not improved coastal protection in the Demak region. Moreover, rehabilitating mangroves has not succeeded on large scale. Floods still occur regularly, and project partners expect that rapid land subsidence will worsen their negative impact on the region.

**Systemic change** – Among others, the World Bank, Asian Development Bank and international NGOs have embraced the BwN concept. Content on BwN has been shared at several international conferences, it is part of the curriculum of the UNDIP university, and several countries in Asia have shown interest to implement BwN-structures to their shorelines. However, although the Indonesian government recognized the BwN-project as successful, it has not yet led directly to many changes in policy. The physical interventions of the project are also applied in other areas, yet still every area needs its own tailor-made approach, making this a cost-intensive approach to coastal protection. Moreover, the social aspect of the initial BwN-project is not implemented here due to a lack of resources from the national and local Indonesian public institutes. As this social aspect mobilises local communities to engage in maintenance of nature-based coastal protection structures, it seems pivotal to include this aspect in any replication efforts of this BwN project.

Also, as some project partners indicate that rapid land subsidence in the coastal area puts tens of millions of people in the Central Java area at risk of flooding, this BwN project has not contributed to the mitigation of this systemic risk.

**Unintended effects** – The project brought to light uncertainties about landownership, as farmers started speculating on newly created land. There was no proper legislation to directly solve this issue, and governmental institutions did not know how to respond to this properly. Besides, the project initially led to some resistance from the local population, as farmers feared the replacement of chemical production inputs. Finally, it is still unclear how the planted mangroves will be protected in the future.

### **Water quality management in the Brantas River, Indonesia**

Below we report on the impact of the Brantas River Project on beneficiaries, systemic changes and externalities based on the interviews with stakeholders.

**Development impact** – Community groups receiving training from Ecoton currently benefit from the project, as they are more confidently in public and are more aware of the importance of water quality. However, project partners indicate that the foreseen long-term impact at a larger scale is still unclear. Improved coordination between the project partners may lead to enhanced water quality and livelihood in and around the Brantas river, but to date no measurable impact has been made in that regard.

**Systemic change** – Project partners did not indicate any current contribution of the project to systemic change in the institutional framework. Only, some partners have noticed improved cooperation since the start of the project. Also, the ambitious notion of a Clean Industry Hub, that would provide private-sector organisations on Java with products and services that would mitigate pollution of the river, and that would operate in a commercially viable manner, was abandoned and replaced by a website with green suggestions. Had this hub been successfully and sustainably established, this would have created a promising avenue for systemic change.

**Unintended effects** – As conflicting interests caused disagreement between project partners, the project did lead to some difficult situations. This tension has also affected the impact of the project by limiting the level of cooperation between specific project partners. However, this situation might also have occurred independently of the project. Besides that, no unintended effects were mentioned.

### **Sustainable Water Services Beira, Mozambique**

Below we report on the impact of the Sustainable Water Services Beira Project on beneficiaries, systemic changes and externalities based on the interviews with stakeholders.

**Development impact** – This project has been able to deliver what was promised. However, unlike the direct project results, it is difficult to address the impact of this project on income, employment and health. FIPAF does not work to improve incomes for the poor; the organization deals with water supply, but there are NGOs that FIPAG works with for a more holistic approach. The project provided temporary employment: many people were needed to install the water supply network. It is an assumption that better water leads to better health, but impact on 'health' was not really monitored (nor the impact on employment and livelihood) and moreover only becomes visible after the end of a project (it is a longer-term effect). Finally, project monitoring came to a standstill during the Corona pandemic.

**Systemic change** – Within FIPAG, a unit has been set up for NRW that is still operational. FIPAG has scaled up the NRW unit and continues to do so (locally, nationally), which is positive. There have also been changes in personnel, such as, the previous director of FIPAG Beira is now director of a larger region. Leadership change (training) has been successful.

**Unintended effects** – A major concern is that people who are trained leave for another job where they earn more, but moving to another job in the same sector can have a positive effect as they transfer knowledge within the sector, which happens in practice. There is little insight into local competition between villages that do and do not benefit from the project. But when people come to Beira from the countryside, they first build a house and then the infrastructure follows, which is a more labour-intensive process because the land is already in use, compared to when the infrastructure is built before new citizens arrive.

### **A Green Sustainable and Safe Water Source, South Africa**

Below we report on the impact of the Green Sustainable and Safe Water Source Project on beneficiaries, systemic changes and externalities based on the interviews with stakeholders.

**Development impact** – The impact on clean water supply has been achieved, but not the impact on job creation, poverty alleviation and skills development. The children who go to school get a full jerrycan of water to take home for free. In addition, water quality and hand washing in schools have improved and children are absent and sick less often (less diarrhea, less outbreaks of stomach problems, less girls absent since the Green Source system installation) but hard evidence of causal relationships is lacking.

In terms of job creation, the project leans too much towards the Dutch side, creating jobs for Dutch rather than local experts. Opportunities to link the project to the creation of local employment were missed. The same goes for local financing options: the Skills Development Fund and the Industrial Development Corporation (a government agency that finances business initiatives) were not tapped. If there is the impression that foreign money is coming in, the links to local financing options (for sustainability) are often inadvertently not made or forgotten. Furthermore, the bottling service has not been taken up and the use of water for irrigation, in addition to consumption, is hardly practiced. As a result, there is less impact than could be. Finally, the impact of the water treatment plant (production side) is not clear, as is the impact of the training (particularly the empowerment of women), which is partly due to not measuring the impact (e.g., impact of training on hygiene was not measured).

**Systemic change** – No major systemic change has been reported. At the school level, there is awareness of the importance of sport, clean water, and infrastructure maintenance (in one case this resulted in a maintenance team for the GreenSource system), but attitudes have not changed.

**Unintended effects** – There are no unintended negative effects on the market. The drinking water supply at the sites was bad, so there is no market disruption from this project. However, schools that do not participate are (sometimes) “jealous”, and stakeholders indicate that a flammable situation can arise because one feels left out. Likewise, some wonder why not spend money on another intervention. An intervention can therefore increase social tensions. Finally, there is no budget for impact recording and evaluation (after the project has ended), which hinders evidence-based sustainability assessment.

### **Integrated water management, Ghana**

Below we report on the impact of the Integrated water management Project on beneficiaries, systemic changes and externalities based on the interviews with stakeholders.

From the interviews conducted for this evaluation, some conclusions by Cameron et al (2020) were confirmed, but also new insights have been obtained. It seems that the project did have some positive impacts, but that government failure to invest in the region will be a major challenge for the project to have a long-term impact. This holds for the construction of the dam, but also in a broader sense for investments in the region.

First, with respect to **training**, impact has been achieved through farm field schools and other trainings. The fact that many women participated in the project has had a positive effect on **gender equality**, as they got access to land and inputs. Improved seeds and specifically, the own production of seeds added to the **self-reliance**.

A **major challenge for the long-term impact** is the limited capacity among farmers to buy seeds. The subsidies that were in place have been abolished, leading to a return to the use of non-improved seeds. The current

economic crisis is adding to the financial hardship of the farmers, and is further decreasing the use of improved seeds and inputs.

The **overriding challenge** is the fact that a large dam that would increase the availability of water in the region has been discussed for a decade, and it is highly uncertain if and when this dam will be constructed, despite a formal “sord-cutting” ceremony held in 2020. Should this dam not be constructed after all, water availability will remain very limited, and farmers will continue to face severe challenges.

Finally, **government commitment to the region is lacking**, much more needs to be done to support the region; now the project partners are too much “on their own”, and cannot keep up the integrated system of input provision and output purchases, particularly if outside parties offer the farmers slightly higher prices for outputs.

### **Drops for Crops, Benin**

Below we report on the impact of the Drops for Crops Project on beneficiaries, systemic changes and externalities based on the interviews with stakeholders.

Drops for Crops Benin is seen as a very inclusive project, including small-scale farmers of which most are women. However, this complicates the business case of the project. Hence, the actual impact the PPP can make currently depends on how much of the investment can be funded and the extent to which the business case will work out. As the PPP still has to start with the implementation of the production fields, the targets should probably be revised.

Furthermore, progress will only be made by small steps. The irrigation technology used will not become highly advanced right away, that would be too much to ask of farmers, so several intermediate steps are needed. In addition, it is important to realize joint marketing and sales for the farmers, so that they no longer have to act individually, but can function as farming groups. CSF hopes to expand its market further into Benin and keep their presence in the country, even beyond the scope of the project.

### **West Bank wastewater reuse, Palestine**

The project consists of the construction of a post-treatment facility, a reservoir and a piped distribution network to the agricultural areas. It failed because the private co-financer cancelled its financial commitment because of the (largely political) risks of a long-term concession.

### **Sustainable water Akagera Valley, Rwanda**

As this project has stopped preliminary (has not started), the project’s sustainability cannot be assessed.

## **Beneficiary perspective**

The beneficiary perspective outlines the findings of beneficiaries for each case study.

### **AQUACRUZ, Bolivia**

In this section we aim to analyse whether capacity building activities of the AQUACRUZ project at the level of the EPSAs had an impact at the household level. Below we report on our findings.

A vast majority of the respondents did not change its customs on water use after the AQUACRUZ project was finished. More than 90 % of the respondents retained its habits concerning drinking water, sanitation, laundry, showering and garden use. Respondents indicated 5%, 9% and 10% changes in customs related to water savings<sup>72</sup>, sewer system and personal hygiene, respectively. We can conclude that customs of household water management components hardly changed after the project ended.

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<sup>72</sup> Collected water is often stored in open barrels where stagnant water serve as breeding grounds for mosquitoes increasing malaria incidence.

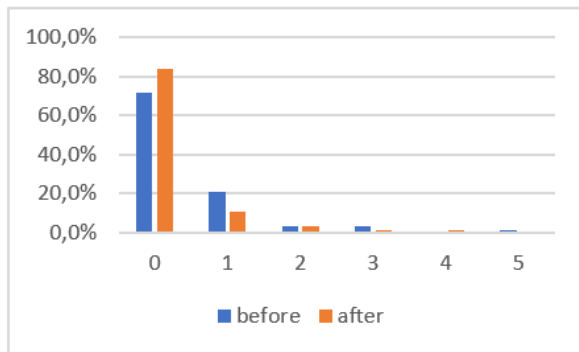


Figure 26: Number of water supply interruptions

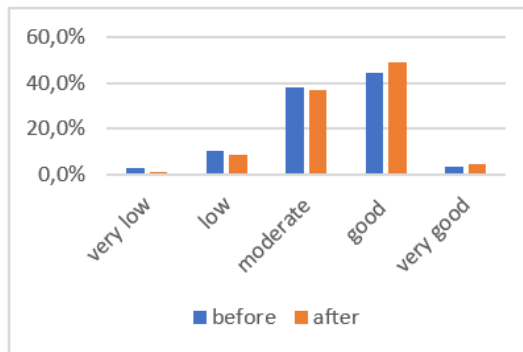


Figure 27: Water pressure before and after the per month, before and after

The use of modern media for communication between EPSAs and water users increased significantly. EPSAs were investing in websites and much expressed desire was to automatize payments in the future. Occurrence of water supply interruptions improved somewhat compared to the situation before the AQUACRUZ. The same patterns of slight improvements after the AQUACRUZ interventions holds for water pressure, water quality and sanitary facilities. The higher efficiency of billing cycle was profitable for EPSAS but earlier payments were somewhat less popular with invoiced clients.

The occurrence of water supply interruptions improved somewhat compared to the situation before the AQUACRUZ. The same patterns of slight improvements after AQUACRUZ interventions holds for water pressure, water quality and sanitary facilities. The higher efficiency of billing cycle was profitable for EPSAS but earlier payments were less popular with invoiced clients. Though, the impact of a single KPI is difficult to attribute to the capacity building efforts and other interventions, the stable positive impact on multiple evaluated KPIs (e.g. see figure 26 and 27) might indicate some positive impact on the AQUACRUZ project.

### Safe Drinking Water for Ethiopia, Ethiopia

Impact of awareness raising, training and promotions by project partners becomes visible in the 50% of the households that practices water treatment compared to 27% in the period 6-10 years ago. The share of people that practice treatment is the same for urban and rural households. Impact is also visible for the 32% of the sample households that became aware of Nazava water filters at the time of this study (March 2023). This awareness level was created through different mechanisms which Nazava Trading PLC has adopted, including water events, promotions and demonstrations through Nazava sales experts, training of 1,991 health extension workers (HEWs) and more that 70,000 Women Development Army (WDAs) who, in turn, directly created awareness to the community.

Comparison of baseline and end-line status indicates that now 8% of the households practiced boiling water as treatment for safe for drinking against 3% five years ago. The impact of awareness creation and establishment of tap water facilities made by project counterparts on water safety and health care is also reflected in the low occurrence (15%) of water-borne diseases in the last four years (Sitotaw and Mulu (2021)<sup>73</sup> found a prevalence of 65% of water borne diseases in their study area). For these reasons, 77% of the households are willing to purchase Nazava water filters in the future if they are convinced of its benefits and the device is available at the markets. To raise their awareness and knowledge, there is a need to use demonstration and other mechanisms. This helps to spread the information once they are convinced of its benefits, spare parts issue and maintenance. It also will help to solve the reasons why people do not purchase filters (see figure 28).

<sup>73</sup> Sitotaw, B. & Mulu, G. (2021). Bacteriological and Physicochemical Quality of Drinking Water in Adis Kidame Town, Northwest Ethiopia. International Journal of Microbiology – [available here](#)



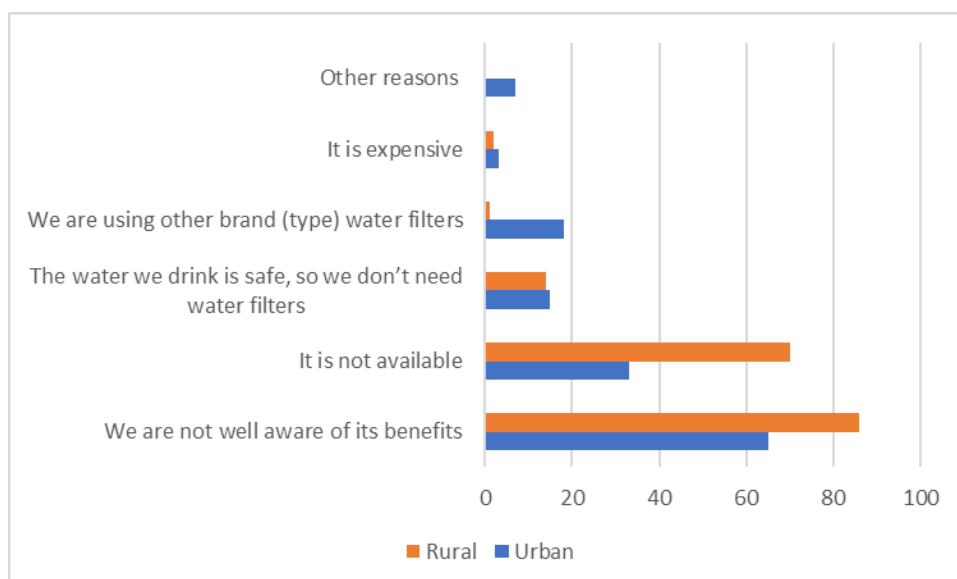


Figure 28: Why people do not purchase a Navaza filter?

The awareness campaigns also had effect on the decision to buy a water filter. A midline review conducted by the project showed that the baseline reported 19% who considered buying a filter while the midline reported 46%.

Another clear impact of the project pertains to reduced health expenditures for those using safe drinking water. In case of water borne diseases, 93% of the household went to a health centre (100% of urban and 90% of rural households) spending Birr 965.21 on average with extremes that go as high as Birr 4,600. The price of Nazava water filters at the time of its distribution in the last four years was Birr 800, which is less than the average cost spent for medication to treat water-borne diseases. Hence, raising awareness of the community will stimulate the purchase of water filters and save not only their money but also their health.

### Water efficiency in sustainable cotton production, India

To most of the beneficiaries participating in focus-group discussions, the project interventions have an overall positive impact in terms of an increase in income (on average 10-12% increase) and improved livelihood (such as better education for their children, increased personal spending and improved health). As mentioned earlier various external factors (such as market prices and the availability of organic seeds and specific equipment) are limiting the development impact and, where possible, require more attention.

**Reduction in input costs and increase in production** – The farmers spoken with in the FGDs who converted from inorganic to organic farming all noticed a positive effect. Firstly, some noticed that soil health has improved. Secondly, most of the farmers also noticed a reduction in input costs as inorganic inputs are more expensive than organic inputs (which they can produce by themselves). The reduction in inputs costs can vary per farmer. Some noted a reduction of 12% or 30%, others 50% or even 75%. However, most of the farmers spoken with are not cultivating 100% organic crops. They often use a small proportion of their land for organic farming, one to three acres as demonstration plot, which limits the extent to which the land they consider organically farmed is in fact organically farmed.

Additionally, some farmers seem to apply the term organic farming more flexible by mixing organic and inorganic inputs. This can still damage their health and soil health, thereby limiting the effectiveness and impact of the training/new approach. The positive impact is larger for those farmers who have received support in terms of water structures. The change in yield differs amongst beneficiaries. Some do not notice any change. Their explanation is that the soil needs a long time to recover (after soil degradation from inorganic practices). However, others noted an increase in production of at least 10%. Due to support on water infrastructure or micro irrigation tools, the yield increase can be even higher. Farmers who benefited from this support noted an increase of at least 20% or even 50-75%.

**Increased income** – In general, farmers spoken with noted an increase in their income. Most of them mentioned an increase of 10-12% per year, some even indicated an increase of 50%. In one FGD with women

entrepreneurs, 9 out of 17 doubled their income. One woman mentioned that she doubled her annual income from INR 1.5 lakhs (USD 1,828) to 3 lakhs (USD 3,642) by selling mushrooms (20-25 kilograms per month). Additionally, farmers who have a farm pond and adopt an integrated model benefit from additional income by selling their aquacultural produce.

**Improved livelihood** – The average increase in income has been able to change the livelihoods of some beneficiaries. General examples provided are 1) better education for their children (mentioned in 6 out of 8 FGDs), 2) increased personal spending (2 out of 8 FGDs), 3) improved health (2 out of 8 FGDs), 4) increased spending on better construction of their home or electricity (2 out of 8 FGDs) and 5) loan (forgiveness) from the government (2 out of 8 FGDs). The women particularly also noted an increase in their confidence and self-esteem thanks to the trainings received (2 out of 8 FGDs). The men particularly also noted they are happy to advance the technology on their farm (2 out of 8 FGDs).

### **Building with Nature, Indonesia**

Focus-group discussions with members of small coastal communities in Demak shed additional light on the extent to which the BwN project has generated impact.

**Increased income** – As a result of the training, participants apply sustainable cultivation techniques and do not use chemicals anymore. One respondent from the Sido Makmur group said: *“I learned how to make a green belt, how to apply LEISA and AMA and how to increase the yield. I now also understand I should stop using chemicals. Through the AMA approach, we get more benefits.”* The participants noticed an increasing yield on the ponds thanks to applying the new practices. For most of them the yield gradually increased with about 10% to 20% in total. Especially adding local microorganism to the ponds seems to be successful in increasing yield.

However, they also indicate it takes time to notice large changes, especially when using compost. The income of the farmers increased with approximately 20%. One of the female respondents said that she first harvested 600kg on her 1ha pond. After adding the local microorganism, she harvested up to 2.2 tons of kg (x4 increase). According to another participant, not only the yield became better, but also the soil and water quality has become better. Besides an increasing income from the ponds, women also benefit from additional income because they started producing and selling microorganism, as well as collecting and selling waste. In addition, several participants also noticed a return / increasing variety of birds and fish species.

**Water security unchanged** – Most of the participants feel less safe now when compared to five years ago. About six villages in the nearby region experience severe flooding due to increased abrasion and high tide. The participants generally concluded that the green belt of Mangrove forest established resulting from the project helped a bit, yet because of land subsidence and impact from the toll road construction it is by far not enough to mitigate flooding risks. FGD participants report unsuccessfully asking for additional permeable structures, high levels of upstream sediment negatively affecting the effectiveness of existing permeable structures, and flood waves flowing into their houses for two hours at high tide before flowing away.

### **Water quality management in the Brantas River, Indonesia**

Focus-group discussions with community members engaged by the NGO ECOTON shed additional light on the extent to which this project has generated impact.

**Minor improvement in water quality** – Even though the community groups have made efforts to clean waste along and in the river, the impact is still limited because of the scale of pollution. Most participants also do not see a significant change in the water quality in the Brantas river yet. Beneficiaries are positive about the training and their own community group activities, but they are critical towards the behaviour of other community members. There is still a large part of the community that has not changed their behaviour. The water quality mainly depends on the location. Community members from the upstream area usually have a positive opinion about the Brantas river that is unchanged, because the upstream part is less polluted. The members from the middle or downstream area are usual doubtful as to whether the quality improved. Two respondents mentioned that while one area has improved, in another area the quality became worse.

**Increased confidence of women, yet institutional effects unclear** – In addition, the training provided additional benefits and impact to women. By joining the training and community meetings, their confidence has increased. The number of women participating in the project and at village level has increased. However, there are no signs that the position of women has strengthened in the institutional context. ‘It should be, but it is still difficult. We don’t have more influence yet, people need more evidence.’

**Income increased** – Furthermore, the income of women that have joined the programme has increased because the women now learned how to buy and sell plastic waste. This also provides benefits to the other community members, who can sell their plastic for about IDR 3,600 per kilo. Some people use this income already to cover their electricity payment. Others will use it to pay for health insurance, school fees, phone costs or tax. Additionally, women sell products from plants that they are cultivating along the river side gardens or from forestation. This also provides additional income. For instance, women use moringa leaves to make and sell krupuk online.

### Sustainable Water Services Beira, Mozambique

For this project, the measurement of impact is based on observations and interviews carried out during the visits, and on the survey held, although this probed for *satisfaction* among beneficiaries, which we interpret as impact. As can be seen from figures 29 and 30, the satisfaction rate is rather high, and so is the perception of alignment with WASH requirements. When asked for factors that could improve the impacts, households mentioned a more secure water supply (21%), improvements in quality (39%), and lower prices (35%).

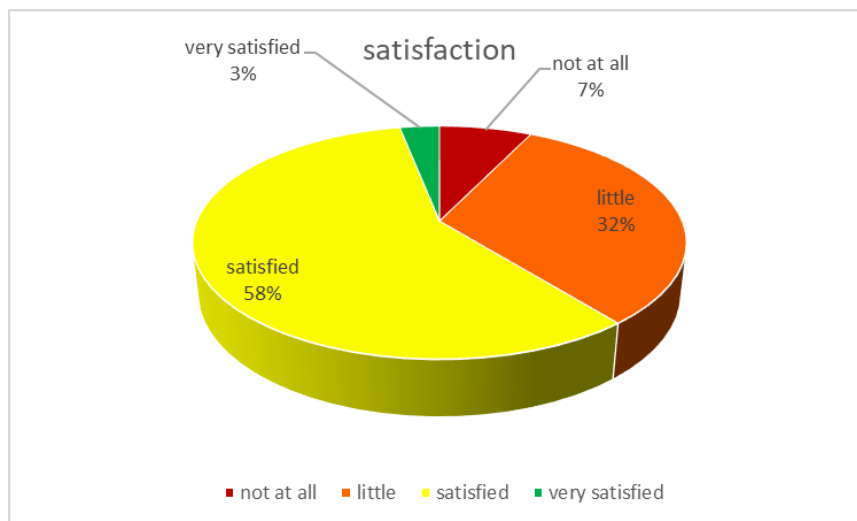


Figure 29: Satisfaction with water services provided.

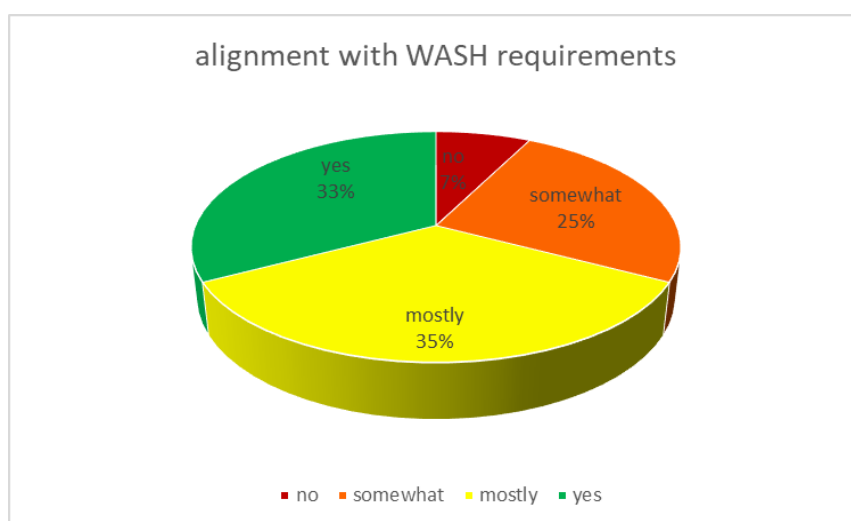


Figure 30: Perceived alignment of water services provided and WASH requirements.

### A Green Sustainable and Safe Water Source, South Africa

As for the project in Beira, the measurement of impact is based on observations and interviews as well as the survey, where in the survey, we probed for satisfaction, which is interpreted as impact. As can be seen in figures 31 and 32, the satisfaction levels are low, and so it the perception whether the project complies with WASH requirements. When asked for possible improvements, respondents emphasized increased water availability (29.6%), improved water quality (17.8%), security and safety of the locations (16.3%), next to better management, maintenance and lower prices (minor shares of respondents).

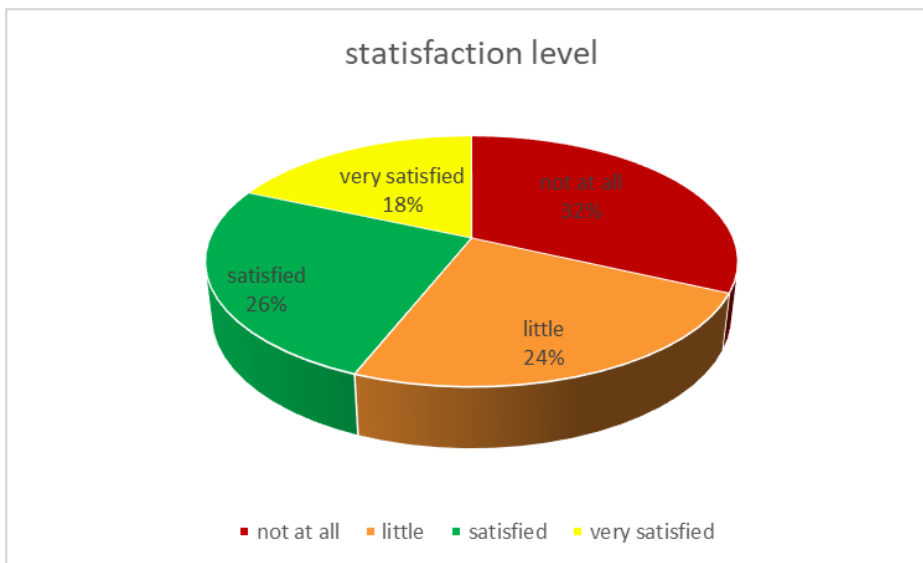


Figure 31: Satisfaction with services offered through GreenSource.

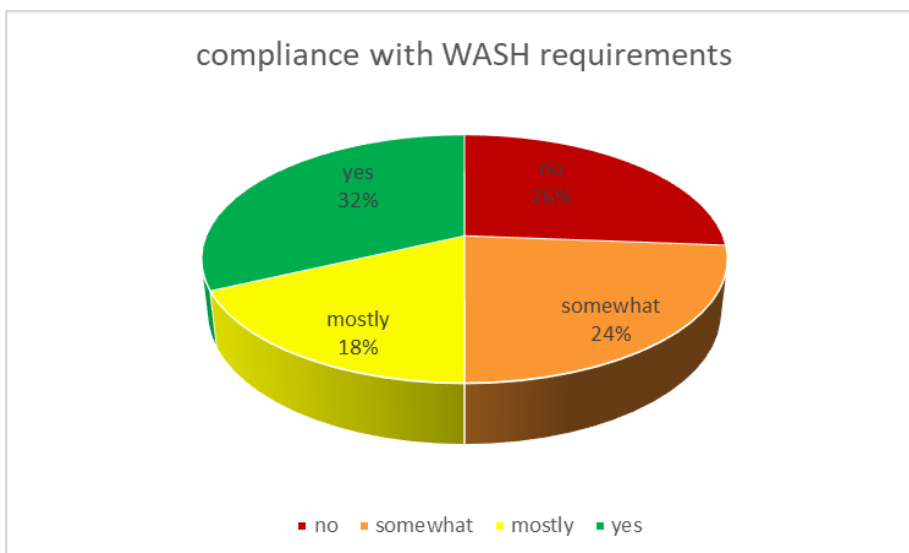


Figure 32: Perceived alignment of GreenSource project with WASH requirements.

## J. Sustainability – detailed findings

This chapter describes the detailed findings for the evaluation criteria sustainability. These findings are categorized into the reporting perspective, the stakeholder perspective and the beneficiary perspective.

### Reporting perspective

The reporting perspective can be further divided into a portfolio-level reporting perspective and a project-level reporting perspective.

#### Portfolio-level reporting perspective

##### Analysis of portfolio-level data

Sustainability of projects is measured using generic as well as theme-specific indicators. Generic indicators include the progress made towards establishing a business case, scaling of the approach taken in the project, additional investments made by private partners in the project, and Dutch and local companies with a supported plan to invest, trade or provide services. However, reporting on the first two of these indicators have been very scant – only 2 projects had clear reporting, both indicating a failure to scale. For the indicators on investments by private partners, there is a marked difference between additional investments done by private partners during the project and (plans to) sustain activities after project end (Figure 33). In fact, the scores for Dutch as well as local company involvement are relatively low (4.0 and 4.2 for the program as a whole). No structural difference between the commitment of local and Dutch partners can be seen.

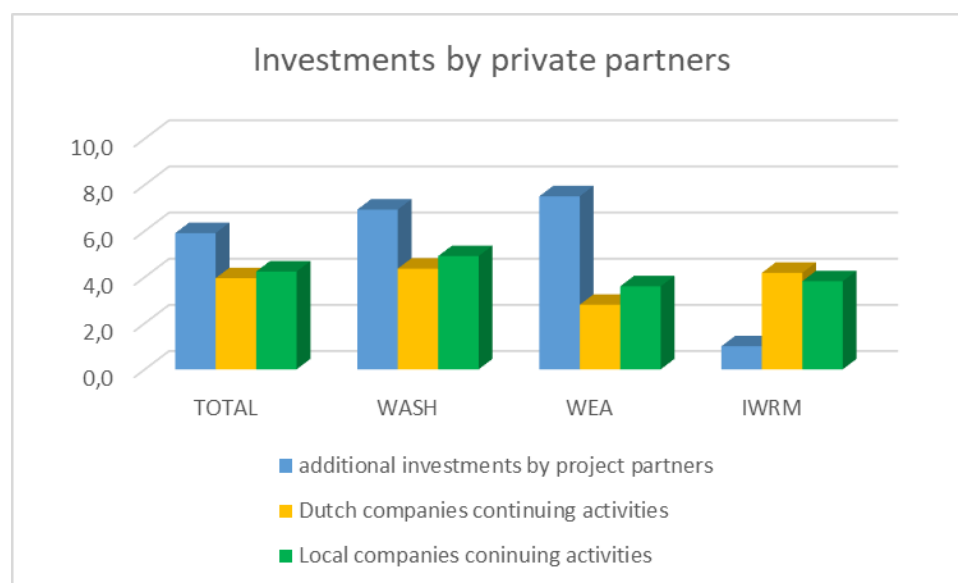


Figure 33: Rubric scores for private partner involvement

Theme-specific indicators provide a diverse picture. For WASH, the scores for the share of infrastructure that is still working after project end and the number of beneficiaries still using the services are maximal, while the score on the compliance with relevant water regulations and policy is very low (3.5). For WEA, again all infrastructure is still functioning at project-end, but there is hardly any progress made on environmental/climate change aspects (score is 1.2 on average). For IWRM, sustainability indicators show a very negative picture, with scores close to 0 for both potential for developing a sustainable water policy and compliance with relevant water policies.

As such, sustainability of the projects does not seem to be guaranteed, as the willingness of local or Dutch partners to continue the activities is limited. The fact that infrastructure is still functioning at project end suggests that the impact of the projects will be there for a time after project end, yet that without an adequate follow-up, there is a high probability that the long-term impact will fade away. For WEA, the lack of attention to climate change and environmental aspects is a major challenge for sustainability, as changing environments can pose a threat to the approaches taken in the project. Finally, the conclusion on IWRM is worrying, as it seems that these projects are somehow 'missing the mark' in assisting local partners to develop more sustainable policies embedded in local policy contexts.

### Analysis of programme level documentation

Sustainability is an important aspect in the appraisal framework of the FDW programme, yet previous evaluators observed that the framework has a general character.<sup>74</sup> The sustainability of FDW projects is inherently important for the long-term success of the programme. RVO adheres to the FIETS criteria to assess the sustainability of the proposal. However, as also mentioned in the previous MTR (2016) these criteria are very general, which means sustainability is often not clearly operationalised within the project context. The MTR 2016 recommended to elaborate on the criteria in the inception phase to clearly define the pathway towards sustainability. An improvement to the sustainability perspective is the added requirement to sign a sustainability compact during the inception phase. This asks partners to commit to specific indicators of sustainability related to the achievement of project goals.

Specific findings on the FIETS criteria based on the MTR (2016) are shared in the table and text below.

| Sustainability dimension            | Key findings in previous evaluations  |
|-------------------------------------|---|
| <b>Financial sustainability</b>     | Strong link to institutional sustainability. FDW adopted a narrow and generic understanding.  |
| <b>Institutional sustainability</b> | Engaging the government at various levels increases the potential for wider influence. Lack of understanding of the institutional issues/dimension is a major cause for the (near) failure of projects. |
| <b>Environmental sustainability</b> | Sufficiently addressed in FDW, although often indirectly.   |
| <b>Technological sustainability</b> | FDW projects have modest innovations, the programme favours more established models.  |
| <b>Social sustainability</b>        | PPP projects focus more on the supply side, more attention is needed to the end beneficiaries. Especially the affordability to the poor is a point of attention.  |

Table 37: Findings on the FIETS criteria based on the previous MTR

A first observation from the MTR (2016) on **financial sustainability** is that the financial sustainability indicator by FDW is linked to institutional and governance issues. This may still depend much on continued public funding, which is subject to all kind of uncertainties. Secondly, the format to assess financial sustainability has a narrow focus by translating it into a generic, not sub-sector specific spreadsheet. Financial sustainability is difficult in the developing context. Despite the developed business cases, revenue generation may not be central or even relevant in a significant number of FDW interventions.<sup>75</sup> Given the intrinsic long-term orientation of the FDW, it is important that the MoFA/RVO focus on quantitative KPIs does not steer the attention, time and resources of project partners to 'quick wins', but also looks at the relevant effects in the long term. Additionally, since financial sustainability should include operational and maintenance costs (OpEx) after project implementation, a new business approach (and subsequent plan) may have to be developed during and at the end of the project. Post-project financing opportunities (scaling finance) or demands should be taken into account earlier in the process for private sector-oriented projects and look into the possibility of a more centralised (programme-level) financial brokering effort or TA, facilitated by RVO or external financial brokers<sup>76</sup>.

In terms of **institutional sustainability**, the previous MTR (2016) found that strong public commitment at various levels leads to high potential for wider influence. However, the lack of understanding of institutional issues is a major cause for the (major) failure of projects. Moreover, projects often face weak local and central governance. Therefore, attention to capacity building on governance and finance structures at central and local government level is needed. Another recommendation is to pay more emphasis to stakeholder engagement and institutional local landscape and do so at the scale of the PPP's long-term objective, not just the project (period) itself.<sup>77</sup> Likewise, ICRA (2023) discusses that within PPPs, there is ample scope for project partners to learn from each other and perhaps improve project mechanisms with regard to capacity development. Hence,

<sup>74</sup> MTR, 2016 p. 48

<sup>75</sup> RVO. (2020). Memo: Outcome FDW-OO upscaling support

<sup>76</sup> RVO. (2022). A decade of RVO management - The Sustainable Water Fund (FDW)

<sup>77</sup> Zwiers, M. (2020). Strengths, Challenges and Lessons Learnt FDW

RVO should include the role of partnership capacity development in a more open and prominent way in PPP projects.<sup>78</sup> The Erasmus University (2020) recommend the programme to pay more time and energy to the position, mandates, (financial) capacity, and absorption ability of the local public entities.<sup>79</sup>

According to the previous MTR (2016), **environmental sustainability** has been sufficiently addressed in FDW. However, there is only one project with an outspoken focus on environmental sustainability (FDW14R114 - Building with nature project Indonesia). Non-revenue water projects have an implicit ecological focus by seeking to save water.

In general, previous evaluators noted that FDW does not pay much attention to **technical sustainability**<sup>80</sup>. The RVO assessment framework does not specifically require including innovative technology but mentions that technology should fit with the local context, needs and capacity.<sup>81</sup> In 2016, only three projects included new innovations. Well-established company structures have a benefit over new, innovative or broad-spectrum interventions where the revenue or financing model is less well-developed. This in line with the nature of the fund. The MTR (2016) recommended that projects should better define in what context the technology is going to be used by whom under whose responsibility, rather than the technology in isolation.

Lastly, regarding **social sustainability**: The MTR (2016) found that the majority of PPP projects have a strong focus on resource protection, production, treatment and operational activities at the supply side of water programmes rather than naming beneficiaries as their main goal. Some argue the PPP construction is not the best mechanism for poverty alleviation.

For each sub-theme (WASH, WEA and IWRM) specific issues to sustainability could arise, as indicated by several previous discussion papers. A key **challenge to WASH projects** is the reliance on hardware investments. Of course, technical training on NRW reduction is helpful. Yet, without hardware investments it is not sustainable for utilities with high malfunction infrastructure.<sup>82</sup> Second, in some cases there are insecurities about the affordability to the pro poor without subsidies. This is further discussed in the next section 'Continuity of impact'. A **key challenge for WEA projects** is climate change. The (future) climate change effects on FDW projects and their results, and potential mitigation measures, should be considered further, as these can cause premature closure of projects.<sup>83</sup> A **key challenge to IWRM projects** is the lack of technical capacity of governments to sustain IWRM measures. Technical trainings are needed to sustain IWM infrastructure. Additionally, public partners could lack awareness and consciousness on the benefits of sustainable infrastructure. Therefore, a sustained dialogue with (some of the) project partners and discussion of the local benefits is essential.

**Continuity of performance** – In 2021, 11 of the 42 projects have ended/closed early. RVO has already examined some of the success factors as well as reasons for project failure.<sup>84</sup> According to this RVO examination, the key preliminary reason for project failure is either related to cooperation in the partnership (roles and responsibilities or capacity and skills) or the relation to the central government (either no support or

#### **Soft/preliminary indications for reasons of project failure are:**

- Insufficient knowledge and understanding of roles and responsibilities and capacity and skills (FDW14R115 Bandung).
- No support/commitment from the central government for approving project (FDW12SL01)
- Political interference in project interventions/strategies (i.e. overly regulated water and political biases in Bolivia, WWTP project in Jenin, West Bank).
- Diffused thematic focus and need for compliance with all FDW requirement (inclusiveness, climate etc).

#### **Typical success factors are indicated as:**

- Clearly defined roles and responsibilities, as well mandates and vested interest of partners, but also a strong previous track record (build up to FDW).
- Multi sectoral and multi-level dialogues stimulated and engaged.
- Robust business cases (or business driven interventions) i.e. Mali, Bangladesh
- Aligns with national and local policy agendas.
- Imbedding at local level and community participation and engagement for the onset (and in design).

<sup>78</sup> ICRA. (2023). Capacity Development in Public-Private Partnerships – Lessons Learnt from NL Funded Projects.

<sup>79</sup> Erasmus University. (2020). Evaluation of projects co-financed by the Sustainable Water Fund (FDW)

<sup>80</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>81</sup> RVO. (2017). Assessment framework.

<sup>82</sup> Zwiers, M. (2020). Strengths, Challenges and Lessons Learnt FDW

<sup>83</sup> RVO. (2022). A decade of RVO management - The Sustainable Water Fund (FDW)

<sup>84</sup> RVO. (2021). Discussion paper FDW Program - Strengths, Challenges, Opportunities & Vision

strong interference). Typical success factors identified in this RVO examination are successful cooperation in the partnership, the engagement of multiple stakeholders (especially including local communities), stimulating multisectoral dialogues, robust business cases and alignment with national and local policy agendas.

The previous evaluators observed that the eight PPPs with commercial private-sector leadership 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.<sup>85</sup> In all other cases, continuation would probably require significant public sector support. The lack of introduction of a major private sector driver or financing makes them look more like conventional aid (ODA) projects. 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.<sup>86</sup>

Furthermore, partnerships with high public sector commitment are more likely to be sustained.<sup>87</sup> The water utility projects are less likely to be sustained as a PPP without subsidy. However, the aim is to institutionalize change that is then adopted by the utility, regulator and other local players.

**Continuity of impact** – Continuity of impact is closely related to the sustainability of the project and the continuity of performance. In general, previous evaluations of FDW have not yet discussed this topic in detail. However, generally, the affordability to end beneficiaries (mainly the poor) is a key determinant for a continued impact on development. In some cases, WASH projects are too reliant on public subsidies, and it is doubtful whether these projects can sustain their development impact in the long term. Access to finance remains an issue in low-income countries, and smart or affordable loans could be needed to ensure a continuity of impact. Another option could be to increase access to water for low-income areas through daily billing.

**Scaling** – The previous MTR (2016) noted that, in general, most PPPs operate at the project implementation level without sufficient attention paid to more strategic or wider impact.<sup>88</sup> To illustrate, most water operator partnerships seek to improve the performance of a single utility. Involving public stakeholders is key to achieve wider influence and scale the impact. Yet, there are already some projects that have upscaled or showed positive results and potential for replication.<sup>89</sup>

Some concepts have been upscaled according to RVO (2021)<sup>90</sup> and Zwiers (2020)<sup>91</sup>:

- **FDW12KE03 - FINISH INK (FDW Kenya)** – Project has been upscaled via financing of the Ministry of Foreign Affairs of the Netherlands in 6 other countries (FINISH Mondial). Sanitation market development through A2F for HHs to MFI sanitation loan products (EUR 5M) and entrepreneurial development.
- **FDW14RI14 - Building with Nature Indonesia** – Project has been replicated to several other locations on Java. There are discussions of upscaling wider across Asia. However, **a lesson learned**: only scale when the concept is tested and proven. In the case of BwN, the concept was scaled in the pilot stage when there were still some uncertainties. Moreover, the Indonesian government only duplicated the technological solution instead of also replicating the social solution (biorights/ capacity building via coastal field schools).
- **FDW14UG43 (FDW and WaterWorx) Alternative approaches and tools for improved WATSAN in Uganda** – As part of the extension of the FDW14UG43 project in Uganda, the lead partner (National Water) was challenged to upscale their solar powered decentralised piped schemes to none project areas. FDW acts as an incubator for WaterWorx.
- **FDW16007IN - Leather Cluster India** – Waste water management approach replicated in Calcutta via strong policy and new funding from EU. Strong interest from Indian government to use approach also in other sectors (textile).

<sup>85</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>86</sup> PPP Lab Food & Water (2016). A portfolio scan of the Sustainable Water Fund (FDW)

<sup>87</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>88</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>89</sup> RVO. (2021). FDW impact & insight - Strategic session

<sup>90</sup> RVO. (2021). FDW impact & insight - Strategic session

<sup>91</sup> Zwiers, M. (2020). Strengths, Challenges and Lessons Learnt FDW



- **FDW12ET06 - Source to tap** – This project in Ethiopia has received additional financing from EKN to upscale its NRW approach in other cities, increasing the impact of the FDW project.

Other projects have *potential* for replication according to RVO (2021) and Zwiers (2020), i.e. potential to scale to other areas by being new but successful in the local context:<sup>92</sup>

- **FDW14SA19 - Reducing the water footprint of smallholder sugarcane producers** – Upscaling is being worked on the replicate with other farmers and countries by Solidaridad. In discussion with FMO to finance upscaling bulk water improvement and on farm water efficiency on unused land in South Africa.<sup>93</sup>
- **FDW12GH02 (IWAD Ghana) - Integrated water management and knowledge transfer in SK Basin** – Has support the development of a large-scale irrigation system in Northern Ghana (250ha+). The implemented agro-business in Yagaba is capable of sustainable operations and a scale up is ongoing.
- **FDW14BO11 – AQUACRUZ** – Project results have been incorporated into broader sector wide program of GIZ.
- **FDW16012PH - Ridge to Coast, Rain to Tap** – Increasing resilience of utility to floods through upstream reforestation, flood modelling.
- **FDW12ET03 Sustainable water services in Harar** – Study on ground water extraction presented to D2B for potential feasibility study.

It appears challenging to upscale concepts within the FDW programme. Especially for WASH projects in low-income areas (i.e. slums) or in the sanitation market.<sup>94</sup> In WASH projects, it seems feasible to outsource water service provisions to a social enterprise to manage connections in low income areas (i.e. slums), although financing this, and up scaling without subsidy, remains an issue. Several recommendations for upscaling in the sanitation market are: 1) Include a financial up scaling partner from the start of your project who will be able to help navigate the complex financial markets and increase likelihood of future financing; 2) with a favourable enabling environment, sanitation marketing in conjunction with sanitation loans can replace traditional aid, 3) access to finance, and 4) sanitation loans are a gateway for financial institutions to service BoP with additional loan products.

### Project-level reporting perspective

In this section, we provide information and insights of project impact derived from project-level reporting for the selected case studies.

#### AQUACRUZ, Bolivia

The embedding within the German-Bolivian program PERIAGUA III ensures for a large part the sustainability of the AQUACRUZ project benefits. Together with project partners, AQUACRUZ carried out sustainability checks that were updated into sustainability compacts. The final version of the sustainability compact was handed in within the last annual progress report (2019). The AQUACRUZ project organized its sustainability component according to the FIETS criteria: Financial, Institutional, Environmental, Technical and Social sustainability.

There was a significant increase in financial sustainability of the EPSAs, while for strengthening the institutional sustainability AQUACRUZ organized capacity building at macro-level (AAPS), meso-level (FEDECAAS and SENASBA) and at micro-level of 21 EPSAs. Concerning environmental sustainability, AQUACRUZ puts emphasis on increasing efficiency in water use at all levels including an integrated and sustainable approach to water extraction, treatment and reuse of wastewater. The project's technical sustainability is achieved when the functionality of technology/hardware, which is required for drinking water service and sanitation, is assured. The project largely concentrated on assuring the operation and maintenance of e.g. macro-meters, anti-fraud-valves and leakage- detectors. Social sustainability was achieved by focusing on peri-urban areas that host population with high poverty rates and a fast increasing population.

The project complied with all its promises and aimed at a sustainable and systemic change. Yet, not all capacity building components could be followed up due to lack of resources. The project could also have had a

<sup>92</sup> RVO. (2021). FDW impact & insight - Strategic session

<sup>93</sup> Zwiers, M. (2020). Strengths, Challenges and Lessons Learnt FDW

<sup>94</sup> Zwiers, M. (2020). Strengths, Challenges and Lessons Learnt FDW

greater and more sustainable impact with more systematic changes if, on one hand, a monitoring process had been continued, and on the other hand, a joint work process had been carried out with associates from the beginning.

### **Safe Drinking Water for Ethiopia, Ethiopia**

Project documentation indicates that the PPP laid down a secure foundation of their activities that should assure a continuation in the post-project period. A strong commitment and assurance of a sustainable long-term development was the co-financing of the project by Private Partners Resilience BV (EUR 172,318), Shayashone PLC (EUR 172,318) and the International Development Enterprises (iDE) NGO (EUR 102,148). This is a clear sign that Private Partners foresee a viable business case and can sustain activities in the post project period.

The project partners organised project sustainability according to the FIETS (Financial, Institutional, Environmental, Technical and Social sustainability) framework. Concerning the Financial/Business case, Nazava PLC operates on an Investment License and lately obtained a business license (after a time that production had to stop). The economic viability of the project was successfully tested during this period of paused sales when the Joint Venture shareholders had to provide more cash to finance operational expenses. The continued demand for the Navaza filter made this possible. Institutionally the outbreak of the COVID 19 and the civil war was a challenging time to engage with Ethiopian institutions as their priorities were centred around dealing with the various crisis. Still, the project was able to make significant progress on training to Health Extension Workers and women of the Women Development Army.

For the environmental sustainability the application for the voluntary Gold Standard for carbon credits has been approved. Partners identified buyers for rejected containers that allow for recycling of defect products. Additionally, the project benefitted from price increases for used polypropylene as a result of the increase in world prices and shortage of foreign currency to import such raw materials. Technically, given the continued forex availability problems in Ethiopia, it remains a good plan to produce filters locally in the country. Socially, the project started a joint collaboration with Kidame Mart for the last mile distribution of water filters. Kidame Mart is a social enterprise that provides distribution solutions in Ethiopia with a special focus on empowering rural women to become entrepreneurs in their villages. Finally, for the scaling and expansion of our findings the proposal with Kidame Mart and BoP Inc. for the King Baudouin Foundation was granted.

To foster sustainability the project team participated in a WASH incubation program by Aqua for All and Ice Addis (innovation hub & tech incubator) and worked with a Ethiopian software development program on a smart phone application that Nazava vendors can use to more quickly and easily place orders, make payments, and collect the water filters.

### **Water efficiency in sustainable cotton production, India**

The partners in the Water Efficiency in sustainable cotton-based production systems in India project signed the Sustainability Compact in January 2022, and committed to annually review and sign the document again, i.e. in 2023. At the end of 2022, the project has been extended until 2024. Therefore, the sustainability of this project is only assessed by a preliminary view based on the theory of change and progress to date. The purpose of the project is to increase farmer's access to water and provide affordable irrigation finance. Additionally, the project aims to create a long-term business model for the farmers. First farmers are trained on good agricultural practices so they can reduce input costs, maintain soil health and reduce pests. More importantly, this helps them to produce higher yields and higher quality cotton for which they can receive an 'organic cotton certification'. With this label they are able to receive higher margins and therefore increase their income. The exact reduction in agricultural input costs and yield increases is assessed during the midline assessment by the end of 2022.

The sustainability of the project depends on several important conditions for success:

1. Farmer's willingness and ability to sustain good agricultural practices without project support (willingness and ability to pay, but also capability to apply knowledge efficiently)
2. Farmer's access to finance (safe loans) and their ability to repay
3. The project's ability to ensure linkages between farmers and government agencies (by means of water user groups) as well as cotton processing companies (connecting buyers such as Welspun India Limited with FPOs/farmer groups) to increase farmer's access to finance, representation, and position in the market

4. Support from local and district level government, such as integrating water structure maintenance in their annual plans and negotiating long-term agreements for the maintenance and repair of hardware with public and private providers
5. Continued and successful collaboration within the partnership as well as within the Water User Associations
6. Of course, the project is also dependent on external factors (climate, financial market, technological issues). For instance, extreme weather conditions may hinder progress on water efficiency.

Project documentation reports that, to date, the project has attracted two additional financiers, which helped scale up the project. Vodafone-Idea has invested EUR 750,000 for the delivery of IoT based agro-meteorological advisories and farmer awareness programme on water efficient and good agricultural practices related to the FDW project deliverables. VIL also provided an additional fund direct deployment of Crop Cameras, Automatic Weather Station and Automatic Pest Monitoring traps as part of their Smart Agri Initiative (amount is unknown). After three years, this is about 25% of the original project target of EUR 3 million needed for scaling up/replication.

### **Building with Nature, Indonesia**

Project documentation indicates that, as the BwN project intended to provide benefits to society that cannot be directly expressed in financial returns, the project was not based on a commercially viable business case. Also, project documentation shows that the private partners involved did not expect to make a profit from the project as well. Hence, at this stage, no revenue is made with which the project activities can be recouped or expanded. Nonetheless, by adjusting pond lay-out and management, and by reducing fertilizer and pesticide inputs, aquaculture productivity of fish farmers increased with 50%. This increase can ultimately allow farmers to contribute to the maintenance of the permeable structures.

Regarding continuity of development impact, due to land erosion, long-term coastline protection in Demak has not been achieved ultimately. Nonetheless, the ownership of permeable structures was successfully transferred to the local communities in July 2018. The 2020 annual report describes that communities are *'very dedicated to keep them in excellent shape, also proposing some additional improvements along the way'* and are *'ready to handle maintenance by themselves, provided that they have sufficient funding'*. The extent to which the maintenance of the structures is actually successful is not described in the available project documentation.

Furthermore, the MMAF invested EUR 2.5 million to replicate BwN across 13 districts in Indonesia. MPWH invested EUR 1.1 million for impact monitoring and to further enhance the permeable structures approach. Thus, these ministries seek to take the project to the next stage in its evolution and scale. Moreover, the concept of Building with Nature has been presented in several global conferences and is included in the curriculum of several Indonesian universities.

### **Water quality management in the Brantas River, Indonesia**

The Brantas River project intends to create a business model by offering Clean Development Packages at a commercial tariff through the Clean Industry Hub. However, project documentation shows this has not been accomplished, and the Clean Industry Hub is now being revised as this concept could not be fully formalized within the local context. Thus, no revenue is being made through the project. Moreover, the project documentation does not currently describe specific actions undertaken to continue development impact after project completion. Furthermore, the project has not been scaled up/out, so it is currently too early to determine sustainability of activities or impact. Yet, the inclusion of multiple public partners could have a positive impact on sustainability, yet it is still unclear if and how this will be managed.

### **Sustainable Water Services Beira, Mozambique**

Aqua-for- all stated in its external evaluation report (December 2021, final version April 2022) about this project that *"there are remaining sustainability issues that require attention"* within the context of this project. Although the project was reported successful in the institutionalization of NRW management through the establishment of a separate NRW unit, FIPAG had still not (until then) been found to be financially sustainable. This was mainly explained by the impact of the pandemic on payment discipline and reduced purchasing power. Other issues reported by Aqua-for-all (e.g., based on final M&E 2021) included: the lack of full embedding (institutional integration) of the transfer of training (i.e., so that trained personnel want and can continue to provide training themselves), and the (until then) non-compliance with the reduction in the use of chemicals in

the water treatment process and the reduction in energy consumption (to have a lower carbon footprint). In addition, the project had not taken into account the need to take climate resilience and adaptation measures, while the three cyclones that swept through Beira during the implementation phase of the project painfully demonstrated its urgency.

With the final project report being submitted just 2.5 months after the external evaluation report, on June 30, 2022, not much change can be expected in the reported issues. Nevertheless, the final project report (2022) stated that “*most of the sustainability conditions had in fact already been met by 2019*” (referring to the increased revenue and the separate NRW unit and stating “*reduced water losses help to better manage scarce resources*”, final report 2022), with project years 2020 and 2021 mainly focusing on consolidation and winding up a number of important investment activities.

### **A Green Sustainable and Safe Water Source, South Africa**

The project proposal refers to a PPP with a healthy mix between public and private funding: the South African Government was expected to secure the land near the schools and make substantial investments, also for the longer term, so that the end-user would be secured. From the Dutch side, reference is made to financially strong (industrial) partners who consider Africa as a new economic development area. In addition, the partners WRC and Saxion were added for the training programs. The South African Government, in cooperation with the other project partners, were expected to ensure a plausible revenue model for the future to sell the water and make sure that the Green Source System will be spread over the whole continent of Africa; a part of this revenue model would be transferring the production of the Green Source System to Africa.

However, in the annual project report (year 7 – 2021, submitted in May 2022) and the two-page project summary various sustainability issues were raised: Repairs and maintenance costs were not properly budgeted at various sites and solid business cases that generate income to cover these costs were still missing at most, if not all, sites. The collaboration with the public partner presented several challenges. The public partner could not provide co-financing (due to lack of investment capacity) and had limited time to invest in poor communities. The mining companies would work to make drinking water available in rural communities at schools (but covid-19 and local strikes around mining sites hampered the process; see project-level stakeholder perspective section). As a result, upscaling beyond the 20 project sites has not yet taken place.

### **Integrated water management, Ghana**

Cameron et al. (2020) expressed doubts on the sustainability of the partnership but were on the whole positive on the sustainability of the project, given IWAD's commitment to developing and continuing with this endeavour over the longer term, to test out different models (rice production), as well as innovations (solar) in reducing input prices to the production process. In addition, they concluded that capacity building had laid a solid foundation for further sustainability of activities. However, a tension was signalled between the commercial interests of the project and the community interests.

### **Drops for Crops, Benin**

In the Drops for Crops project, payment of an annual fee to access the water infrastructure system should ensure maintenance of the infrastructure. However, as the farmers in the north of Benin have generally little investment ability, financial sustainability may become a challenge for the project. Yet, the 2021 progress report mentions that a business case analysis of the intervention has been conducted, showing that the farmers will be able to finance equipment and inputs with the income from their production and will have certain profits, according to the assumptions of the business plan. Furthermore, the sustainability compact between the project partners was agreed upon in 2022. Besides, project documentation does not describe continuity of impact or scaling yet. With new policies on decentralization, land and financial management, mobilization of the communes' contributions to the project has become difficult and more complex in terms of procedures.

### **West Bank wastewater reuse, Palestine**

As this project has stopped preliminary (has not started), the project's sustainability cannot be assessed.

### **Sustainable water Akagera Valley, Rwanda**

As this project has stopped preliminary (has not started), the project's sustainability cannot be assessed.

## Stakeholder perspective

The stakeholder perspective can be further divided into a programme-level stakeholder perspective and a project-level stakeholder perspective.

### Programme-level stakeholder perspective

**Factors that increase or hinder the sustainability of the FDW approach** – In their answers to the question about the sustainability of the FDW approach, interviewees pointed to factors that increase or hinder the achievement of sustainable results. Likewise, they identified factors that influence the effectiveness with which the FDW programme manages sustainability in order to ensure continuity of impact. These factors are presented in the table below.

| Factors that increase success in sustainability  | Factors that hinder success in sustainability   |
|--|---|
| <b>PPP related</b>   |   |
| <b>Commitment/loyalty of partners:</b> "We value our partnership and there is no way to let go"  | <b>Strict PPP preconditions:</b> PPP is under pressure due to all preconditions. The responsible lead partner is therefore tight on implementation, affecting other partners  |
| <b>Participation of - and integration with - local partners:</b> The importance of partnership with local parties has been emphasized; but good integration with local partners also brings additional complexity  |   |
| <b>Duration of change processes:</b> Working with financial institutions usually implies long-term change processes (often around 3-4 years), but the relationship also tends to last longer afterwards.   |   |
| <b>Capacity built:</b> Sustainability is that (local) partners have sufficient capacity to continue projects   |   |
| <b>Private partner with commercial interest:</b> it helps when the interventions are the core business of the private partner with commercial interest   |   |
| <b>Investment from CSR:</b> investment from CSR is often the only way to involve the private sector. Projects with VEI have also succeeded without commercial interest (N=1)   |   |
| <b>Programme-Management related</b>  |   |
| <b>Increase in business focus:</b> Thoughtful business cases were much more common in 2016/17 projects. A business case was not required for 2012/2014 projects, although many had included one.   | <b>Advice from embassies:</b> embassies' advice on project proposals does not always correspond to reality. Reasons: embassies are busy and water is often not one of their focal (expertise) areas   |
| <b>More flexibility in the PPP criteria helps sustainability:</b> the current large legal and administrative focus does not fit the partnership idea. One will benefit more, if "think more as the project progresses and be accountable afterwards" and "loose formulation of bigger goals" are allowed | <b>Assumption of subsidy as seed capital and catalyst of investment by companies:</b> the assumption that parties will take over (finance) the project themselves after the termination of the FDW subsidy seems incorrect  |
| <b>Available funding:</b> Achieving financial sustainability is difficult, but not impossible  | <b>Trade-off between sustainable business and development goals:</b> Project partners faced challenges when it comes to sustainability and impact of FDW. Yet, the (strength or effectiveness of) partnership plays an important role in whether both goals are achieved. |
| <b>Project duration:</b> a FDW project is allowed to last 7 years so "you have the time."  |   |

|   |  |
|---|--|
| <p><b>Policy-driven assessment criteria</b> for grant applications: have a positive influence on the effectiveness of sustainability management</p> |  |
|---|--|

Table 38: Factors that influence success in sustainability of the FDW approach

**Participation and influence of local governments on sustainability and scaling up** – Several interviewees confirmed that "active participation and commitment from the local government is a key success factor for both the sustainability of the project and possible scaling up. But at the same time, this is also a major challenge for many". Explanations for the suboptimal role of local government, especially in relation to **sustainability**:

1. **Difficulty in estimating public commitment in advance and aligning expectations** – Projects are often seen as free money; government parties did not always realize that participation in FDW meant that something was also expected from them. Lack of government involvement will undermine sustainability.
2. **High staff turnover** – frequent personnel changes hinder continuity (e.g., in Egypt, a network was set up with Ministry of Water then a new minister arrived, and the entire staff was replaced).

In relation to **scaling up**:

1. **Poor alignment of interventions with (local) statutory laws and regulations** – this is especially the case if differences of interest play a role and/or interventions are not designed locally
2. **Limited absorption capacity** – African governments invest an average of only 0.4% of their GDP in water. Budgets are often only partially used due to limited absorption capacity. A lot (of development) must happen before they can meet their commitments.

## Project-level stakeholder perspective

In this section, we provide information and insights of project sustainability derived from project-level stakeholder interviews for the selected case studies.

### AQUACRUZ, Bolivia

Below we report on the sustainability of the AQUACRUZ project benefits based on the interviews with stakeholders.

The sustainability of the AQUACRUZ findings are guaranteed for the financial sustainability of the EPSAs, but maintaining project findings for institutional, environmental, technical and social sustainability in the post project period seems to be less successful. The achievements and experiences of the AQUACRUZ project aim to conduce to a successful implementation of the German-Bolivian program PERIAGUA III (*Programa para Servicios Sostenibles de Agua Potable y Saneamiento en Áreas Periurbanas*). The embedding of the AQUACRUZ project within the PERIAGUA programs ensures a sustainability of experiences acquired. Support in the commercial area definitely helped the financial sustainability of the EPSAs. There were some initiatives to create business using mobile sensing but they were not developed into full business cases.

Many interviewees mentioned the low tariffs and widespread (mis-)conception that access to water - as a human right - should be free of charge (e.g. Cochabamba war) undermined the financial sustainability of water and sanitation services. At national level, PERIAGUA-AQUACRUZ promotes regulatory policies that enable cost-covering tariffs to foster the approval of new (higher) tariffs. The low tariffs that are controlled by the state (AAPS) is the main complaint that was voiced by all the EPSA.

Concerning the Institutional sustainability, experts indicated that the AQUACRUZ project could capitalise on the multi-level contacts of the PERIAGUA project. Sustainable institutionalization of acquired knowledge was for small sized EPSAs a major concern, especially when trained personnel left for other jobs. Larger EPSAs seem to accommodate the acquired knowledge better as more people were trained.

Environmental sustainability was, according to the experts, closely linked to the low tariffs. Hence, EPSAs could not comply with their full mandate of water units that includes the collection and treatment of waste water. The many inhabitants that are not connected to the sewage system and non functioning of other collection techniques and related uncontrolled waste water disposal becomes now a serious concern for groundwater quality in Santa Cruz. Moreover,

*"Concerning environmental policies, local and national authorities need to be more efficient. So far, all that has been done is to increase water sources and expand coverage, but we have seen that city growth is always more than expected. .... This is currently the problem ... there is no planning<sup>95</sup>"*

Experts indicated that technical sustainability of the project for certain parts were difficult to maintain. AQUACRUZ's technical support to EPSAs with training on macro-meters, anti-fraud-valves, leakage- detectors, was much appreciated. Yet, EPSA technical staff also indicated that acquired knowledge on many other advanced technologies could not be put into practice because required investments could not be realized by the EPSAs.

*"They considered the aforementioned technical training to be timely, however, the program is also incomplete because the training component should have been accompanied by the delivery of necessary equipment to put the acquired knowledge into practice.<sup>96</sup> "*

### **Safe Drinking Water for Ethiopia, Ethiopia**

The interviewed experts assessed sustainability of the Safe drinking water for Ethiopia project as follows.

Regarding technical sustainability, experts indicated that the trainings given were very useful, because they improved the quality assessment of water, including tap water. However, stakeholders indicated that there should be a close monitoring, and support by experts from Nazava to strengthen the capacity building. The health office should provide training on waterborne diseases and water safety twice a year. Furthermore, technical details provided by the filter users should increase the quality of water filters, (e.g. water holding capacity design). Also, availability of spare parts should be guaranteed.

Experts suggested that expansion of water filters should be supported by providing training to selected model farmers at the Kebele level. Furthermore, a sustainable supply could be supported by monitoring people who have used water filters and solve their problems, provide spare parts and maintenance services,

Operating in a competitive market sustainably remains a challenge and is not without risks. An authority reported that after awareness sessions organized by Navaza, the community could not buy the Navaza filters because of a supply problem. At this stage Tulip introduced itself through Woreda Water Office as water filter supplier and the community turned to using Tulip. Hence fine tuning between organizing events and availability of water filters is crucial for a sustainable business case.

Concerning loan facilities, experts indicated that adequate awareness and explanation for the community about credit services should be given. An interview with a head of a Credit and Saving Institute indicated that

*"The different criteria to access loans to the community are based on the customer's need .... We ensure that the community can repay the loan properly,...borrowers are permanent residents of the local community, organize them and lend to 3-7 borrowers as a group guarantee ... Almost 70% of the borrowers belong to the rural community<sup>97</sup>".*

It is also good to organize various youths to distribute water filter and do awareness work on waterborne diseases in various meeting platforms

The economic sustainability of the Navaza filters was estimated by experts as good. Given the lack of foreign currency in the country the production of filters locally provides an adequate answer to the expected demand. Furthermore, the price of Navaza filter is competitive as compared to its major rival the Tulip water filter. The price of Tulip was Birr 660 but lately increased to Birr 840 and is now sold for Birr 1242. Moreover, Tulip does not provide training. A Navaza filter costs Birr 800 that increases with 250 for transportation and service charge, to Birr 1050. Yet, quality of Navaza filter is superior to other water filters and has a well sustainable position in the market.

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<sup>95</sup> Entrevista 10\_KO

<sup>96</sup> Entrevista 10\_EP1

<sup>97</sup> Entrevista 10\_MF

### Water efficiency in sustainable cotton production, India

Below we report on the sustainability of the Water efficiency in sustainable cotton production project benefits based on the interviews with stakeholders.

All project partners expressed their willingness to continue and scale the project. Yet they agree this would require an extension period of at least 1.5 years due to delay caused by COVID-19. For several interviewed partners, additional funding is a prerequisite for the ability to continue. TU Delft and Biocare do not have a feasible business case without project funding. For instance, the TU Delft app is now in the initiating phase and *“public funding is still needed to scale up”*. However, Solidaridad has already been able to leverage additional funds from different sources (e.g. EUR 5 million from Vodafone) to sustain the association with the project farmers for a slightly longer duration. Additionally, Welspun and the KVKs have access to internal financial resources to guarantee continuation of their activities. Project partners are currently exploring potential opportunities for scaling the project. For instance, TU Delft is having exploratory conversations with the Dutch Embassy in Mumbai of scaling their activities to two other (neighbouring) states. Welspun has started a new company in another district to increase their volumes on organic cotton procurement.

In terms of project activities, stakeholders explain that the business case for beneficiaries is relatively sustainable. According to project partners, organic farming requires less input costs and the premium price would allow farmers to increase their income. Additionally, the TU Delft app will allow farmers to make better decisions that lead to higher productivity and thus higher income. The training and services provided by the project are considered affordable. The beneficiary-level business case partly rests on the assumption that project farmers will be certified as organic, and several stakeholders indicated the certification process is lengthy and cumbersome, and that individual farmers may not be certified as long as their neighbouring farmers do not farm organically.

The sustainability of the water user groups and the water structures is a challenge. To ensure sustainability beyond the project period, the project facilitated the establishment of water user groups in the region who are recognised by the local government body (Panchayats). Yet, one of the project partners observed three villages closely and noted that *“no one is taking responsibility now”*. Only a few women are coordinating the maintenance. According to this partner, 65% out of 100% of the water user groups are not performing well. *“We should include a transition phase to increase chances of these groups becoming more mature. The project is now running activities for five years and then suddenly stops all support. After the project there should be a two to three-year transition phase during which the project monitors the activities of these groups and transfers responsibility with only 5-10% financial support.”*

### Building with Nature, Indonesia

Below we report on the sustainability of the Building with Nature project benefits based on the interviews with stakeholders.

Stakeholders explain that the BwN project did not establish a sustainable business model during the project period. To finance the maintenance of permeable structures and mangroves, communities still depend on public institutes and NGOs. However, although the consortium did many attempts to motivate local governments for ongoing funding, no parties are currently willing invest structurally in the physical structures in Demak. Project partners indicate that a business case is not feasible when only a few villages are involved. While beneficiaries surely profit from the project through their increased aquacultural yields, for parties with strong commercial interest, the project is not attractive on a small scale.

Although project partners indicate an ambition to continue the project activities, it is unclear whether the permeable structures and the fishing ponds will remain in good working condition in the coming years. In some villages, maintenance of the permeable structures has been (partly) taken over by communities. Through the biorights approach, they are now co-owners of the dams and try to continue project activities. Furthermore, project partners indicate that farmers who participated in the project still benefit from what they have learned at the coastal field schools. For example, they still use seedlings that were first provided by the project. Mangroves may continue to grow as well.

However, to maintain the structures well, especially when materials need to be replaced, more budget is needed. Hence, in most villages the project activities are at risk of discontinuation due to lack of financial resources. Some sites have already reinforced dams with hard artificial materials such as pvc. Stakeholders explain that, overall, continuation of development impact highly depends on the extent to which land subsidence progresses and financial resources from the public sector become available.



The technical project interventions have been scaled out both within and beyond Indonesia. After a couple of years, the Indonesian government worked independently on similar projects in 13 other locations. However, these projects were usually less successful as there was no budget for maintenance of the physical structures and lack of involvement (and acceptance) of the local communities. Stakeholders explain that the local communities are needed to maintain the physical structures. Besides, for every project, a tailor-made solution is necessary. Currently MMAF still applies the BwN-approach at several coastline protection projects. As there are little to no NGOs involved in these projects, they still cannot include the social components that lead to community engagement and uptake. Indeed, scaling up the entire integrated approach requires a large budget.

In addition, plans for Building with Nature Asia are currently being made, which will partner with other international water programs or funds. Next to Indonesia, this project will also involve the Philippines, Malaysia, India, China and Vietnam. Lessons learned from BwN Indonesia are being incorporated into the landscape propositions.

### **Water quality management in the Brantas River, Indonesia**

Below we report on the sustainability of the Brantas River project benefits based on the interviews with stakeholders.

Currently, the project partners are not working on a business model to accomplish financial sustainability of the project activities. The Clean Industry Hub has not been successful; hence the local private sector has not been actively involved in the project yet, and has not been presented with commercially viable products and solutions to reduce their amounts of waste. BBWS indicates that, due to lack of financial sustainability, it will be difficult to continue the working group after the project. The TKSPDA platform is funded by the ministry, so this is assumed to be maintained.

Most project activities are still far from finished, but partners do not agree on possible extension of the project. Project partners indicate they do not yet know how project activities can be continued in the future, due to lack of budget and resources. There is a risk that development impact will not be achieved if the PPP does not continue their activities after the project period. Nonetheless, most partners indicate that they want to continue working on more collaborative and integrated water resource management.

Scaling up is not on the table for this project, although discussions on integrated water resource managing take place regularly in the Dutch water sector. TU Delft indicate they are working on the exchange of knowledge on this topic. Besides, PJT1 indicate that they hope this project can be replicated to other locations, funded by other parties.

### **Sustainable Water Services Beira, Mozambique**

Below we report on the sustainability of the Sustainable Water Services Beira project benefits based on the interviews with stakeholders.

Most of the materials used for the water supply system are imported from South Africa, China, and Europe. The water pipes are produced in Mozambique, yet the water purification materials have been imported. Stakeholders explain this is very costly and a real challenge. The 2019 cyclone damaged the Motua purification plant. In addition, the infrastructure, including the distribution plants, the administration office and around 30 km of water pipes, were all severely affected. An emergency treatment plant was built. To be better prepared for such events in the near future, the government has instilled the concept of resilience within their agency in charge of reconstruction. The new buildings and infrastructure are more climate-resistant compared to the existing water system and buildings built by the Portuguese. Vandalism is a major problem: water meters are disconnected (and quickly connected just before FIPAG arrives for recording) or destroyed (this year in 3 places). People use the water meters to sell the parts inside (fittings), but once they take the meters out, the water flows freely. The penalties are fines and prosecution, but FIPAG is working towards a normalized situation whereby all people are connected to the system.

Stakeholders report that FIPAG is well prepared in terms of technical sustainability. In addition, the collection rate for water supply (with additional income from Non Revenue Water) is higher than before and is sufficient to cover the costs. This has been an incentive to scale up, because it pays off. In another district, for example, FIPAG has installed 3km of extra water pipes with local revenue. The NRW business model is now being applied in other cities, such as Maputo, and plans are being made for expansion into Angola.

However, in absolute terms, FIPAG's debts have grown in 2021. Not all that FIPAG earns from improvements made by the project can be reinvested 1 to 1 in their own infrastructure. All income flows back to the head office. But FIPAG has made the NRW component transparent and that has opened the necessary doors. FIPAG has also indicated that it wishes to continue its collaboration with WSUP.

### **A Green Sustainable and Safe Water Source, South Africa**

Below we report on the sustainability of the Green Sustainable and Safe Water Source project benefits based on the interviews with stakeholders.

Stakeholders report that ownership is a problem for schools, yet less so when a mining company is involved. They explain that the organization of the technical part of the GreenSource system could have been done much more on the South African side which could have strengthened sustainability. They indicate that more contact between RVO and the companies in the submission phase would have provided much clarity about sustainability issues, also in relation to possible risks and context adaptation.

Of the current 16 projects, 14 are maintained and are operated sustainably. The system location at Moedwill was however not well anticipated: the system is too far away from where it is needed (dormitories, vegetable garden), obstructing the use of back wash and hindering surveillance. Stealing is a problem on this site where there is no proper fencing, and some system components (pipes and playground) are damaged. School teachers were trained to solve very simple system failures, yet for other issues support from outside was needed. In addition, the majority of those trained in maintenance have already left school or the community.

The system is owned by the school, so there is a sense of responsibility there to keep the system in good condition. However, the school's budget is limited and insufficient to cover the cost of replacing vital parts that are expected to need replacing in about 10 years. Parents (and teachers) are generally not willing to contribute to the system's maintenance because "schooling is for free" and / or their homes are far. Likewise, there is no willingness to pay for water. At the beginning of the project, this was tried, yet the demand for the water dropped to zero. Local funding and job creation through the Skills Development Fund and the Industrial Development Corporation were not considered but could have helped strengthen sustainability. There is no indication that local government will take over the project, and the same holds for the local water authority.

It is difficult for local partners to come up with a workable business model and find a partner willing to provide the financial injection needed to kick-start the business process. In addition, the schools expected more income from GreenSource and support from the mining industry. The political unrest among the miners in the region at the start of the project created a completely different starting position, and the north-west province was also unable to make the financial commitment. The bottling of water (and ice making) turned out not to be a viable business case. With increasing electricity prices, it becomes even less viable. Finally, money could be made by renting out the playground for sports activities in the evening; this option has not yet been sufficiently explored.

There are concerns about the upscaling and maintenance of the GreenSource system. Possibilities for implementing (upscaling) GreenSource in Malaysia are being investigated. Dutch companies have been called upon to take a more active role to ensure the long-term survival of this project once completed. Partners are working on an exit strategy that should have started much earlier.

### **Integrated water management, Ghana**

The challenges for sustainability are largely described in the context of the long-term impact of the projects in section 4.2.2 and Annex I. A major challenge for the long-term impact is the limited capacity among farmers to buy seeds, while the overriding challenge is the fact that a large dam that would increase the availability of water in the region has been discussed for a decade, and it is highly uncertain if and when this dam will be constructed. Finally, government commitment to the region is lacking, much more needs to be done to support the region for project benefits to be delivered sustainably.

### Drops for Crops, Benin

Below we report on the sustainability of the Drops for Crops project benefits based on the interviews with stakeholders.

The intended business case in the Drops for Crops project in Benin is twofold. On the one hand, farmers may increase their production and income, while the ESOP can achieve economies of scale in marketing farmers' products. Indeed, in the current situation, all farmers sell their products individually at the local market or through traders. Collective sales contracts by ESOP with buyers provides benefits to farmers. On the other hand, CSF can increase its market in Benin and achieve greater sales there, allowing them to remain active in Benin.

Yet, the business case is considered fragile. Most farmers in Northern Benin only own a small piece of land and have little investment capacity, which complicated achieving sufficient economies of scale. Hence, the demonstration fields established are larger than initially foreseen, and cooperation is sought with some medium-sized farmers that are already experimenting more with irrigation techniques themselves. Currently, ESOP cannot function on its own either, so also needs funding for the time being. As this organization should continue most of the operations after the project period, their business case is critical to the sustainability of the project. Furthermore, involving local financial institutions is still difficult; therefore, assurance and volume must be built first.

If a business model can be established for the farmers and CSF, the intended concept and development impact can continue, but otherwise it will be difficult. Technical sustainability can be achieved through CSF, and social sustainability is ensured through the involvement of the municipalities. Nevertheless, there are several challenges anticipated regarding the ecological sustainability as well, specifically in relation to the arid climate in Northern Benin, the large distances between farmers and their low level of education, and the current small size of ESOP. Although CSF hopes to expand their activities further into Benin, they have not yet established a sustainable business model there, hence the project has not yet scaled up.

### West Bank wastewater reuse, Palestine

Government institutions are often dealing with the private sector by providing services, but not with an evaluating and monitoring framework. Partners indicated that the main challenge for the PPP model is to lay the foundation for legal grounds that are needed for the partnership. Furthermore, it is also of interest for public institutions to learn and absorb the experiences of the private sector. The project failed because the private co-financer cancelled its financial commitment because of the (largely political) risks of a long-term concession.

### Sustainable water Akagera Valley, Rwanda

As this project has stopped preliminary (has not started), the project's sustainability cannot be assessed.

### Beneficiary perspective

The beneficiary perspective outlines the findings of beneficiaries for each case study.

#### AQUACRUZ, Bolivia

From the beneficiary perspective, it seems that there is a tendency that end users are benefitting from the sustainable implementation of the AQUACRUZ-acquired knowledge and trainings sessions that are sustained after the project ended. Affordability of the supplied water is a challenge to project sustainability.

Measuring the sustainability of the project from the beneficiaries perspective turned out to be a challenge because the name of the AQUACRUZ project was unknown and enumerators could not use the name of the project to refer to a period in which the project was active. The efforts of the AQUACRUZ project basically concentrated on the capacity building component of the EPSA staff and not directly to the end beneficiaries, viz. the clients of the EPSAs. Also the development of communication plans was focused on training of EPSA staff in prioritizing problems related to public relations, and adopting a customer orientation and did not help to increase the brand awareness of the project. Consequently, only 4% of the households interviewed knew the name of the project. The name PERIAGUA, was also virtually unknown. Hence, to measure the impact and sustainability of the project activities the enumerators started the interview with an explanation of the questionnaire objectives and referring explicitly to the period before and after the AQUACRUZ project was

active. Furthermore, we occasionally compare the Focaliza survey results with a survey held in 2019 that covered all EPSAs. (Focaliza, 2019, Satisfaccion usuarios EPSAs).

The household surveys showed that a vast majority (74%) of respondents were satisfied with the functioning of the water system since the finalization of the AQUACRUZ project. That is a higher rate compared to the 59% that was recorded in the Focaliza survey conducted in 2019. This might indicate that the changes in operation that were introduced during the AQUACRUZ project were sustainably followed up after the ending of the project in 2019. The 14% that was not satisfied referred to parts of the water system that were not installed correctly.

The overall satisfaction rates for the functioning of the drinking water (64% satisfied and 6% very satisfied) is higher as compared to the Focaliza survey results in 2019 (56%). Also, the satisfaction rate for the functioning of the sewer system (79% satisfied and 5% very satisfied) and water for personal hygiene (80% satisfied and 7% very satisfied) were high.

Sustainability can also be measured by a continued commitment of households to actively contribute to the functioning of the water system. After the AQUACRUZ project ended we still observed a remarkably high participation (48%) of the respondents in the maintenance of the water system. About 46% of the participating respondents was involved in changing of tubes and 7% in rinsing of the tubes. Other participants indicated a large range of maintenance activities.

The share of respondents indicating that water tariffs are too 'high' (38%) or 'very high' (10%) is more or less the same as the respondents that found the tariff normal (50%). Respondents from COSPAIL found the tariffs in general higher as compared to other EPSAs. Compared to the Focaliza survey in 2019 the satisfaction decreased which might correspond to a sustainable functioning of the shorter billing cycle and higher pressure on EPSAs clients to pay in time.

A majority of the respondents is satisfied (50%) or very satisfied (4%) with the communication of the EPSA. The remaining part was moderately (32%) or not (15%) satisfied. These results showed an improvement compared to the Focaliza survey in 2019 when 41% was satisfied, and 37% was not satisfied. Obviously, the developed communication plans of the AQUACRUZ project are implemented sustainably.

### **Safe Drinking Water for Ethiopia, Ethiopia**

Although the project is still running, it seems that the currently developed activities by the Safe Drinking Water for Ethiopia Project and the collaboration with local counterparts create a sustainable embedding for a further commercially attractive future and sustainable development and expansion of a viable business case.

Beneficiary households of the Safe Drinking Water for Ethiopia Project have witnessed a number of sustainable benefits from the use of Nazava water filters. A large proportion of households (92%) that adopted the Navaza filters realized that the family is now drinking safe and tasty water. In addition to this, 90% of the beneficiaries that used Navaza water filters witnessed that occurrence of water-borne diseases among family members has decreased in the last five years.

The other sustainable impact concerns the cost of medication that also decreased in the last five years since they started drinking filtered water (58%). Household members used to fall sick from water-borne diseases, such as diarrhea, frequently in a year. A lot of cost used to be spent to treat the victim. Since they started drinking safe water, they noticed substantial decline of medical cost to water-borne diseases.

The awareness campaigns and training organized by the project also did foster a sustainable development in the overall water consumption. The facts are clear, comparison of baseline and end-line status indicates that the quantity of water consumed by households has increased over time. The proportion of households who were consuming more than 50 litres of water was 21% in 2018. After five years, this proportion was increased to 69.1%. This was associated with increased water availability created for households since the last five years by Bureau of Water, NGOs and other development partners.

A sustainable development of the project findings can also benefit from the use of new communication means, Knowledge of households' access to communication media helps to design appropriate promotion and other intervention strategies of new technologies. According to the findings, 72% men had access to their own mobile phones while this proportion is 40% for married women and 51% for female household heads. More than 85% of the households in urban settings had access to personal mobile phones while it is 53% for rural households. Household use mobile phones not only for communication but also to listen to radio. Because of this, purchasing a radio apparatus is not getting popular in now a days. In addition to this, radio ownership stands at

37% of overall sample households while TV ownership is rather higher standing at 53%. In urban settings, 95% of the households owned TV while it is 27% for rural households with access to electric power.

The above outcomes/impacts can remain sustainable if the challenges identified are addressed properly. The community and Regional, Zonal and Woreda Offices of Water and Health are optimistic that the company will manage the challenges and ensure sustainability of outcomes/impacts. The Aqua for All NGO has also promised to establish linkages with Nazava Trading PLC, so that they start promoting Nazava water filters for the community as they do for others. These are some of the indications of sustainability for the outcomes/impacts brought by Nazava water filters. The legal proceedings on-going now in the region should also be addressed amicably, and permit issues with Investment Agency should be addressed, so that the company can design robust strategies to promote and distribute the product and sustain the impacts.

### Water efficiency in sustainable cotton production, India

Focus-group discussions with beneficiaries indicate there are positive signs of the sustainable impact on training organic farming practices, yet a more detailed evaluation needs to follow after project completion. All of the farmers involved in the discussions expressed their confidence in continuing organic farming practices. They are generally satisfied about the benefits it provides them (especially mentioning health and income benefits and the high input costs of inorganic fertilizers), despite the current challenges with market prices. As described in section 4.2.2 and Annex I, supporting farmers with establishing market linkages, organic seeds and irrigation tools is key to improving the sustainability and development impact of the project in the long-term.

The sustainability of the water structures supported by the project is a topic of attention. The general perception of the beneficiary farmers is that it is not their responsibility to maintain the water structures, usually a farm or community pond. *“The project has provided the farm pond, so they have to maintain it”*. Others believe *“it does not require maintenance”*, or that local government will step in to conduct maintenance of the structures. Typically, they will add that if they are asked to maintain, they will do so. However, farmers are not aware of the required maintenance efforts and costs to maintain the water structures. Because they are not trained to maintain the structures and they indicate they do not have the financial resources to do so, this makes the sustainability of the structures on the long-term questionable. Experts indicate that the structures need maintenance at least every two years, especially focusing on removing the sedimentation from the pond. Depending on the soil structure, maintenance can be done by hand or by hiring machinery. In some instances, project beneficiaries responsible for maintaining water structures underestimated the foreseen maintenance costs by 300%. In other instances, members of water groups explained they are not able to finance maintenance of their community ponds, and reported to conduct no water budgeting, and no management of maintenance aspects in terms of resource pooling, planning of maintenance activities, or coordination of maintenance responsibilities.

### Building with Nature, Indonesia

During focus-group discussions with communities of beneficiaries, all participants expressed their willingness to continue with their activities to sustain project benefits, such as continuing with ecologically sustainable management of their fishing ponds and maintaining as well as they can both the permeable structures near the coast and the fishing ponds behind the line of mangrove forest. At the same time, the scale and speed of land subsidence overrides the benefits the permeable structures can provide when it comes to protecting the communities from flooding.

The representatives of eleven community groups (men and women groups) still meet quarterly even though the project is finished. The Bintoro Forum facilitates them to advocate their concerns to village and district level government. All male FDG participants currently involved in the maintenance of the project structures (green belt or permeable structure) also indicated they will continue. The men monitor the greenbelt and permeable structures and are convinced that if they maintain them, they will last for five years. One of the participants said: *“During the monthly monitoring of the greenbelt we observe where maintenance is needed. Then we will prepare the material and make sure it is finished in 2 days. However, it is a challenge to ensure proper maintenance in Betahwalang because it is such a large area to repair”*. Another respondent indicated that the bamboo structure is not sustainable and only lasts for one to three years. Therefore, the structure has been replaced by a PVC structure that can last for 10 years. It seems the participants are mostly involved in small maintenance issues and it is unclear to what extent they can perform large maintenance themselves and without additional financing.

Part of the FDG participants stated they wish for an extension of the project. They think project has not reached its maximal effect yet, and they do not feel completely safe now. They explain they will need additional budget to extend the project because the group savings are not enough. Although they are satisfied with the project and still have a good connection with the Wetlands International team, they believe they also need assistance to collaborate effectively with the government. Several participants mentioned they hope the government will help in removing the sedimentation and support with maintaining the mangroves. However, one of the respondents doubts whether this will happen: *“NGOs are worried that removing the sedimentation would only make the flooding worse. I also think the government is not willing to do it because it is not their main programme or responsibility. Probably they have other priorities.”*

### **Water quality management in the Brantas River, Indonesia**

Focus-group discussions with members of communities along the Brantas River indicates that all FGD participants are motivated to continue the project activities. They believe they can and need to continue the activities after the Aksi Brantas campaign has finished in order to improve the water quality of Brantas River. However, the main challenge to the sustainability and long-term success of the project is government regulation and sanctions of polluting behaviour of other actors alongside the river. In some places there is still a lack of government regulation and sanctions relating to waste management, the use of plastic and illegal building alongside the river.

Some participants are hopeful that the community efforts will influence people to change, while others believe that without proper legislation and sanctions in place their efforts will have limited impact. One participant mentioned: *“We believe that with continued efforts the waste will be 0 in five years’ time. But if there is no regulation on district level, nothing will be achieved.”* The community groups also explain to need additional training, tools and budget to be able to continue their efforts in the long term.

### **Sustainable Water Services Beira, Mozambique**

Through a household-level survey, sustainability was probed by asking if households still used the services, if they were involved in the management and maintenance of the facilities, and if they were investing themselves in supply systems. An overwhelming 93% of respondents indicated they still use the facilities. The small group no longer using the services indicate that this is because of damaged facilities the fact that the facilities never functioned properly or were not adequately installed. Only a quarter of the respondents is involved in management or maintenance, the vast majority of which (75%) being involved in the maintenance of public taps, while a smaller share (18%) is engaged in replacing broken pipes and flushing the pipe system (6%). 24% of households are investing time, funds or materials to add to the water supply system. The low involvement of people’s involvement signals a potential challenge for the sustainability of the intervention.

### **A Green Sustainable and Safe Water Source, South Africa**

Through a household-level survey, sustainability was probed by asking if households still used the services, if they were involved in the management and maintenance of the facilities, and if they were investing themselves in supply systems. Concluding, from the survey, sustainability seems to be limited, as there is very limited local ownership of the facilities, and hence very little investment in terms of resources or time in their maintenance.

62% of the respondents still uses the water taps and playgrounds installed by the projects. Those that do not, indicate that the main reason for this is that the system never functioned well or that it is damaged (29.6% and 20.5% respectively) or that they do not find it useful (20.5%). A minority of respondents who do not use the facilities indicate this is because it is too far away (4.6%). A very small portion of the respondents is involved in the maintenance of the GreenSource facilities (5.7%), and when they do, they are involved predominantly in the maintenance of the playing field (71.4%) rather than with the water purification system (28.6%). Finally, only 6.9% of the respondents is investing time, money or materials in the maintenance or upgrading of the GreenSource system.

## K. Efficiency – detailed findings

This chapter describes the detailed findings for the evaluation criteria efficiency. These findings are categorized into the reporting perspective, the stakeholder perspective and the beneficiary perspective.

### Reporting perspective

The reporting perspective can be further divided into a portfolio-level reporting perspective and a project-level reporting perspective.

### Portfolio-level reporting perspective

#### Analysis of portfolio-level data

As described in section 4 and Annex I on impact, it is difficult to measure either impact or efficiency for IWRM and WEA projects, due to the challenges of identifying the number of direct beneficiaries from the projects. Hence the efficiency analysis at the level of the portfolio is done for WASH projects only. For 16 out of the 22 WASH projects, the expenditures can be compared with the number of improved drinking water and sanitation facilities and with the number of persons who gained access to these facilities. According to the estimates provided to RVO by the project partners, these 16 WASH projects improved slightly more than 100,000 facilities and served 1.641 million beneficiaries, of whom 40% are women, 58% live in rural area and 49% are vulnerable. Accordingly, each facility has about 16 beneficiaries on average. From this confrontation it follows that an estimated average of EUR 376 is spent per facility, while the expenditure per beneficiary amounts to EUR 26, on average.

This average is fairly consistent with the findings of a 2020 UNICEF study, which showed that the average capital cost per beneficiary gaining access to basic and safely managed sanitation is USD 24, varying from USD 13 in Central and Southern Asia, USD 28 in Sub Saharan Africa, to over USD 50 in developed countries.<sup>98</sup> Furthermore, the impact calculator of the research NGO SoGive suggests that donating USD 19 to NGO WaterAid can fund a WASH intervention for 1 person.<sup>99</sup> These findings indicate that the WASH interventions of FDW are neither inefficient, nor efficient, compared to WASH interventions of other programmes or institutes.

Of course, when interpreting our calculations, one should keep in mind the considerable differences in the scale, the focus and the circumstances of the various projects, as well as with the fact that some data may require further scrutiny and should be handled with caution. Notably, the estimates for the project in South Africa constitute a clear outlier. The 1,750 beneficiaries per facility is more than 100 times the average, the expenditure of EUR 205,714 per facility is 55 times the average, while expenses of EUR 118 per beneficiary is 4.5 times the average. In all other cases though, the outcomes form a reasonable distribution around the overall averages.

When we consider the different stages of the projects and the calls, the costs per beneficiary are higher for ongoing projects than for finished ones, which can be explained by the fact that the number of beneficiaries may continue to increase. This could also explain the rising costs when moving from call I to III (Figure 35). Linking efficiency to PPP types, small consortia seem to be more efficient than larger ones, whereas there is no difference between private and mixed consortia in efficiency per beneficiary (Figure 36). Because of the outlier in South Africa, it is difficult to compare the efficiency across continents; excluding South Africa from the comparison, the efficiency is roughly equal in Africa and Asia.

<sup>98</sup> UNICEF. (2020). Global and Regional Costs of Achieving Universal Access to Sanitation to Meet SDG Target 6.2.

<sup>99</sup> SoGive. (2023). WaterAid - <https://sogive.org/#charity?charityId=wateraid>

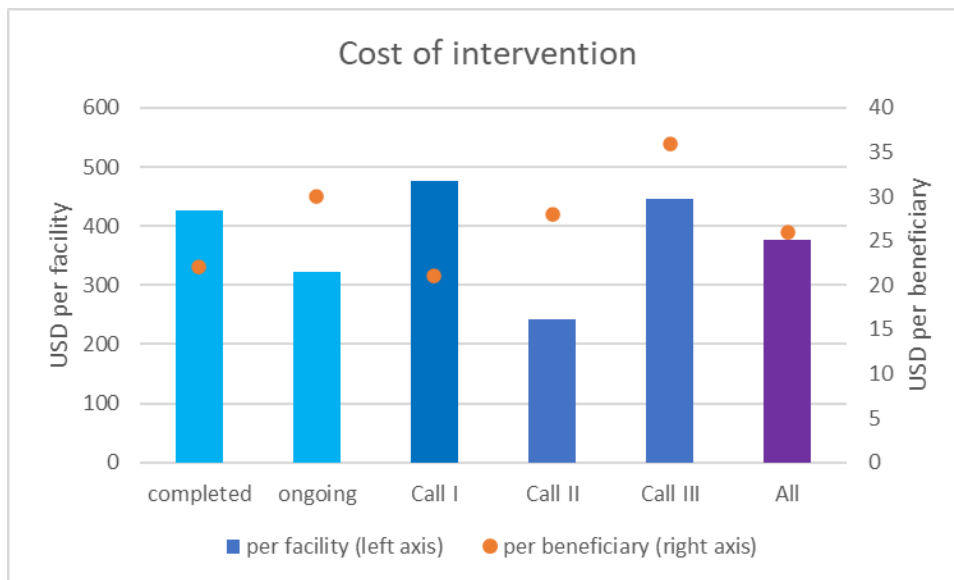


Figure 35: Efficiency of interventions, WASH projects, by completion status and call

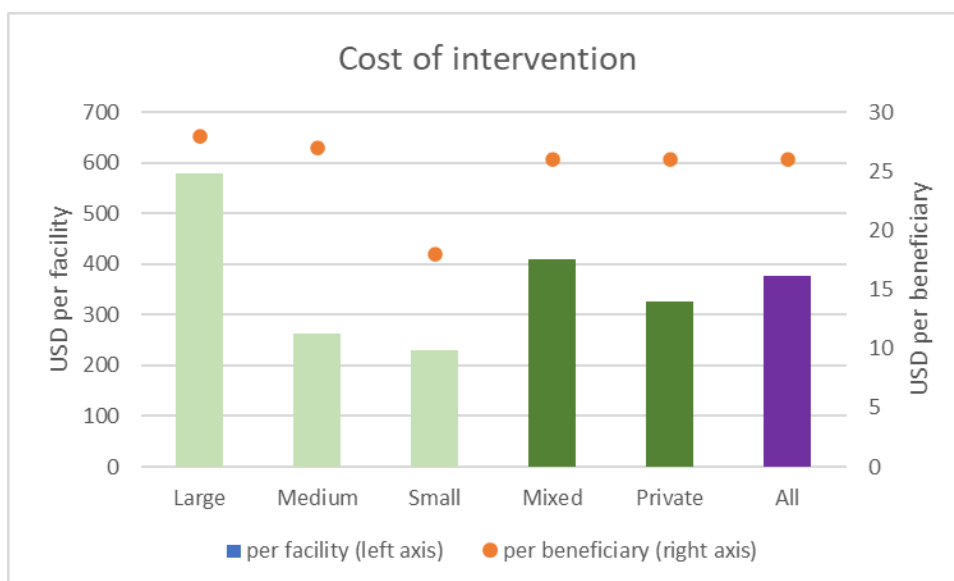


Figure 36: Efficiency of interventions, WASH projects, by PPP type and size

### Analysis of programme level documentation

Programme documentation is unclear on the efficiency of the FDW programme. This appears to be due to the diversity on project designs, sub-themes and local contexts in which the projects operate. As RVO (2021) also noted: "Projects have individual challenges and drivers in terms of theme, geography and approach".<sup>100</sup> To compare the project costs per person within the entire FDW programme would not lead to clear insights, as WASH, WEA and IWRM projects are inherently different. In April 2021, RVO indicated (upon request of IGG) they would consult project partners to compose an analysis of project costs within the WASH portfolio.<sup>101</sup> A detailed final unit cost analysis was not considered possible at that stage, given availability of intermediate results and project development. This analysis has not been made available yet.

<sup>100</sup> RVO. (2021). FDW impact & insight - Strategic session

<sup>101</sup> RVO. (2021). FDW impact & insight - Strategic session



Previous evaluations mention the efficiency of the programme only scarcely. However, the previous MTR evaluation (2016) did share some reflections on the efficiency of the overall programme and RVO's management. The RVO application and assessment process was considered 'good'. However, according to the 2016 MTR, the monitoring process requires attention, including M&E and financial monitoring. In an attempt to engage in efficient project monitoring, RVO shared templates for progress reports and M&E logframes with the PPPs. However, these are mainly focused on project outputs. The previous 2016 evaluation team considered the monitoring process more a 'ticking the boxes' activity than providing insights into the state of affairs of the fund (progress made, main challenges, actions to be taken and lessons learned). Present monitoring methods, formats and tools are insufficient to analyse data on a portfolio level. There is a need for an exploration of a data system to monitor the progress of the impact results on a portfolio level.<sup>102</sup> Additionally, the previous MTR noted that RVO account for public money but "*has surprisingly little insight in what happens with their money except that it contributes approximately 60% to something*".<sup>103</sup>

According to the 2021 annual report, RVO seems to adhere to the agreed budget. In 2021, the total operational costs were lower than the budgeted costs. This was EUR 198,234 less than initially budgeted, or a depletion of 86%.<sup>104</sup> Reasons for lower operational costs are for instance the organization of virtual meetings instead of field visits because of COVID-19 restrictions. Programme expenditures were EUR 7,299,521.36 in 2021, or 92% of the budget (EUR 605,235 lower than expected). The table below summarizes the programme and operational costs (in Dutch, from RVO annual report 2021).

| FDW                               |                  |                  |                |            |
|-----------------------------------|------------------|------------------|----------------|------------|
| Type of costs                     | Budget           | Realisation      | Difference     |            |
| Capacity costs                    | 1,310,779        | 1,232,987        | 77,792         | 6%         |
| Direct implementation costs       | 150,000          | 29,558           | 120,442        | 80%        |
| <b>Total implementation costs</b> | <b>1,460,779</b> | <b>1,262,545</b> | <b>198,234</b> | <b>14%</b> |
| Commitment capacity               | 750,000          | 668,452          | 81,548         | 11%        |
| Programme expenditures            | 7,976,879        | 7,299,521        | 605,235        | 8%         |
| <b>Total expenditures</b>         | <b>9,437,658</b> | <b>8,562,066</b> | <b>875,592</b> | <b>9%</b>  |

Table 39: Programme costs of Sustainable Water Fund (2021), amount in EUR

However, the RVO budget for managing 29 FDW projects has been exceeded in 2021 with 20%. In total, RVO has spent EUR 701,497 instead of the budgeted EUR 583,999. RVO indicates that a selective number of cases requires tailor-made support and therefore extra time and dedication from RVO project staff.

In terms of management, previous FDW evaluations also describe that FDW is focused more on "*procedures and less on the content of the FDW projects*".<sup>105</sup> This reduces FDW's flexibility to respond to contextual changes, innovation and 'trial-and-error'. Virtually without exception, partners in the PPPs also acknowledged that the governance structure of the projects is labour intensive and time consuming. The organization of a PPP with the right partners from private and public sectors, but also from the third sector requires a lot of traveling, communication, meetings and legal inputs. Similarly, the communication and tuning of the interest and activities of the partners requires a lot of diplomatic skills and time during the implementation phase of the projects. Yet, also without exception, the partners in the PPPs confirmed that the benefits of the PPPs by far outweighed the operational costs related to the structure. Moreover, RVO described that projects especially appreciate the inception dynamics (and providing more flexibility).<sup>106</sup> The inception phase is an essential part of the project and when paying the right amount of attention, this will pay off during the project lifetime. Typical reasons for extended inception periods include changes in the partnership, concretizing log-frames and COVID-19 related delays.

Institutionalisation of knowledge is also a topic of attention. Institutional memory often resides in individuals, not in the organization. RVO has made a recent effort to improve programme learning by facilitating FDW Inspire sessions with project stakeholders.

<sup>102</sup> RVO. (2020). FDW Knowledge Management Outline Version 2.0

<sup>103</sup> Van Woerseem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>104</sup> RVO. (2021). FDW Jaarrapportage 2021.

<sup>105</sup> Van Woerseem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>106</sup> RVO. (2021). FDW impact & Insight – Strategic session

Previous recommendations from RVO<sup>107, 108,109</sup> as well as the MTR (2016)<sup>110</sup> to improve the efficiency of the FDW programme are:

- Improve the assessment procedure
- Strengthen the inception phase (including focus on contents and providing more flexibility)
- Focus on quality of the partnership instead of on the quantity of partners
- Include criteria in the assessment, limit the number of countries
- Focus on country-specific calls, which are grounded in strong problem/market analysis or involve external expertise, should be considered to increase focus and/or efficiency tailored to programme objectives<sup>111</sup>
- Reduce the administrative burden, change FDW regulations that prevent adaptation and risk taking
- A 5-10% contingency fund in all project budgets in future programmes could be considered in order to address unforeseen project obstructions and to deal with the dynamics and risks observed in and around FDW projects<sup>112</sup>
- Knowledge management should be built into the design of many programs.
- Simplify M&E procedures, focus on results, allow flexibility in implementation

### Project-level reporting perspective

In this section, we provide information and insights of project efficiency derived from project-level reporting for the selected case studies. To provide some background to the RVO criteria on project level: RVO has several criteria regarding the operational project costs, which are primarily assessed in the proposal stage.<sup>113</sup> These include:

- **Own contribution:**
- **Training costs:** No guideline, “calculate costs per participant”
- **Costs for project management** (employment management + traveling and DSA): Should not exceed 10% of the project budget. These costs are regarded high if it exceeds 10% of the project budget.
- **Monitoring and evaluation budget:** The project should have a sound monitoring and evaluation system. In the FDW-14 call there was a mandatory requirement of at least 2% of the project budget. The 2% is not mandatory for the last FDW-17 call but used as reference point.
- **Inception phase:** Should not exceed 10% of total budget. If higher, it should be demonstrated why more money is needed.
- **Staff tariffs:** Specified maximum tariffs for Dutch staff members, to be found in the “Handboek Loonkosten PPP”
- **Hardware costs:** No guideline, leading question: “Does it provide sufficient information needed for RVO’s project monitoring? For instance is the capacity of HW included, the number of items. As a rule of thumb the HW list is specified at the level of functional unit.”

### AQUACRUZ, Bolivia

The AQUACRUZ project was budgeted for a total of EUR 2,181,732. Yet, project management (110%), technical assistance (101%) and monitoring and evaluation (117%) spent more (EUR 3,962,675) than was budgeted. Jointly with costs for third party the total budget became EUR 4,707,147. This overspending is due to the fact that the consortium partner GIZ has included the real costs that it incurred in the overall of the project. However, the RVO subsidy of EUR 2,181,732 is not affected. Furthermore, GIZ’s accounting system was not compatible with the RVO requirements and reporting on expenditure at sub-result level was not possible.

The reporting of the budget at sub result levels provides some interesting insights how the money was spent on various intervention areas. For the detailed preparation of the interventions per EPSA in total a EUR 85,040 was spent or less than 2% of the total budget or EUR 4,048 per EPSA. Given the success of this approach we state that this money is spent with high efficiency.

<sup>107</sup> RVO. (2022). A decade of RVO management - The Sustainable Water Fund (FDW)

<sup>108</sup> RVO. (2021). FDW impact & Insight – Strategic session

<sup>109</sup> RVO. (2021). FDW Jaarrapportage 2021

<sup>110</sup> Van Woerseem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>111</sup> RVO. (2022). A decade of RVO management - The Sustainable Water Fund (FDW)

<sup>112</sup> RVO. (2022). A decade of RVO management - The Sustainable Water Fund (FDW)

<sup>113</sup> RVO (2018). Draft Assessment framework subsidy applications FDW16

The total spending on the seven intervention areas is shown in figure 37.

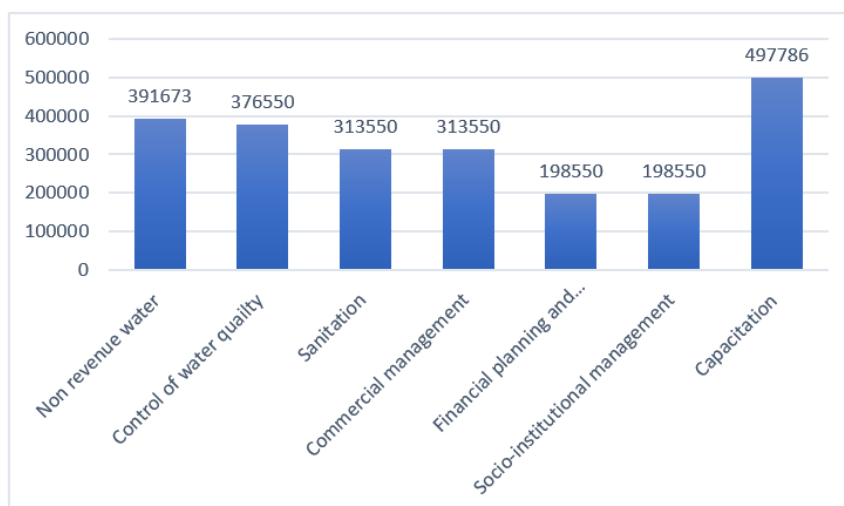


Figure 37: Total spending in EUR per intervention area

The highest spending concerns capacity building that comprises the number of EPSA workers that were capacitated / trained in topics on potable water, sanitation which have improved their professional and working capacities. In total 282 persons were trained, of which 57 women. Hence per person EUR 1,765 was spend on training.

The project spent in total EUR 746,593 to train the SENABSA staff. However, the change of government in November 2019 in Bolivia resulted also in the replacement of the whole SENASBA staff. The new staff has been interested in the training, but due to other priorities is has not been applied until the handover of the final report. Nevertheless, SENASBA foresees the application independently despite the closure of the AQUACRUZ project. As an endorsement SENASBA handed in a letter to AQUACRUZ, confirming the application of the guideline in the before-mentioned 3 EPSA and describes these plans to further apply the guidelines within the scope of MIAGUA IV and AFD.

For the performance improvement of EPSAs in St. Cruz (Benchmarking with FEDECAAS) a EUR 166,500 were spent, which means EUR 7,928 per EPSA. All planned results were achieved. The budget for introducing and anchoring benchmarking in the Bolivian water sector at a national level (AAPS) was EUR 326,500. Activities comprises annual benchmarking; 3 workshops/meetings per year with utilities and additional EPSA reporting to AAPS. New regulatory instrument published by AAPS. Testing of a digital system for reporting on performance indicators.

The reporting shows that all planned results were achieved by the AQUACRUZ project.

### Safe Drinking Water for Ethiopia, Ethiopia

The total project budget was EUR 1,116,956, of which EUR 670,173 was provided by RVO and EUR 446,783 was provided by counterparts, 90% of which was spent at the end of 2021. A remarkable effort, given the COVID conditions and ongoing civil war in the country. The total amount of 474,872 people were trained and received awareness training on drink water quality. Hence, per capita EUR 2.12 was spent for training.

On project management a EUR 237,990 or 21% of the total budget was spend on project management, slightly exceeding the budgeted EUR 236,450. Most of the budget was reserved for technical assistance, in total a EUR 488,242 or 44% of the budget.

Internal occasional overspending was well managed. Because the setting up of local production has been more challenging and the Ethiopian investment commission demanded more sophisticated machinery for the production facility a small overspending was made on the technical assistance and travel to obtain the business license. This overspending was compensated by reducing the number of free filters through health posts and extension workers. The free handing out of filters was also less impactful as expected.

### Water efficiency in sustainable cotton production, India

The project has a total project budget of EUR 3,334,920. Cumulative expenditure up to December 2021 is EUR 599,472. The project management costs in the inception phase have exceeded the approved budget with 32%. The partners did not provide a reason why this budget has exceeded. Travel costs have remained within budget, actually 75% less than budgeted. In 2021, the annual report indicated no revisions of the approved budget for the work packages are required. Most project costs are directed at the Work Package 3: 'Adoption of Water Efficient Production Methods in Market Oriented Irrigated cotton Based Cropping System' (EUR 1,714,369). The overall efficiency of the project has to be properly assessed at the end of the project.

Due to staff turnover at RVO, this project was managed by three project advisors from 2018 to date. This may have resulted in a fragmentation of knowledge. The current RVO advisor has started in September 2022. Due to COVID-19 restrictions the project could not be visited annually by RVO. The current RVO advisor has first visited the project in October 2022. RVO has provided templates to submit annual reports, M&E log frames and financial reports to RVO. The project partners have successfully filled out and submitted the reports throughout the years. According to the finance sheets, the project did not allocate any budget to M&E, which is surprising giving the criterium on a defined M&E budget in the FDW assessment framework (2017). RVO commented that this budget will be included in the last stage of the project. This makes it even more important that clear templates and instructions are provided by RVO. The mid-term report for 2022 is delayed but expected in 2023.

### Building with Nature, Indonesia

For the BwN project, estimating costs per end-beneficiary or cost per outcome is unfeasible, as the number of people that may benefit from long-term coastal protection is difficult to estimate, while at the same time long-term coastal protection be achieved. Furthermore, the project did not report on efficiency standards itself. Yet, the financial statements show that EUR 960,000 was reserved for the construction of 6 primary dams and 3 secondary dams, and the maintenance budget for the structures amounted EUR 40,000 in 2020. At the end of the project, the total costs of trainings provided at the Coastal Field Schools amounted EUR 216,147. With 250 people trained, the average cost per person trained amounted EUR 864.59. As the training of fish farmers is thus relatively time and cost intensive, this aspect of the Building with Nature hampers the efficiency of the intervention. Besides, the total costs for monitoring & evaluation of the project amounted EUR 347,953, which is about 8% of the entire project budget. Project management costs were in line with the committed budget.

### Water quality management in the Brantas River, Indonesia

In the project budget, the vast majority (EUR 3,831,912) is reserved for staff hours and travel costs, leaving subcontracting (EUR 931,353 excluding staff hours) and hardware (EUR 727,250) as relatively smaller cost elements. The institutional strengthening of water quality management (EUR 307,587) and the overall coordination of the water quality monitoring activities (EUR 300,097) are the project outputs for which the most budget is allocated. The budget for staff hours and travel costs was initially divided among 41 involved staff members. Many of these involved are local employees, resulting in considerably lower hourly wages. This benefits the monetary efficiency of the project. Furthermore, only a third of the budget of the project has been spent, and important outcome level results are yet to be achieved. Hence, based on the project documentation, it is too early to draw conclusions on the final efficiency of this project.

### Sustainable Water Services Beira, Mozambique

From the final financial report, it follows that the project has spent 20% of the total budget on management, which is quite a high percentage. 56% was spent on hardware – the rehabilitation of the water purification plant and of the water system, including repairing the damage done by hurricane Idai. Through this rehabilitation, access to drinking water has been improved for 162,000 people (EUR 22.40 per person). Costs of technical assistance were EUR 450,000, but it is not entirely clear how many trainings were given and how many people would have been reached. Hence, the efficiency of the hardware provision is quite good, but the management costs seem to have taken quite a large part of the budget, and the same holds for the technical assistance budget.

### **A Green Sustainable and Safe Water Source, South Africa**

The share of management in the total budget of EUR 6.3 million is 12.6%. Half of the budget is spent on hardware, leading to the installation of 16 systems, at a cost of approximately EUR 200,000 per system. At an estimate number of beneficiaries of 1,750 children and their family members per system this implies that the cost per beneficiary are EUR 118, which is quite high. It can be argued that the system also provides other benefits that are important for children in poor areas (playgrounds), but even if only 50% of the costs would be assumed to be allocated to the provision of water proper, the costs of providing water is still EUR 60 per person. Technical assistance took over 30% of the budget and is spent on training as well as assistance to maintain and repair the installations. When part of this budget is added to the costs of providing the water, then the efficiency of the project is reduced further.

### **Integrated water management, Ghana**

The share of management (including monitoring and evaluation) is 13%, which seems reasonable for a project that is carried out in a region with many challenges with respect to governance and infrastructure. Approximately EUR 3.1 million is spent on a large number of training activities, which according to the reports, included 50-1000 participants depending on the training. In all, this seems money well-spent. 52% of the budget was directly spent on hardware. Given the large amount of infrastructure constructed as well as supporting hardware installed, it also seems that this was money well-spent. Hence, the overall conclusion is that this project was efficiently using funds.

### **Drops for Crops, Benin**

The total revised budget of December 2018 of the Drops for Crops project amounts to EUR 3,197,499. Within this budget, EUR 1,201,589 is reserved for hardware such as the water basins, boreholes and underground dams, and EUR 1,566,328 for project partner hours & travel. The total expected costs for project management amounts to EUR 142,740 – less than 4.5% of the project budget. As the project experienced various delays and few results are achieved yet, it is difficult to assess efficiency. However, the project delays point towards a reduced efficiency. On the other hand, the project can benefit from the experience of the Drops for Crops project in Burkina Faso, which may improve efficiency the coming period.

### **West Bank wastewater reuse, Palestine**

The project aligns to the National Sector Strategy: Water and Wastewater (2011-2013) that aims to provide efficient and effective water and wastewater institutions engaging all segments of society. The total planned budget for the wastewater treatment project in Palestine was EUR 3,498,361, of which EUR 2,313,711 was budgeted for the hardware (different value specified in section 3.3.2.) or 66% (of the total budget). Private partner Padico, would cover 40% of the budget and 60% would come from the FDW. Only EUR 128,616 was spent, and the project was stopped without a substantial output.

### **Sustainable water Akagera Valley, Rwanda**

As this project has stopped preliminary (has not started), the project's efficiency cannot be assessed.

## Stakeholder perspective

The stakeholder perspective can be further divided into a programme-level stakeholder perspective and a project-level stakeholder perspective.

### Programme-level stakeholder perspective

Not all stakeholders spoken with were conversant on efficiency of FDW at programme level, as this is a topic on which little data and documentation is available. The stakeholders that did comment on programme-level efficiency provided the following insights.

**Management of cost effectiveness within FDW** – Some general comments were made about cost-effectiveness within FDW:

1. **Assessment of efficiency by RVO** – Although not a specific part of the program, stakeholders report that efficiency is assessed, such as determining whether the budget is proportionate to the planned outputs/results during the proposal phase
2. **Limit for project management**– Project management costs are limited according to stakeholders to a maximum of 10% and M&E costs to around 2%.
3. **Distribution of budget within projects** – Stakeholders explain that RVO does not know the specific contribution of project funds to partners because it is up to the partners themselves to divide the budget.
4. **No focus on cost-effectiveness** – Unlike in the early years of the program, according to stakeholders, there is no active focus within FDW on cost-effectiveness. FDW differs from other programs in managing cost-effectiveness (e.g., tighter timelines) partly because the PPP approach makes FDW much more complex. FDW is larger than the Private Sector Investment program (PSI), which also has no partnerships, but smaller than the Dutch Good Growth Fund program (DGGF). RVO was instructed by the ministry to find a middle ground for the assessment in terms of intensity. Whether cost-effectiveness is a pressing question for MFA was more or less confirmed with reference to a (cost-based) study of WASH projects currently being carried out by the Netherlands Court of Audit (Algemene Rekenkamer).
5. **Hiring of external parties during initial phase** – Stakeholders explain that the first period of FDW was characterized by haste, both in terms of content and cost. As soon as the setting up of the instrument was mentioned in the coalition agreement, FDW had to be set up quickly. This led to the hiring of external parties to do, for example, certain analyses. Hiring externals is more expensive, so it had an impact on cost-effectiveness.

**Impact of different approaches on the cost-benefit ratio of projects** – A comparison is difficult according to stakeholders, as the cost-benefit ratio varies from project to project and country to country. In Bangladesh, for example, the enabling environment is good and the cost per person is relatively very low. But in countries in Africa, the costs per person can be 5 times higher.

### Project-level stakeholder perspective

In this section, we provide information and insights of project efficiency derived from project-level stakeholder interviews for the selected case studies.

#### **AQUACRUZ, Bolivia**

Interviewees<sup>114</sup> pointed out that the AQUACRUZ program was very idealistic, as in 3 years it aimed to change the situation of different cooperatives and their trajectory. Although EPSAs share a similar structure, they are different in management and internal policy making. This might initially compromised the efficiency of the project. Yet, these interviewees explain:

*"Of course, it is important to bear in mind that it is a process of maturing ideas from directors, acquiring learning from technicians, responsible people. That is why I think it is a very positive thing that these ideas have been implemented ..., I think it is the added value that resulted, since an experience and awareness has been acquired on the subject".*

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<sup>114</sup> Entrevista 10\_JM

The project efficiency was also described by other experts<sup>115</sup> who indicated that the implementation of this project has been pertinent and necessary in view of the demand and the need of the EPSAs, especially in specialized technical support. They consider the approach of this project to have been well planned with clear results and goals:

*"In addition, it should be added that a very paternalistic policy is usually given, which persists until now, but in the project it was different because it was worked jointly with the EPSAs. Furthermore, the name AQUACRUZ was decided by themselves."*

Concerning efficiency on energy use, the extraction of groundwater from subterranean sources requires large amounts of energy that are consumed by submersible pumps and motors. Hence, advises on energy efficiency and maintenance of their wells for drinking water production was an important contribution of the AQUACRUZ project. With support of the project, EPSAs started a detailed monitoring of their energy costs that were translated in easily interpretable indexes of energy-use and energy-costs. Through these calculations the utilities have identified measures to reduce their energy expenditures. For example, in 6 EPSAs oversized pumps were identified that could be replaced by installation of pumps and motors with less physical potential, which produced the same amount of water but consumed less energy. All utilities implemented energy efficiency measures to their pumping devices which were advised by the AQUACRUZ project. Therefore, lower expenditures on energy were achieved.

The reduction of Non-Revenue Waters was an important target to improve efficiency in the water system. The losses went down from 28% (baseline) to 22%, but then increased again to 25%. It should be noted that the reported differences in NRW are large (e.g. values span from 9,78% (COOSAJOSAM) to 49,84% (COOPARE)).

### **Safe Drinking Water for Ethiopia, Ethiopia**

According to stakeholders, the Safe Drinking Water for Ethiopia project in Ethiopia had an efficient implementation of its project targets but suffered from 2019 onwards from several setbacks. First, sales of the filter stopped effectively in May 2020 because of continued production issues with the mould, causing a small gap between upper and lower container. Consequently, the mould had to be adjusted and was shipped to Indonesia. Second, due to the COVID crises less training sessions could be organized and less woredas could be visited (43) as planned (48). Second, the ongoing civil war between the Ethiopian government and Northern Tigray with both sides accused of multiple atrocities had a devastating impact on the country and the project. Specifically, the war heavily impacted on the project's target group and project staff and many areas were declared unsafe to travel. Furthermore, the development of the partnership came under pressure as it was difficult to work together. Fourth, and finally, the Ethiopian Investment Commission rejected the business license in 2021 based on the Ethiopian preference for large scale industrialized processes.

Despite these difficulties the project showed its resilience. The adjusted mould was incorporated into the production process. The reduction in sales is expected to be increase as there is still a large demand for the product; four sales agents that resumed their activities. The role of MFIs will become more important after getting back to the market. Finally, upon the purchase of two additional machines to manufacture activated carbon, Nazava is expected to be granted a business license.

The project shows a remarkably high resilience to recover from several unexpected issues and maintained a strong belief in the final project objectives.

### **Water efficiency in sustainable cotton production, India**

Stakeholders explain that there were two issues in the project that caused delay and thereby also hindered efficiency in the project: the issue with TU Delft wages and COVID-19 restrictions. However, the impact of COVID-19 on training activities was also partly mitigated by adopting an alternate source of engagement with sources through digital medium (SMS and WhatsApp). Major progress was made in 2022 in terms of resource utilisation. The brief pauses due to COVID-19, interactions with farmers and project partners also gave project partners a great opportunity to reassess the best suited hardware based on the agro-ecological conditions in the region. This learning will be shared with RVO in form of a proposed request for changes in hardware items alongside the request for no-cost extension of 1.5 years in this year.

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<sup>115</sup> Entrevista 10\_JCC

### **Building with Nature, Indonesia**

The BwN approach used in this project is not considered as efficient by various stakeholders. One of the project partners mentioned that while the Building with Nature concept can (in theory) be replicated to every delta, every new location is unique and would require a thorough landscape investigation from specialised engineers. In addition, to maintain the permeable structures and fishing ponds, local farmers should be properly trained, and actively involved in the project. As these project costs are high, but necessary to achieve impact as well, this constraints efficiency but also the scalability of the project.

### **Water quality management in the Brantas River, Indonesia**

Due to the project delays, the project is not yet considered efficient or cost-effective. In addition, the market-based approach through the Clean Energy Hub was abandoned. Nonetheless, this project requires hardly any investment in infrastructure, and most project activities could be continued by local parties later on. Thereby, the project does have the potential to be efficient, but more project results are needed first.

### **Sustainable Water Services Beira, Mozambique**

Stakeholders explain that it is rather difficult to relate the cost of the project to the output. After all, there are not only the direct water connections that count, but there is also a joint impact on Beira. In the case of 600,000 people in Beira, then the costs would be EUR 10 per person. But the efficiency also depends on how impact is calculated.

In addition, the investment costs have had an impact. Vitens' own contribution was higher than expected: although basic materials could be purchased in Mozambique many other materials had to come from abroad (England, China).

In terms of time, the project could have been run more efficiently if not for COVID and the cyclone of 2019. With projects like this, the run-up to implementation takes a lot of time; it takes until all parties know what they want, and it is a process to get to that point. Without COVID, the project could have been completed more quickly. But on the other hand, the project has not suffered much from COVID, because everything was already done (and set up). The exception to this is the latest implementations, which took longer. Similarly, community activities have been hampered by COVID, especially the group training on sanitation and water.

### **A Green Sustainable and Safe Water Source, South Africa**

Stakeholders explain that decision-making in South Africa is complicated, as people are hesitant to make rash decisions. They report that perhaps the project could have been more efficient, yet the role of decision-making should not be underestimated. In addition, the political and economic climate in South Africa continues to deteriorate; this in turn also has an impact on social sustainability.

Stakeholders think that demonstrating that GreenSource water supply can be done decentrally is worth an investment. There will be 17 million litres per year (equivalent to the needs of approximately 200 thousand people for a year), and it can last for at least 10 years, so it would be very efficient. But the question is whether the 17 million will be achieved. The parts are mostly available locally; the artificial grass for the start was delivered from the Netherlands. Efforts are also being made to produce even more locally. The local partners can now also start building and maintaining the system themselves, which reduces the cost of the system. The installation training is provided by Royal Tub, together with Happy Feet.

### **Integrated water management, Ghana**

Stakeholders explain that, since the location of the project implied that no existing infrastructure was available that could be used by the project, substantial investments had to be made by the project itself, but public investments were expected as well. The lack of these – and/or the substantial delays - is compromising the efficiency of the project investments, as the returns for farmers of having improved irrigation systems is highly conditional on the ability to sell the produce, which in turn implies that connections to more affluent markets are critical. Stakeholders stress, though, that the project could not have foreseen that the public investments would not be made, or would be delayed to the extent they were.



### **Drops for Crops, Benin**

Stakeholders describe that, although the original design of the project was considered to be relatively efficient, part of the project budget has been used to write new plans and reorganize the consortium, while staff and travel costs continued. Furthermore, downscaling the targets also increased cost per farmer, and getting the pumps and equipment available in Benin reduces cost efficiency as well. Stakeholders explain that, perhaps, if more flexibility on the investments made was allowing during the inception phase, this could have increased the efficiency during the project implementation.

### **West Bank wastewater reuse, Palestine**

According to the interviewees<sup>116</sup> the project was based on a solid business case concerning the efficiency gains in water production and related increase in agricultural activities. Moreover, public members are now increasingly accepting treated wastewater for reuse. The demand for treated wastewater is increasing especially after the proof that it is cheaper and efficient for irrigating. However, the project was cancelled before real-world results could be generated.

### **Sustainable water Akagera Valley, Rwanda**

As mentioned in previous paragraphs, the project has stopped preliminary. Therefore, the efficiency has not been discussed.

## **Beneficiary perspective**

The beneficiary perspective outlines the findings of beneficiaries for each case study.

### **AQUACRUZ, Bolivia**

The higher efficiency of billing cycle was profitable for EPSAS but earlier payments were somewhat less popular with invoiced clients. Nonetheless the higher billing efficiency will in the long term also benefit the clientele of the EPSAs as people will avoid in delaying payments. Second, all utilities implemented energy efficiency measures to their pumping devices which lowered expenditures on energy which might give the possibility to lower the tariffs accordingly.

### **Safe Drinking Water for Ethiopia, Ethiopia**

Buying a Navaza filter (app. 1250 birr) can result in large efficiency gains. First, as water from the river and hand pumps can be used an expensive digging of a well can be avoided saving approximately 5000 birrs. Second, Using the filter health expenses can be saved that could reach a 3000 birr per year for clinics, but now all the family members are healthy and the only expense is for her regular check-up.

If benefits are so clear, it becomes interesting why the expansion of the Navaza filter does not take off. Hence, households who did not yet purchase water filters were asked the reasons why. A large proportion of them (76%) clearly indicated that unawareness is the major reason. They are not aware of how water filters work and how they can make water safe for drinking. Households require adequate awareness on availability, price, spare parts and maintenance issues. This is the key message from the community to Nazava Trading PLC. If awareness is created adequately and promotions are made, and issues of availability and spare parts are addressed, 78% of the community has plans to purchase water filters in the future.

### **Water efficiency in sustainable cotton production, India**

The FGDs with beneficiary farmers did not provide any direct information on the efficiency of the project. However, it was noted that beneficiaries spread their knowledge within their network. Training one group of farmers successfully can therefore efficiently result in increasing awareness amongst a much larger group of farmers. Additionally, in some trainings only one representative of a group is allowed to join the training. This can also be considered an efficient way of spreading knowledge. At the same time, the level of information will degrade. In one FGD, the women were aware that some of their group members joined the training session on microenterprises, whereas they could not tell us about any learning from this training (and expressed their

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<sup>116</sup> Entrevista 10\_GA

desire to receive support on marketing their business). This learns that dissemination of knowledge is not guaranteed and field officers should ensure frequent follow-up to monitor group understanding.

**Building with Nature, Indonesia**

Beneficiaries did not mention any topics related to the efficiency of the project.

**Water quality management in the Brantas River, Indonesia**

Beneficiaries did not mention any topics related to the efficiency of the project.

**Sustainable Water Services Beira, Mozambique**

Beneficiaries did not mention any topics related to the efficiency of the project. This was not included in the survey.

**A Green Sustainable and Safe Water Source, South Africa**

Beneficiaries did not mention any topics related to the efficiency of the project. This was not included in the survey.

## L. Relevance & Additionality – detailed findings

This chapter describes the detailed findings for the evaluation criteria relevance & additionality. These findings are categorized into the reporting perspective, the stakeholder perspective and the beneficiary perspective.

### Reporting perspective

The reporting perspective can be further divided into a portfolio-level reporting perspective and a project-level reporting perspective.

#### Portfolio-level reporting perspective

##### Analysis of portfolio-level data

Overall, the score on additionality and relevance is a 6.7/10 on average, based on three indicators: (1) would the project have been done without subsidy?, (2) did private partners contribute to the project (in cash or kind) and (3) was this contribution substantial? Figure 38 presents the outcomes by theme. For all themes, it is clear that the project would not have been carried out without subsidy, and private partners have contributed to the project. However, when asked for the magnitude of the contribution, IWRM and WEA score very low. This may signal a lack of relevance, as local partners apparently are not willing to carry the project. However, it can also be a signal of a lack of financial means. Finally, the portfolio analysis does not allow for an assessment of the contribution (in kind or cash) of local or national governments, as project partners or as enablers of the project. Hence, based on the limited number of indicators, it is difficult to reach a conclusion on relevance.

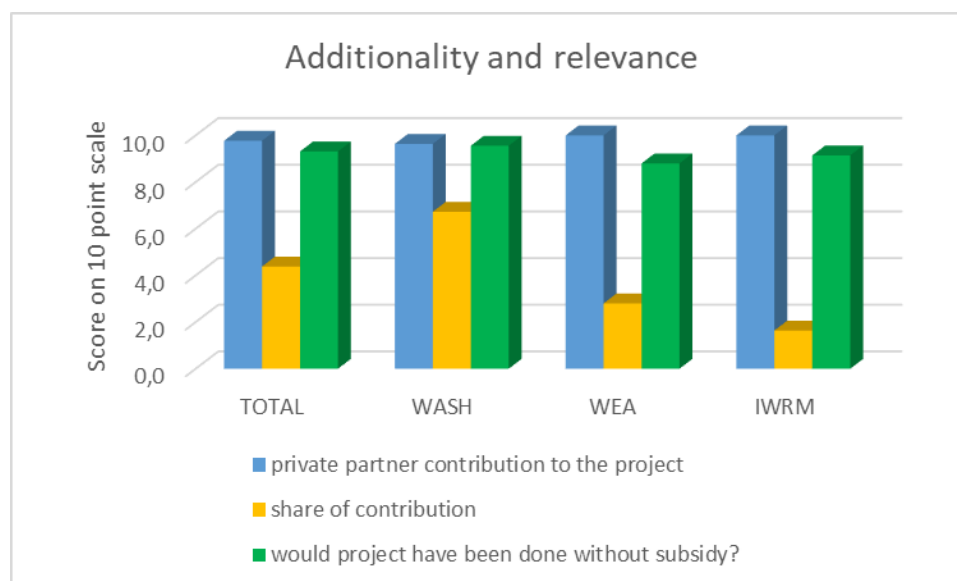


Figure 38: Scores of projects on additionality and relevance

#### Analysis of programme level documentation

##### Context relevance

Previous evaluations show mixed findings on the context relevance of the FDW programme. In general, most projects bring an adequate knowledge of the local context and are considered innovative within the local context.<sup>117</sup> According to the 2016 MTR evaluation, all projects also fit into the existing policy priorities (as required). However, RVO does recognize the need for more context specific frameworks in future programmes.<sup>118</sup> First, FDW does not adopt a demand driven approach or engage in regional planning. For instance, FDW could identify specific local or regional problems and invite partners to come up with solutions. Second, the assessment does also not differentiate between regions, for instance there is no difference in the subsidy possibilities (i.e. higher subsidies in conflict regions or considering alternative financing models in fragile states). A suggestion as mentioned earlier, is to focus on country-specific calls, which are grounded in strong problem/market analysis or involve external expertise.<sup>119</sup> Lastly, the assessment includes limited criteria

<sup>117</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>118</sup> RVO. (2021). Discussion paper FDW program - Strengths, Challenges, Opportunities & Vision

<sup>119</sup> RVO. (2022). A decade of RVO management - The Sustainable Water Fund (FDW)

on context relevance. For example, WASH projects should not be seen as a 'one size fits all' approach. Specific regions require differentiated instruments.<sup>120</sup> It is also important to do a needs assessment at the beginning of the project, to know the community needs.<sup>121</sup>

In addition to better aligning with the local context from the start, more attention should be provided to the contextual changes during the project. "Long duration programmes require adaptive projects", as RVO formulated in its 2021 annual report.<sup>122</sup> The inception phase is crucial for this aspect. A longer financed inception phase could help with making the project designs and plans truly align with the context and ensure partnership and plans are sufficiently concretized.<sup>123</sup>

### Private sector relevance

Engaging the private sector remains challenging: most of the matching funds in 2016 (51%) were "public" in character (government, donor, foundation funding and from beneficiaries).<sup>124</sup> The private sector contributed with 22%, of which 17% for commercial and 5% for business development purposes. Additionally, the previous MTR mentioned the distinction between public and private is quite artificial. The water sector is a predominantly public domain. However, water utility companies are considered private. Furthermore, many of the private contributions come from CSR budgets. These have more in common with "matching funds from non-government sources than commercially driven private sector investment".

There are various possible reasons to explain why the private sector might be less interested. First, project applicants find the FDW arrangement too cumbersome in terms of the grant mechanism and application process. Second, the level of the own contribution is considered too high for uncertain gains (approximately 30%). Due to the considerably high business risk, FDW seems to attract more established businesses. Third, private sector may not want to work together with other parties in a partnership modality. Fourth, FDW does not pay for market exploration, market analysis or problem analysis. Fifth, private parties consider the grant too risky and do not want to wait so long (year 10) to see a return on their investment. Lastly, private parties have money to invest on their own and do not need FDW financing.

A particular challenge for the sub-sector IWRM is that the sub-sector is often considered a public domain and unfamiliar to PPP approaches. Additionally, interventions require high level funding and complex development trajectories, thereby of less interest to the private sector. Consequently, the IWRM sector has the most difficulties with involving private sector.

There are several recommendations to increase the engagement of the private sector.<sup>125</sup>

- **Increase clarity around the definition and expectations of the private partner.** Also differentiate between the business case and the business model. These terms are used interchangeably but are different. The business case could be around creating value or saving on costs. The business model focuses on how value is created.
- **Define potential roles of the private sector.** For instance, private companies can engage in what are described as 'reshaping-the-rules' partnerships due to an interest in a stronger enabling and more predictable business environment.<sup>126</sup> In a 'reinforcing-institutions' partnership the private sector could provide technical assistance to under-capacitated public institutions. The most natural role for the private sector is in the 'market-solutions-partnership', where the private sector brings products and services to uses and thus has a clear and direct commercial benefit.
- **Enhance knowledge on business drivers for companies to increase interest.**
- **Elaborate on the risks private partners are taking and how FDW can help mitigate or reduce these risks.** Of course, it would help if FDW could allow for more risk-taking, so the private sector has to bare less risks. According to Erasmus University (2020), it was often private partners that took a disproportionate amount of the risk.<sup>127</sup>
- **Let the recruitment of proposals pay more attention to country-based advertising and brokering of partnerships.** Specifically targeting local problems with a solid revenue-based business model approach, could attract more local private parties.

<sup>120</sup> Discussion paper FDW program strengths, etc.

<sup>121</sup> Strengths, Challenges and Lessons Learnt FDW (2020)

<sup>122</sup> RVO. (2021). FDW Jaarrapportage 2021

<sup>123</sup> RVO. (2022). The Sustainable Water Fund's Public-Private Partnership Portfolio: Reflections through a partnership lens

<sup>124</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>125</sup> Van Woersem, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>126</sup> RVO. (2022). The Sustainable Water Fund's Public-Private Partnership Portfolio: Reflections through a partnership lens

<sup>127</sup> Erasmus University (2020). Evaluation of projects co-financed by the Sustainable Water Fund (FDW)

### Additionality

The 2016 MTR reports that FDW mainly has added value by bringing actors together and creating strategic and potentially sustainable partnerships. Additionally, FDW specifically targets the water sector, thereby providing a chance to these parties who often find it difficult to compete in other funds. FDW can play a role in catalysing the development of revenue-based water sector products.<sup>128</sup> FDW also aims to be additional by drawing in new actors. However, several evaluators found that FDW often attracts the ‘usual suspects’, organisations active in development cooperation, such as knowledge institutes, NGOs, some consultancy firms and water utilities. Dutch SMEs are generally not attracted because the barriers to entry are too high.<sup>129</sup> FDW does not aim to be particularly innovative. The focus on the business case means FDW prefers to select projects with a proven concept.

FDW is also considered additional when comparing to other sustainable development facilities financed by the Dutch government. The largest resemblance is between FDW and the Facility for Sustainable Entrepreneurship and Food Security (FDOV). The two facilities both focus on public-private partnerships. FDW focuses on the water sector and FDOV on the food security sector. However, some overlap between the two could possibly arise, especially in the water efficiency domain (WEA projects). Other facilities focus on either the water sector but without the PPP approach (e.g. Via Water, DHK, Partners for Water) or the PPP approach but without focus on the water sector (e.g. ORIO and DRIVE).

There is no specific built-in link to other instruments. This is a missed opportunity, as seeking these relationships could increase mutual learning and also possibly create follow-up opportunities for FDW projects, which can strengthen development cooperation across the entire water sector. FDW does more recently try to increase the knowledge exchange between related programmes, such as WaterWorx and Bluedeal. For instance, by generating newsletters and inviting both FDW-colleagues and other relevant stakeholders to the monthly FDW workshops.

The positioning of the different facilities for sustainable development impact in the water sector is illustrated below, as provided by PPP Lab (2015).<sup>130</sup>

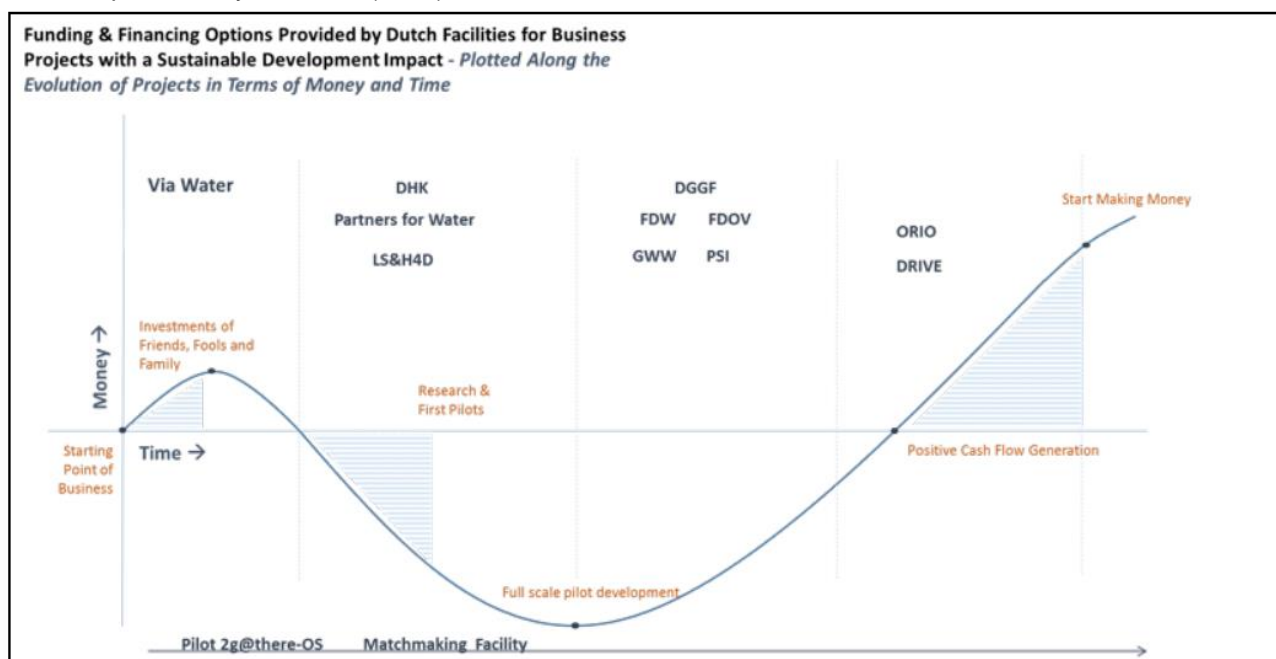


Figure 39: Position of the funding facilities on the ‘time-line’ of the evolution of projects from idea to market

<sup>128</sup> Van Woerse, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>129</sup> Van Woerse, B. Heun, J. Caplan, K. (2016). Sustainable Water Fund Mid term Review. Final report

<sup>130</sup> PPP Lab Food & Water. (2015). FDW and FDOV in the broader Dutch funding and financing landscape

There are no earlier findings that FDW has specifically tried to seek alignment or cooperation with other donor programmes. This is a critique from Zwijs (2020), who describes that, in some cases, there seems to be a duplication of interventions of other donors. In other cases, similar donor initiatives may even hinder FDW project interventions. Before starting a project, it is important to have an overview of all international donor initiatives working on the subject and try to cooperate (or at least align activities). The Embassy could play a key role in facilitating this mapping and contact.

### Project-level reporting perspective

In this section, we provide information and insights of project relevance and additionality derived from project-level reporting for the selected case studies.

#### AQUACRUZ, Bolivia

It can be concluded from project documentation that the AQUACRUZ project was addressing the needs and issues that were raised by the EPSAs using an elaborate needs assessment during the inception phase of the project. Hence, the AQUACRUZ project can be considered as relevant. Considering the factors that enhance or diminish the interest of private partners in the public-private partnership model, we refer to the earlier mentioned low tariff structure for the sale of water, regulated by the government which discourages the EPSAs as private partner to further develop their potential. The increasing efficiency that in certain parts of the water supply chain are institutionalized are attractive contributions to foster the participation of the EPSAs.

With regards to input additionality, the EPSAs would not have conducted the project activities without the financial means that were provided by the contribution from FDW. Another additional component is that the project was able to capitalize on existing institutional networks that brought EPSAs and supervisory objects together. The visits of the Dutch experts can also be considered as an additional value. The technical staff of the EPSAs indicated that they did learn a lot from talking and discussing relevant problems with experts that are versed theoretically but also come with practical solutions for the work floor.

#### Safe Drinking Water for Ethiopia, Ethiopia

From project documentation it is beyond doubt that the Safe Drinking Water for Ethiopia is a relevant and positive contribution to the needs for clean and healthy water resources in Ethiopia. The chain of awareness campaigns on clean water, the technique learned to purify and store water safely, the production line of the Navaza filter as alternative purifying methodology and the resulting decrease in water-borne diseases are vital elements of a well-designed and well executed project.

The interest of private partners to join the PPP did not only depend on available subsidy, it was also encouraged by the complementarity of the partnership and efficient division of executive tasks in the partnership.

Regarding additionality the project would not have been viable without the start subsidy. First, it made Resilience BV an attractive partner for co-financing. Second, capital was necessary to build the production plant. Third the awareness campaigns and training sessions needed substantial financial support to reach the large target groups.

#### Water efficiency in sustainable cotton production, India

Project documentation shows that the project demonstrates local relevance by seeking to build a business model that addresses a local urgent problem and involving all relevant stakeholders. The consortium partners provide locally relevant technological and infrastructural solutions to reduce water scarcity and increase water efficiency. For instance, farmer trainings are not only provided by extensionists from the private consortium partners but also by local government KVKs (extensions under the Department of Agricultural Research and Education of the Indian Ministry of Agriculture and Farmers Welfare). This collaboration, in addition to multistakeholder workshops, aim to contribute to a larger scale replication of the project interventions, thereby also increasing its relevance and additionality.

Project documentation does not indicate whether the contribution of 60% of the total project budget provided by the FDW programme would be additional to activities that would have been undertaken regardless. TU Delft

provided a contribution of about 5%. The largest (financial and in-kind) contributions were done by the two local companies: Welspun India Limited (10%) and Biocare (25%). They both have an interest in the project because of a business interest to create sustainable supply of high-quality cotton. Welspun has committed to source at least EUR 1 million worth of cotton produced by project beneficiary farmers and to date (December 2021) has procured 5200 metric tons of cotton from farmers connected to the FDW program. Biocare has an interest by providing organic inputs to farmers transitioning to sustainable farming practices. Together with the consortium, they have established a network of demonstration plots with application of their own biological environment-friendly agricultural inputs.

### **Building with Nature, Indonesia**

For the BwN project, project documentation indicates that the private partners' interest was mainly enhanced by the opportunity to improve knowledge regarding nature-based solutions for coastal security and to broaden the toolkit of measures to increase sustainability performance. Furthermore, the project could be used to strengthen collaboration with Indonesian contractors. Nonetheless, working in a large multi-cultural consortium containing partners with different disciplines and backgrounds was also seen as a main risk at the beginning of the project, as this could constrain efficient collaboration and integration of work packages and approaches.

The project proposal describes that the project partners aimed to solve various problems in the local context. Indeed, the project should not only prevent flooding, but the fishing ponds should also have a positive impact on farmer income, and the planting of mangrove forest strengthens the local ecosystem. In this way, context relevance of the project is substantiated.

As the BwN project consisted of both Ecoshape, Wetlands International and Witteveen & Bos, all financially healthy organizations at time of the project application, the public contribution from FDW may not have been entirely required to keep the project afloat. Yet, considering the uncertainty around the eventual impact of BwN at that time, the project funding did mitigate some of the financial risk for project partners. In addition, due to annual budget allocation and approval, both the Indonesian public agencies MMAF and MPWH were not able to mitigate financial risks by committing a cash contribution.

### **Water quality management in the Brantas River, Indonesia**

Project documentation describes that for the private partner in the Brantas river project, TAUW B.V., the project was interesting since they are extending their market to Asia with river rehabilitation project in several Asian countries. TAUW also had a long-standing relation with the TU Delft, so this project provided a credible and robust opportunity. Although working with local business and manufactures, and insufficient participation of policy makers were outlined as risks in the project, it was assumed that these risks would not actually lead to actual problems.

Given the high levels of water pollution in the Brantas River and the impact this has on communities living along the river, improvement of water quality as described in project documentation is certainly relevant to the local context. However, enhancing and aligning the water monitoring capacity does not directly ensure improved living conditions, and the large length of the river makes the local problems challenging.

As both the lead partner (TU Delft) and private partner (TAUW B.V.) of the Brantas river project are Dutch, FDW might have been instrumental in the establishment of the project. Nonetheless, as stated in the project plan, eventual required post-project funding must be generated by the Indonesian ministries. Thus, these project partners will probably also have to reserve own budgets to keep the project running. Given that they did not seem to have these budgets available at the beginning of the project, the FDW contribution can surely be considered additional to this project.

### **Sustainable Water Services Beira, Mozambique**

In its proposal (Project plan Beira), the applicant (VEI; private sector) proposed a partnership that combines three partners, each with a specific key competence required to implement the project: water operations (FIPAG), technical assistance (VEI) and community involvement (WSUP). The partnership proved to be adequate, with its partners indicating a good collaboration. However, no attention was paid to the partnership itself, for example in terms of looking for a long-term strategy for the partnership. In addition, while FIPAG and VEI had a longer history of Water Operator Partnership through other programmes and projects, (the inclusion

of) WSUP was seen as a "vehicle to get the project done" (Aqua-for-All external evaluation report, April 2022); the latter was also evident from the Concept Note on NRW strategy by FIPAG HQ (2021 June) in which the role of WSUP (and Community-based Organizations) is not mentioned.

As stated in the Aqua-for-All external evaluation report (April 2022), this project is considered highly relevant as is evident from its NRW reduction approach being replicated in various other cities of Mozambique. Reducing water production and collection losses is crucial in an area like Beira where the water source capacity is limited; it will increase the volume of water for citizens, provide a higher revenue, give net savings, offer potential to connect more houses to the water network, and prepares FIPAG in Beira to become a viable company.

### **A Green Sustainable and Safe Water Source, South Africa**

The project plan explains the reasoning behind the PPP formation, pointing to Green Source as a multi-purpose solution that was still *"too expensive for a small rural community, village or local government"* at the time the project ideas were developed. The private partners were therefore involved to finance the considerable amount of initial investment, supply the materials, technology, and knowledge, and manage the project. Their cooperation with the (local) government parties was seen as useful to secure the land near the schools for the project and to obtain information about pollution, water resources and irrigation systems. In addition, prices for the Green Source systems were expected to fall as demand for the systems would increase over an estimated five-year period. The interest of the private partners, who saw Africa as a new economic development area, was to eventually spread the Green Source system across the entire African continent.

The North West Province Department of South Africa was highly interested in this project because it was well aligned with the Agriculture Master Plan for North West Province launched in 2010 (Project plan 2012). Water is considered to be the key limiting factor for development in the North West Province. Approximately 30% of people in the North West Province is living in substandard living conditions and many rural communities are dependent on groundwater. The province faces main groundwater quality issues because of pollution by mining and industrial activities. The 20 project sites for building the Green Source systems were all planned in a mining area where water was polluted over a long period of time with wastewater from the mines. Therefore, it was expected that both the local communities and their environment would benefit from water treatment to access clean drinking water and irrigation water. Total well-being and good health are cornerstones for the development of the province. So, in addition to safe water and nutritious food, exercise in the form of sports on the playgrounds of the Green Source system is also important and relevant, especially for children in schools.

### **Integrated water management, Ghana**

Project documentation shows that the interest of the private partner was linked very closely to the intrinsic motivation of the founder of the company. Hence, when the company decided to leave the consortium, a new company, founded by the same person, entered the consortium. Commercially, the interest of the private partner was linked to the possibility to develop a viable agricultural system including a value chain. The relevance of the project is very clear, as the North of Ghana is a dry area, poor in infrastructure (including irrigation) and with many smallholder farmers who are in need of improved agricultural practices. Given the risks associated with investing in this part of Ghana, carrying out this project without public financing would have put a large burden on the private partner.

### **Drops for Crops, Benin**

Project documentation described that the ambition of CSF (a manufacturer of water pumps and towers) is to expand its business from Burkina Faso to other Western African countries. Hence, the PPP allows them to make the step to Benin. With this PPP, they can provide farmers the financial option to pay off their equipment in three years' time, increasing the opportunities for expanding sales. ESOP has been established by project partners Dedras, CSF, and ETD (an NGO active in Togo and Benin), as representative company for the farmers. This private partner thus not joined the partnership itself.

Given the severe drought and limited development in northern Benin, the intended interventions are relevant to the local population. Moreover, the interventions in the Drops for Crops project in Burkina Faso have also already proven that they can have a strong impact on local living conditions.



Project documentation indicates that, given the limited financial resources in northern Benin, it seems unlikely that project partners could have undertaken the same project without FDW support. Even with contributions from FDW, building the business case is challenging, given the little investment capacity of the local farmers. Moreover, at the end of 2022, contribution from the communes was still unsure. Thus, the local public sector seems unable to finance project activities on its own as well.

### West Bank wastewater reuse, Palestine

Project documentation on the PPP described that the approach of this project was to encourage a real partnership between the public and the private sector. The project encouraged the private sector to invest in the water sector to share the benefits, responsibilities, and risks jointly with public institutions. The PPP was not considered as one of the targets that should be achieved but is a means to contribute and serve the project. Factors that diminished the interest of the private partners in PPP: Too much risk to invest. Factors that enhanced the interest of private partners in PPP: The shared responsibilities, risks and benefits

### Sustainable water Akagera Valley, Rwanda

Project documentation describes that the partnership consists of three private companies, namely Kabuye Sugar Works Limited (KSW), Royal Haskoning DHV Nederland B.V., and TechForce Innovation B.V., in addition to the Rwandan Ministry of Agriculture and Animal Resources and the Netherlands-based NGO Agriterria. Since the early 2000s KSW is actively involved in development cooperation in Rwanda, collaborating with local NGOs and interacting with global institutions.

The interest of the KSW (lead) in the project relates to the opportunity to produce more sugar through the extension of the area under sugarcane cultivation. In addition, KSW has been working successfully for 4 years with the farmer-industry-government triangle in the earlier project 'Sugar: Make It Work' (FDOV12RW02) also financed through RVO (see below). Royal Haskoning DHV became involved in the project through its multidisciplinary consultancy services in areas such as water and the environment, infrastructure and ports, industry and energy. With its vision "Improving society together", the company wants to contribute to sustainable development. In the water sector, this includes providing safety to people (the farmers in this project) and ensuring sustainable water management, areas of expertise also required for this project. TechForce Innovation B.V., a Dutch privately held SME in setting up and managing projects, was invited by KSW to provide such support for the SWIAVI project.

Rwanda is a relatively small country where the availability of agricultural land is limited and partly affected by floods and droughts. Rwanda's population density is the highest in Africa at 471 people per square kilometre, and with a fast-growing population, pressure on land is very high. The SWIAVI project is partly based on the earlier 'Sugar, make it work' project, which was set up to optimize the existing land use by carrying out drainage work between 2013 and 2018; more specifically, the project regulated the water level in a sugarcane growing area along the Nyabarongo river, not far from the capital Kigali. The SWIAVI project aimed to also make the wetland area further downstream, referred to as "Masaka Marshlands", suitable for sugarcane cultivation. One of the programs of the Rwandan Ministry of Agriculture and Animal Resources involves the transformation of wetlands into productive farmland. Although the government of Rwanda has already allocated the Masaka Marshlands for sugarcane cultivation, its Ministry of Agriculture is interested in developing more wetlands in the long term for the cultivation of various crops including sugarcane.

KSW owns the only sugar factory in Rwanda that produces 30% of Rwanda's total sugar consumption. The demand for sugar is still increasing rapidly. Therefore, Rwanda imports most of its sugar, so expanding current sugar cane cultivation for sugar production would eventually make Rwanda less dependent on imported sugar.

## Stakeholder perspective

The stakeholder perspective can be further divided into a programme-level stakeholder perspective and a project-level stakeholder perspective.

### Programme-level stakeholder perspective

**Relevance and additionality of FDW** – Programme-level stakeholders shared the view that without the public subsidy, projects would not have started, or they could not operate at their current (larger) scale. Stakeholders consider FDW not only additional through its financial support, but also through its contribution to the formation of new partnerships by bringing new partners together.

When discussing the additionality of FDW, stakeholders provided various factors that have contributed to its success and factors that require more attention (see table 40 below). Some factors are mentioned as a success factor by one, while being noted as a shortcoming by others. For example, some identify the contribution from the private sector (20-40% of project budget) as a distinctive strategy contributing to sustainability. But others argue that, in practice, private sector investments are still underrepresented. The lack of investment is mainly explained by financial uncertainty in the subsidy scheme and commercial interests of private partners. The holistic approach of FDW is seen as a success factor and one respondent advocated including this as a 'condition in the FDW framework'. Two respondents considered the learning element in FDW a success, mentioning the improvements in recent years, such as, the FDW inspire sessions and newsletters. Another respondent argued that RVO could optimize further learning between projects.

| Success factors   | Limiting factors  |
|---|---|
| <b>PPP ambition drives and facilitates new partnerships</b>   | High administrative burden (reduces participation of smaller partners)      |
| <b>Holistic approach (including different partners with different approaches to solve complex problems)</b> | Financial uncertainty (adversely affects participation of smaller partners) |
| <b>Business case approach</b>   | Lack of investment from private sector                                      |
| <b>Own contribution as prerequisite for participation</b>   | Potential to optimize knowledge sharing amongst FDW projects                |
| <b>Knowledge and learning element in FDW</b>  | Complex consortia = complex collaboration                                   |
| <b>Linking projects to maximise interventions</b>   | Subordinate role of local partners  |
| <b>RVO selection criteria allow for participation of smaller partners</b>                                   | Difficult to quantify some FDW results such as organizational change        |
| <b>Flexibility and customer orientation of RVO</b>  | Holistic approach is not (yet) a FDW condition                              |
| <b>Focus on value for money (instead of promoting Dutch businesses)</b>                                     | Underestimating effect of commercial interests                              |

Table 40: Factors mentioned to influence the additionality of FDW

**Private sector relevance** – Table 41 below gives an overview of the factors that enhance or diminish the interest of private partners to engage in a PPP, as reported during the interviews. Although the diversity of answers for both types of factors is comparable, there are clearly more interviewees (who point to factors that reduce interest (unfavourable water sector characteristics and too high FDW requirements) than interviewees who point to factors that arouse interest (good communication with the private sector, local relevance of the project objective and committed project partners).

| Category   | Type of interest  |
|--|---|
| <b>Interest increasing factors</b>                           |   |
| <b>Communication and information</b>                         | <ul style="list-style-type: none"> <li>• Organisation of external communication and information meetings with private sector partners</li> <li>• Awareness raising activities</li> </ul>                        |
| <b>Relevance of project objective for local stakeholders</b> | <ul style="list-style-type: none"> <li>• Local transformations in water use</li> <li>• Access (large) sales market and knowledge exchange and / or contribute to development of own country / region</li> </ul> |
| <b>Type of partners to be involved</b>                       | <ul style="list-style-type: none"> <li>• Highly engaged and active partners</li> <li>• Dutch companies in working abroad and wanting to learn</li> </ul>  |
| <b>Interest reducing factors</b>                             |   |
| <b>Characteristics of water sector</b>                       | <ul style="list-style-type: none"> <li>• Unattractive for commercial investment</li> <li>• Too little profit, too few opportunities for private parties</li> </ul>  |

|                         |   |
|-------------------------|---|
| <b>FDW requirements</b> | <ul style="list-style-type: none"> <li>• Own contribution: a stumbling block for local parties</li> <li>• Financial uncertainty until end of project due to contract form</li> <li>• Too much emphasis on performance</li> <li>• Excessive administrative workload</li> <li>• High requirements for project proposal, high efforts (time input) to arrive at proposal hindering participation of smaller parties</li> </ul> |
|-------------------------|---|

Table 41: Factors mentioned to influence the private sector relevance of FDW

**Risk-taking and innovative interventions** – Previous studies noted that FDW seems to operate in a risk-averse manner and in practice does not fund the most distinctive or innovative interventions and business cases. When asking programme stakeholders about their feedback on this observation, various responses were noted.

Respondents argued that there is a misperception that FDW is a difficult fund for small private parties because it is rather risk averse. Yet, some of the smaller parties have been brought under the wing of other FDW partners to cover these risks. Regarding innovation, there is 1) one group of respondents explaining why there is limited funding of innovative interventions and business cases in FDW and 2) another group explaining that FDW thinking is innovative after all. The first group mentioned that FDW's rigid setup and assessment criteria could hinder innovation. Project proposals must comply with the policy rules set by the MFA, if they do not, RVO must reject them. Explanations for limited funding of innovative interventions and business cases. The second group considered FDW as innovative because the PPP approach in itself is innovative. There are not as many PPP funds yet. FDW brings different partners in the entire value chain together. Additionally, when compared to other programmes FDW allows projects to have a longer implementation phase (about 5 years) during which there is also room to implement innovative changes (that might arise from the sector).

**Context relevance** – Stakeholders commented mainly on the factors that positively or negatively influence co-ownership and equality in partnerships, and the explanation why this is the case:

- **Local interest/local presence (positive):** RVO encourages equal relationships, bearing in mind that local interventions are required in which the participation of local parties is indispensable. Moreover, the local presence of Dutch partners ensures good cooperation.
- **Time investment in relationship development (positive):** Invest time in developing relationship and getting to know each other's interests, language, and culture will help to develop equal partnership.
- **Own contribution (negative):** It is often difficult for the local private party to *make its own contribution*. But FDW did reduce the amount of the co-payment after the 3rd round to make the participation threshold lower for smaller parties. Moreover, FDW provides funding space for smaller parties, which do not qualify for direct funding from IGG.
- **Output focus/Lack of flexibility and its impact on task division (negative):** Co-creation and co-responsibility are sometimes at odds because FDW gives little flexibility. To ensure outputs, partners each have specific (complementary) tasks (not necessarily of equal weight) as a result. Moreover, RVO has a strong and legal role yet encourages equivalence.
- **Attitude of RVO advisers (positive):** RVO advisers do think along with interim changes and encourage equality, for example by communicating or writing to all parties instead of just to the lead party.

**Additionality when compared to other donor or MFA programmes: a complicated process** – Connection with other MFA programmes is referred to as being “still complicated”. There is a clear link between FDW and FDOV as the two programmes were set up in parallel. Both adopted the PPP approach, with FDOV focusing on the agri component and FDW focusing on the water component. However, cooperation with other MFA programmes is limited to non-existing. In recent years, knowledge exchange has been encouraged by organising FDW inspiring sessions, sending newsletters and organising lectures to which stakeholders from other programmes are also invited. There are no findings on the result of this exchange. Cooperation in the field is also not observed. Additionally, it is not easy for projects to graduate from FDW to other MFA instruments. Connection is complicated by the fact that FDW differs from other programmes in various ways. First, there are differences between the implementing partners of the various MFA programmes. MFA has limited capacity and therefore outsources programme management to other organisations such as RVO. Second, instruments all have a unique focus (little overlap), which means that it is rare that a completed project can be referred to a follow-up programme. Third, FDW projects are usually implemented in other geographical regions (the geographical distance often limiting cooperation with other programmes). MFA is considering how to use available knowledge and capacity as efficiently as possible for activities management (we call this the less-better-more-flexible agenda).

**Cooperation with other donors is considered even more complex** – Coherence with foreign projects received little attention in setting up FDW. One respondent mentioned that FDW's PPP approach in the water sector is rather unique (and additional) so it was difficult to find examples. However, MFA did look at countries like Sweden and Denmark that also set up a water fund. This was not about lessons regarding PPP thinking but more about maximising impact for water projects. Besides complicating the functionality of the programme, respondents also mentioned two other explanations. FDW is tied to Dutch companies, thereby partly excluding cooperation with other donor programmes. There have been improvements in recent years with links to multi-donor programmes: in 2012 there was only some exchange (of knowledge and experience) but now there is an increasing focus on multi-donor initiatives.

**Recommendation to increase cooperation with embassies** – Embassies (can) play important roles in forming partnerships, connecting with other (BZ) donor programmes, and thus achieving greater impact. They have a good insight into what is happening in a country, which international actors are active in certain regions and on certain themes. To date, this cooperation has been limited. This is mainly caused by the role division between MFA the Hague and the Embassies. Roles are divided in terms of programme responsibility (capacity and budget). "In an ideal world, embassies do play an important role, for instance suggestions for engagements with other donors and to scale up. In reality, this does not succeed because time and capacity are limited." This is also caused by a lack of budget. Programmes funded by the decentralised budget are the Embassy's first responsibility and therefore get priority.

## Project-level stakeholder perspective

In this section, we provide information and insights of project relevance and additionality derived from project-level stakeholder interviews for the selected case studies

### AQUACRUZ, Bolivia

Concerning additionality all interviewees indicated that the AQUACRUZ project would not have been conducted without the funding from FDW.

*"I don't think so. I'm not sure. Most likely, tools were purchased, so it would be difficult for an EPSA to pay for those things. There are also things they couldn't pay for, such as external know-how, which AQUACRUZ offered."*

The relevance of the project was also confirmed by the interviewees. The earlier mentioned detailed needs assessment plays an important role in the relevance character of the AQUACRUZ project. Moreover, the need for cooperation was also emphasized.

*"I believe that now more than ever, the sector needs support from cooperation, and we have realized that there is a lack of strengthening. Also, supervision is very important."*

### Safe Drinking Water for Ethiopia, Ethiopia

Regarding additionality and expert emphasized that it is not easy to carry out such a project in Ethiopia without subsidy 'Without financing, you are very much on your own and they probably would not have started setting up a local production facility and sales in rural areas.'

Hence, the subsidy was considered to be essential for the success of the project. Other companies probably would not have participated as other water filter companies are mainly focused on urban areas and are not familiar with the local production process in Ethiopia. Furthermore, there are already other water filters on the market, which forces the project to improve the quality of their water filters and bring them to the market against an attractive price.

The factors that enhance the interest of private partners in the public-private partnership model is a combination of the available subsidy to give a kick start and that the members of the partnership complement each other well. Hence, efficiency and distribution of roles and tasks in the partnership are important to make a joint venture attractive to the private sector (with little to no duplication of tasks and roles).

### Water efficiency in sustainable cotton production, India

The project and the selection of project locations are relevant in the local context. The project partners emphasized the scope and urgency of the problems in Maharashtra. The training of farmers may not be unique as there are multiple other NGOs/foundations involved in training farmers in Maharashtra, yet is highly relevant. The added value of this particular programme is the holistic approach to improving the livelihoods of farmers,

especially by adopting a market-based approach and creating better market linkages for farmers. The project also adapted to the current times where digital literacy is key and has promoted utility of Agri-meteorological advisories amongst the farmers.

Overall, the funding of FDW can be considered additional. TU Delft and Biocare could not have started the project without this public contribution. According to project stakeholders, the timing of the public contribution from FDW was crucial to kickstart the project. Without the public contribution from FDW, the project might have started a bit later and the involvement with farmers at such a large scale might have not been possible in such a short span of 1,5 years. The private-sector party Welspun and the KVKs seem to have sufficient internal funding available. Welspun is financing the project from its CSR programme and KVK is financed by the Ministry of Agriculture of India.

Project partners recommended taking the time to learn about the local and social reality. The expectation of RVO on the deliverables was focused on hardware, tangible deliverables and allowed for less flexibility. It would be helpful if there is less emphasis on logframes and infrastructure based KPIs during the inception phase (and set KPIs after the inception phase). Another recommendation focused on the value of local support systems. In a geography adversely affected from climate change impacts, a supporting system always needs to be present to safeguard the natural resources as well as the financial security of farmers. This includes engaging various stakeholders and creating better market linkages for farmers. Lastly, the adoption of Agri-meteorological advisories is highly recommended. It has triggered a better understanding amongst the farmers on the importance of IoT-based applications and helped them experience the benefits of technological interventions.

### **Building with Nature, Indonesia**

The project was seen by project partners as a good opportunity for a demonstration project. The shared ambition and joint motivation were supportive for the project partners. The partnership was unique at the start, but also complex in terms of coordination. Although the project was not able to reduce the risk of flooding, the project partners consider the interventions relevant to the local context. The interventions are relevant to both the population and conservation, and can be replicated in other areas both within Indonesia but also across Southeast Asia.

Project interventions are not yet market-ready, so FDW funding was essential for this PPP. Several project partners indicated they would not have been able to finance their community activities without the funding. Initiatives like the BwN-project are not set up by the Indonesian government. Other projects with a similar approach have also used funds to set up the activities.

### **Water quality management in the Brantas River, Indonesia**

The partners are mainly interested in improving mutual cooperating. Project partners indicate that the project also has academic value, as it provides new research opportunities. Perspectives regarding the context relevance are mixed. While the interventions are largely considered useful by project partners, it is also recognized that the project approach is not comprehensive enough to effectively address local water quality improvements.

Project stakeholders explain that, although the public partners already worked together before the project, the current cooperation would not have been fully established without the funding of FDW, as this funding allows institutions to spend more time on the project activities. Nonetheless, as stated by several project-level stakeholders, similar projects are also implemented without public funding. Moreover, some of the local government institutions in the PPP would have done their project activities (specifically the water quality monitoring) anyway.

### **Sustainable Water Services Beira, Mozambique**

The partnership is described by stakeholders as being transparent, helpful and small, with only 3 partners. It was a conscious choice to form a small partnership, which is easier to manage. The partners had not worked together before, but they already had bilateral collaborations. Both Vitens (private) and FIPAG (public) have their respective roles in the hardware and infrastructure establishment. WSUP, the local NGO, conducted the community surveys, an external partner was hired for the leadership training, and an IT company for the payment innovation. Stakeholders report that the partners have a good relationship and plan to continue the collaboration.

Stakeholders do not expect that the partners would have done the project without the public contribution from FDW. Drinking water is not a public good that generates profit, so partners cannot get started without a subsidy. Similarly, NRW reduction might not have succeeded without subsidy. The investments would have been too high and the result too uncertain. Moreover, the research was large-scale and would entail high costs.

Stakeholders describe several factors that have enhanced the participation of the private sector parties in a PPP: Commitment, a sense of responsibility and solidarity towards others to improve water supplies. Moreover, the activities that follow from the PPP fit within their mission to guarantee “access to water”. Demonstration, bridging the “valley of death” through (public) funding, and getting the support of local governments are three other conditions for the success of private sector participation.

### **A Green Sustainable and Safe Water Source, South Africa**

Local interviewees expressed the project’s general lack of understanding of how South African government institutions work, which may have been due to the lack of government involvement in the design phase of the project. The impression is that the conceptualization of the project was done by engineers in the Netherlands. A major omission appears to have been the timing and alignment of the GreenSource project plan with the local government’s five-year plans, which made it difficult to integrate the project activities into the government’s Integrated Development Plan (IDP). It is positive that the recently developed Green Villages concept, in which GreenSource participates, has now been included in IDP. Finally, there is also a clear need to put much more emphasis on risk assessment than the impact part of the proposed project. The risks are only broadly defined (political, social, financial, environmental), while specification based on local context is necessary.

Stakeholders explain that this project would never have happened without a public contribution from FDW. Obstructing factors are the co-financing. Without co-financing, it will be difficult to carry out the project and the consortium is now running into this: the project is running for quite a long time and costs (extra) money.

Although the private partners played a very important role in this project, their role in the project was not clear to everyone. Due to the takeover of Ten Cate by the (newly established) Ammon Foundation, the partner Landscape solutions disappeared, and the tasks and activities of the Water Research Committee remained unclear. Stakeholders indicate that there was a lack of full commitment from key private partners. It was expected that the large partners would reinforce the smaller partners and use more of their own resources, but instead the smaller partners (Royal Turf, GreensourceNPC, Ammon) led and supported the project. It is not clear for stakeholders why the larger partners have not taken up their role. Finally, in addition to private partners, the success of the project also depends on the schools with which the project is carried out. A more active participation of the schools was expected to make the project a success, but schools have a limited budget and GreenSource is not their priority.

Factors that enhance the interest of private partners in PPPs include demonstration of benefits of the PPP, bridging the “valley of death” through government funding, and getting the support of local governments.

### **Integrated water management, Ghana**

Under the first FDW call, it was still a requirement that the public arm contribute in cash (not in-kind). Stakeholders describe that this was quite a challenge because these kinds of contributions have to be included in the central government budget. SADA was an authority (parastatal) and was able to provide financial funds to some extent, but the remaining required funds were provided by IWAD itself, which ultimately undermined the intended PPP shareholding structure. Stakeholders report that, because the project started in an isolated area, the government contributed quite substantially to the improvement of infrastructure in the region, which was much more significant than the cash contribution from the government to the project. Under the FDW facility, a knowledge institute had to be added – Alterra. They have partly contributed to the development of a knowledge component (training and demonstration plots). Alterra’s contribution was really the result of FDW requirements and clearly improved the project; this is a clear example of additionality through the public funding.

### **Drops for Crops, Benin**

CSF was originally based in Burkina Faso and had a good reputation as a supplier of water pumps and irrigation equipment. They purchased land in the project area (Natitingou) where they will establish an office, to expand their market there and sell more products. The project has allowed CSF to make themselves known in Benin, and offering them the opportunity of more strategic partnerships, bringing benefits to both CSF and the farmers. Working in a PPP is new to CSF but is seen as a great opportunity for the company. They had a difficult start as they were not yet established in Benin, yet are currently content with the progress of the project and the way of working. Furthermore, CSF indicates having a positive relationship with the municipalities, which accelerates the introduction of the new technologies. Contact with the farmers is usually made through Dedras,

but once initial contact has been made, direct contact between CSF and the farmers occurs, so that any concerns or problems may be addressed directly. Moreover, this positive relationship can strengthen the contextual relevance of the interventions.

The funding of FDW is considered additional by CSF. Indeed, before the project, CSF were only able to make sales to wealthier farmers. This project allowed CSF to target farmers with more financial difficulties, as they can be given the opportunity to buy a pump on credit, which they can pay back over the course of 3 years. Through this mechanism farmers can gain more profit, increasing their ability to repay the cost of the pump in the long run. Moreover, CSF appreciates the presence of Woord en Daad and involvement of the Dutch government, as this allows CSF to gain respect of the local communities.

### **West Bank wastewater reuse, Palestine**

Stakeholders explain that the approach of this project was to encourage a real partnership between the public and the private sector. The project encouraged the private sector to invest in the water sector to share the benefits, responsibilities, and risks jointly with public institutions.

The project was considered as a proof of concept. Yet, the project could have been conducted without public contribution from FDW as the local government considered the project of great importance. The PPP was not considered as one of the targets that should be achieved but is a means to contribute and serve the project.

Factors that diminished the interest of the private partners in PPP : Too much risk to invest. Factors that enhanced the interest of private partners in PPP: The shared responsibilities, risks and benefits

Stakeholders indicated the pre-requirements for successful partnerships. First of all, to have a real PPP partnership you need a good environment for collaboration. Second, it needs to be defined exactly the intervention areas so the private sector can be engaged. Third, the collaboration between the government and private sector, where the private sector should contribute socially and have some incentives of funds or grants. In this way a clear partnership is established.

Concerning additionality, according to one expert the project could have been conducted without public contribution from FDW as the local government considered the project of great importance. One expert considered the project as proof of concept and indicated that subsidy was necessary to cover unforeseen risks.

### **Sustainable water Akagera Valley, Rwanda**

Stakeholders explain that factors that reduced the interest of the private partners in the PPP of the project were unexpected rainfall, high implementation costs, political forces, and lack of additional financial contribution from the Rwanda Government and other donors. The high estimated cost of land reclamation is related to the wetness of the terrain which necessitates pumping, apart from development of hard water management infrastructures. In addition, the effects of climate change had led to river silting, resulting in a shallower but wider river, making the project area almost a permanent lake. Water management solutions need to be more robust, require more frequent maintenance and thus cost more than originally planned. Initial plans for relocating and expanding KSW's factory to an area less prone to flooding were submitted to Rwanda Development Board. However, a decision on the location of the SWIAVI project has not yet been made, due to disagreement between other government entities with different priorities, which reduced the interest of the private partners.

Stakeholders explain that factors that (initially) increased the interest of the private partners in the project include:

1. Access to Dutch expertise: through RVO, the lead private partner got access to other Dutch expertise
2. Good collaboration with the partners and RVO during previous project.
3. Land ownership: Recurring flooding is a problem in the Nyabarongo and Akagera valleys, where the Ministry of Agriculture owns the wetlands, making it necessary to form a partnership and find funds.
4. Financial and other support: KSW would not have been able to continue with the project without external support to fund the farmers components; additional investment from RVO, other Donors or Rwanda government would facilitate the project to become economically viable

Stakeholders report that Kabue Sugar Works (KSW) initiated the project by extending the funding needed for the initial studies by Royal Haskoning DHV. However, KSW could not have continued the project without external support to finance the farmers' components. In addition, support was needed from the Ministry of Agriculture, owner of the target area (about 600 ha for farmers and 600 ha for KSW), which made it necessary to enter into a partnership.

## Beneficiary perspective

The beneficiary perspective outlines the findings of beneficiaries for each case study.

### **AQUACRUZ, Bolivia**

At the level of the end users, the AQUACRUZ interventions were relevant in improving the protocols for water quality assessment and improvements in water supply. During the focus group discussions at the EPSA it was indicated that the relevance of the AQUACRUZ project was undisputable. Moreover, the knowledge transfer was by some EPSAs seen as a new essential initiative to continue with the opening of training processes aimed at the sector, from the technical level to the professional level. It was suggested to start a water university aimed at training the technical staff including a training in rural and urban planning which would equip EPSAs as a good counterpart for the interventions through municipalities.

The project activities would not have been conducted without the subsidy of the FDW. The budget of the EPSAs is very tight due to the low water tariff schemes and most training sessions and workshops are sponsored by external funds.

Concerning the Private sector relevance we discussed here before that EPSAs as Private Entities in this project were strongly regulated and could not develop their potential role as entrepreneur. The public partner, as a matter of fact, was not the protector nor the custodian of the EPSA, but was the most important regulator to maintain low water tariffs which constrained the required investments to let the EPSAs operate as a water unit with a full mandate from water supply, used water collection and water treatment.

### **Safe Drinking Water for Ethiopia, Ethiopia**

The relevance of the project at the level of the end-user is best understood by the following story line. Out of the household who faced water-borne diseases, 93% of the overall sample households have taken their victim to health centres spending for water-borne diseases on average Birr 965.21 up to Birr 4600. Addressing the causes of water-borne diseases through various water treatment mechanisms, such as water filters, means saving this expense. For instance, the price of Nazava water filters at the time of its distribution in the last four years was Birr 800, which is less than the average cost spent for medication to treat water-borne diseases. If the awareness of the community would have been raised, they would make a decision to purchase water filters and save not only their money but also their health.

### **Water efficiency in sustainable cotton production, India**

The project interventions are relevant as water scarcity and lack of perspective for smallholder farmers are widely perceived as the two main challenges in Maharashtra. The discussions with beneficiaries as well as the site visits also clearly confirmed the local relevance of the activities. Given the scope and various dimensions of the problems, there are many stakeholders involved. Therefore, the project partners work together with other organisations in the field, such as NGOs who already have a long track record of involvement with local communities. Because of the convergence in activities, there is especially some overlap with state government activities. However, project support is still considered additional as some beneficiaries are reluctant to ask for government support. They believe there is a lot of corruption at government level and procedures are too complicated. Beneficiary-level focus-group discussions demonstrate that the project partners have built a trusted relationship with the communities through which they are able to provide valuable support.

### **Building with Nature, Indonesia**

All focus-group participants were satisfied with the project and indirectly expressed that they considered the project relevant to address local problems related to water management and aquaculture. They gained knowledge that they were not able to access before the project. Based on the discussions, the project also seems additional because the respondents mention that the (local) government seems to lack capability and willingness to support them.

### **Water quality management in the Brantas River, Indonesia**

All focus-group participants are positive about the cooperation with ECOTON. They report to have gained new knowledge and received tools. The participants are now aware of the importance of the conservation of their environment. Based on the focus group discussions, it can be concluded that the participants consider the activities relevant to address their community problems in terms of water pollution, waste management and deforestation. However, they also acknowledge that the activities will only have impact once all villages put government regulation and sanctions in place. Without, members doubt whether their activities will have the needed impact. Because the community training and activities are at the core of ECOTON's mission, it is unclear whether ECOTON would also have conducted these activities without the additional financing of FDW.



However, the tools from TU Delft are relevant in introducing new water quality testing techniques and simultaneously involving and motivating the community to combat water pollution.

### **Sustainable Water Services Beira, Mozambique**

The survey confirmed that the population in Beira was suffering from a severe lack of connection to the water system: only 39% of the survey respondents had a good connection before the project. Even less people were connected to waste-water systems (13%), while also interruptions of the water supply and limited hours of water provision per day were reported. For many people, public taps are the dominant (39%) or even only source of water (35%). Finally, households reported water-borne diseases, such as diarrhea; 19% reported frequent occurrence, while another 51% occasional occurrence. Given these indicators, it is clear that the project was highly relevant.

### **A Green Sustainable and Safe Water Source, South Africa**

About half of the respondents in the survey indicated that, prior to the project, they did not have access to safe drinking water, while also the quality of the water was judged as being very poor (28%) or poor (40%). The amount of drinking water that was available to the household was also perceived as being very poor (20%) and poor (40%). Finally, almost half of all households report cases of water-borne diseases, either often (24%) or occasionally (28%). With respect to playing ground availability, an overwhelming share of respondents indicated that they rate the quality of these facilities as poor or very poor (60% and 10%, respectively). Hence, the project was relevant, both in terms of water provision as well as providing facilities for sport activities for the youth.