

# EVALUATION REPORT

## END EVALUATION OF AIAS PO35 PROGRAMME

### “CAPACITY BUILDING FOR OPERATIONS OF SECONDARY URBAN WATER SYSTEMS AND URBAN SANITATION SYSTEMS, UNDER THE MANDATE OF AIAS, PHASE 2”

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# END EVALUATION OF AIAS PO35 PROGRAMME “CAPACITY BUILDING FOR OPERATIONS OF SECONDARY URBAN WATER SYSTEMS AND URBAN SANITATION SYSTEMS, UNDER THE MANDATE OF AIAS, PHASE 2”

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## ACRONYMS

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AC	Assessment Categories
AIAS	Administração de Infraestruturas de Água e Saneamento, Administration of Water and Sanitation Infrastructure Mozambique.
AURA	Autoridade Reguladora de Água, Water Regulation Authority Mozambique
CORAL	Conselho Regilador de Água Local
DAC	Development Assistance Committee
DCOAT	Technical department (of AIAS)
DPT	Department of planning and tariffs (of AIAS)
EDM	<i>Electricidade de Mozambique</i> ; the national electricity company
EKN	Embassy of the Kingdom of The Netherlands in Mozambique
EQ	Evaluation Question
FGD	Focal Group Discussion
GI	Group Interviews
ICT	Information and Communications Technology
JC	Judgement Criteria
KII	Key Informant Interview
MEL	Monitoring, Evaluation and Learning
MSC	Most Significant Change (MSC)
NRW	Non-revenue water
OECD	Organisation for Economic Co-operation and Development
SDPI	Serviço Distrital de Planeamento e Infraestruturas, District Service for Planning and Infrastructure
TI	Transition International
UGEA	Procurement department (of AIAS)
WASH	Water, Sanitation and Hygiene
WP	Work Package

## EXECUTIVE SUMMARY

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### INTRODUCTION

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This report presents the outcomes of the end evaluation of the programme “Capacity building for operations of secondary urban water systems and urban sanitation systems, under the mandate of AIAS, phase 2”, also known as PO35. This programme commissioned by the Embassy of the Kingdom of The Netherlands in Mozambique (EKN) to Administração de Infraestruturas de Água e Saneamento (AIAS; Administration of Water and Sanitation Infrastructure) aims to reach 130.000 additional people served with water and 47.800 additional people with access to sanitation by the end of 2020.

This evaluation, requested by EKN has three specific objectives:

1. assess the likelihood of achieving the programme’s objectives by December 2020,
2. draw lessons from what worked well and what didn’t work well during the implementation of the programme, and
3. provide recommendations for the third phase of the AIAS programme (PO75), planned for the period 2021-2025.

To meet these objectives, the Transtec/Transition International evaluation team employed a 'mixed methods' approach, consisting a comprehensive, structured document review, key-informant interviews (KIIs), focus-group discussions (FGDs) and site visits. The evaluation, which took place between 27 July and 18 September 2020, was organised around the programme’s four Working Packages (WP), whilst also investigating the wider outcomes of the programme and the sustainability thereof, as well as several cross-cutting themes.

As a result of the COVID-19 pandemic, the three international experts were unable to visit Mozambique and do direct observational work. For the same reason, because of social distancing practices and a limited timeframe, the two local consultants carried out site visits to three towns (only) where they had limited contact with beneficiaries. Nonetheless, because of the extensive triangulation of primary and secondary data, sufficient evidence has been collected – presented in this report – and a vast amount of recommendations are provided for both the remainder of this programme as well as for the next phase (PO75).

### RESULTS

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Overall, the programme performs very well to date and will most likely achieve the expected results by the end of the programme. The sustainability of the results and effects beyond the programme period are however doubtful. The programme does not have a clear exit strategy, and if there would not be a phase 3, most results and effects would most likely have no longevity after the end of the programme.

The financial sustainability of both AIAS and the water and sanitation operators are the main points of concern. AIAS is still waiting to receive its financial autonomy status, which allows it to directly claim the operators’ lease fees, rather than being dependent on the state budget (aside the budget support from EKN and other donors) to cover for operating costs.

Most operators are also struggling to run a profitable business, although improvements have been made through the programme, for example in operators’ cost recovery ratio, collection efficiency and non-revenue water (NRW) reduction. So, even when AIAS would directly receive the lease fees from the operators, this would by no means be sufficient to cover its operational costs. With the deterioration of

the economic situation because of the response to the COVID-19 pandemic, the likelihood of reaching higher profits will diminish in the short term.

Nonetheless, the programme's intervention logic (building the capacity of AIAS (WP1) and of the water operators (WP2), combined with some financial support to operators in maintaining and improving their systems (WP3), and the introduction of certain 'innovations' also aimed at improving the viability of the operators and other private businesses (WP4)) makes very good sense and has proven to be very effective. This is especially true for the 'water supply' component of the programme.

The results on sanitation are also strong, with AIAS now having a full sanitation team with staff 100% allocated to sanitation, a massive increase in sanitation investments by AIAS including budget allocated to construction of treatment and disposal facilities in Vilanculos and Mocuba, and an iterative strategy for closing the FSM loop in some pilot areas. Target municipalities have also sanitation groups and plans for realising sanitation services, raising the profile of sanitation. Even more, large part of the results (such as additional people with access to sanitation) reached up to one year before the end of the program. Yet the biggest area where progress can be achieved within PO75 is the consolidation of more long-term strategies to close the faecal sludge management (FSM) cycle, on which pilots are just being trialed and thus progress is at very early stages.

For 'sanitation', the successes are less visible, mainly due to unclear mandates in that sector and a poor enabling environment. The evaluation found limited progress nor a consistent approach on the management and operating modality of the public sanitation blocks. And although more household latrines were sold during the programme than planned, the biggest area where progress can be achieved within PO75 is the consolidation of more long-term strategies to close the faecal sludge management (FSM) cycle.

## KEY LEARNING POINTS

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Based on the findings from the different working packages, we found the following main learning points from this evaluation:

### **WP1: Organizational Development AIAS and Programme Management**

Within the domain of investments, both AIAS and the project partners were able to raise funds for water infrastructures and assist the water operators and sanitation groups developing and implementing investment proposals.

PO35 has brought a lot of value to AIAS. For one, because it allowed them to recruit more staff to provide services to AIAS and to provide more funds for additional water systems and operators. Furthermore, EKN's unique approach and comparative advantage (to other programmes) was to support AIAS to establish itself at central and provincial level with staff that is able to manage its assets and with private operators that are able to provide sustainable services and generate revenues. The VEI-led consortium assisted AIAS to set up the Delegated Management Framework to ensure that all the water and sanitation systems under its mandate are being run by contracted entities.

PO35 and PO75 (planned) do not have a clear exit strategy and AIAS today depends almost entirely on EKN and other donors for its operational expenses. The PO75 proposal and its resource mobilization plan currently being developed, aims to achieve organizational and financial sustainability over the period 2021-2025. However, it needs to be reviewed by taking concrete measures to increase the share of lease fees from water sales in incremental number of towns, operators and connections.

## **WP2: Local Operator Development (Water and Sanitation)**

The capacity-building support provided by the programme is seen as very relevant, both for water and sanitation operators. Key-informants – water operators and sanitation group members – value the trainings as highly relevant as they are based on issues operators face, identified from monitoring tools and AIAS field monitoring missions. The improvements (reductions) in NRW and ‘downtime’ due to technical failure clearly indicates the effectiveness of the capacity-building efforts.

Overall, the establishment of private operator run public toilet blocks along with the creation of sanitation groups to promote the use of the toilets has been a success and helped to improve sanitation and hygiene in towns. The presence of operators furthermore helps the longevity of the facilities as they keep them clean, carry out minor maintenance works and prevent vandalism. However, the operation of the facilities as a business is far from being considered a success in all cases; some are completely closed and others are not in full operation due to the absence or problems with the water connections and the reluctance of users to pay for these services, which has been worsened as a result of the economic consequences of the COVID-19 pandemic. There are also problems with insufficient technical capacities of toilet operators due to non-strict application of selection criteria conducted by local authorities/municipalities which also contributes to inefficiency of the operation.

The (water) operators are conscious about the need to ensure the sustainability of systems but stressed the need that AIAS should reflect on the type and duration of contracts. Contracts are standard for a 5-year period, which from the operator’s viewpoint is too short to allow for investments for the expansion of the system they operate.

As a result of the COVID-19 crisis, many consumers cannot pay their water bills anymore. The government has imposed that consumers cannot be fined or cut off for not paying their bills for the duration of this crisis. Given that public institutions are both the largest consumers (and should thus bring in the most revenues) but also some of the worst customers when it comes to paying their bills (and the first ones not paying their bills if they don’t have to due to the COVID-19 crisis), results in a substantial loss of income to the water operators. As a result, water operators are finding it more and more difficult to continue operations, let alone to making a profit.

## **WP3: Infrastructure, development and investing**

The public toilet blocks (PTB) are far from being sustainable at least in the short and medium term, due to the lack of sufficient users to make them profitable. The situation has worsened as a result of the COVID-19 pandemic and its economic effects. Also, in Moamba for example, market vendors are making the point that they are already paying a market fee<sup>1</sup> which they believe should cover for making use of the public (market) latrines for free.

The programme made great progress in increasing the demand for household sanitation products and services. A large number of household latrines have been constructed, significantly raising the number of people with access to basic sanitation. The creation and capacitation of sanitation groups was the key success factor in taking-up the sanitation products.

## **WP4: Development of innovative business models**

The two/three pilots chosen for expansion have so far shown a viable business case in the areas where they are being implemented, and thus there is a strong case to consider expansion of the model to other

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<sup>1</sup> A fee paid to be allowed to sell on the market.



municipalities and doing cost-efficiency comparisons across these pilots to determine possible limitations that could be fixed and learnings worth replicating. The operators using the model would be a key stakeholder in the model of expansion, as their experience can be used to convince other operators to take on this innovation. Furthermore, based on interviews and documentation from other WASH programmes being implemented in Mozambique, more could be done to share the experience with them, and thus reviewing the possibility to expand beyond the scope of PO75 municipalities.

PO75 should focus on measuring how the innovations being implemented at the moment create cost-efficiencies in the model delivery or are helping to achieve impact in one or more of the areas of focus of the programme. Although the indicator selected for this phase was adequate, as PO35 was mainly focused on creating ideas to increase the sustainability of the water and sanitation business models, for PO75 the indicator should focus not on the '*number of innovations implemented*', but on how (much) these innovations are helping in delivering the changes that the programme needs to create to achieve the programme's primary objective.

### **Cross-Cutting Areas**

AIAS' gender strategy was finalised in December 2018 and approved internally in early 2019. However, an implementation plan, the funding to deliver it, and thus actual implementation has not yet started. This was the result of a decision taken by the National Directorate for Water Supply and Sanitation (DNAAS) in mid-2019 which requested all gender strategies within the umbrella of DNAAS to be harmonized, so a single coordinated strategy could be set in place. It is important to focus PO75 in accelerating this process of approval and focusing on implementation, particularly across operators. AIAS already shows a strong commitment in achieving the strategic actions proposed, yet operators might face some obstacles in ensuring application as a result of both lack of resources and lack of understanding on how this can be implemented.

On the other side, COVID-19 and the security situation in Cabo Delgado do not seem to have major effects in the delivery of PO35, but the economic consequences of both issues might have strong implications in the sustainability model for PO75.

## **RECOMMENDATIONS**

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The evaluation provides 24 recommendations for the remainder of this programme as well as for the - anticipated - next phase of the programme, PO75. All 24 recommendations are presented in the respective chapter in both English and Portuguese. The indicators more relevant in terms of achieving sustainability and greater progress in the next stage are:

1. Develop SMART-er indicators and more ambitious targets, with an emphasis on outcomes and impact. PO75 can increase its ambition and focus on measuring: (a) cost-efficiency gains in the delivery of the services, (b) increase in the number of communities that have adequate FSM treatment and disposal, (c) better measuring customer satisfaction with the services provided and qualitative changes observed in user behaviors, (d) composite indicators to measure achievements in the gender strategy, and (e) measuring innovation not by the number of activities implemented but rather by the impacts achieved in any one of the critical areas of the programme.
2. Develop more ambitious targets with respective implementation strategies, where possible. For example, aiming for an NRW < 25 or 30% (instead of <40%) will have a significant impact on various aspects (i.e. operators' and – thus – AIAS' revenues/lease fee and – as a consequence – their financial sustainability etc.).

3. AIAS' quest to obtain the autonomous status remains paramount during the next phase of PO75. There is an urgency to work together to achieve this as soon as possible. Since this is a lingering issue for almost a decade which bears an enormous impact on AIAS' sustainability, and therefore the success of the programme, it is recommended that EKN should take this up with other donors and come with a joint approach in order to reach a solution with the Ministry of Finance.
4. Stakeholders at the management and technical level also recommended creating investment lines (contests/challenges), which are launched to promote locally sourced innovations from local entrepreneurs and operators, and which can create new initiatives at the village and community level. Yet, a potential issue with these, is (i) the possibility to spend all resources on developing new initiatives, instead of focusing on creating a sustainable model for those that already exist, and (ii) that similar funds have been implemented by other donors with different levels of success.

In Annex D (in both English and Portuguese), the evaluation team presents in more detail proposed actions to reach AIAS' financial and institutional sustainability by 2025.

## SUMÁRIO EXECUTIVO

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### INTRODUÇÃO

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Este relatório apresenta os resultados da avaliação final do programa “Desenvolvimento de Capacidades para operadores de sistemas secundários de água urbana e sistemas de saneamento urbano, sob o mandato da AIAS, fase 2”, também conhecido como PO35. Este programa solicitado pela Embaixada do Reino dos Países Baixos em Moçambique (EKN) à Administração de Infraestruturas de Água e Saneamento (AIAS); pretende atingir 130.000 pessoas adicionais servidas com água e 47.800 pessoas adicionais com acesso ao saneamento, até ao final de 2020.

Esta avaliação, solicitada pela EKN, tem três objetivos específicos:

1. avaliar a probabilidade de alcançar os objetivos do programa até dezembro de 2020,
2. Alencar as lições do que funcionou bem e do que não funcionou bem durante a implementação do programa, e
3. fornecer recomendações para a terceira fase do programa AIAS (PO75), prevista para o período 2021-2025.

Para cumprir esses objetivos, a equipe de avaliação da Transtec / Transition International usou uma abordagem de 'métodos mistos', consistindo em uma análise abrangente e estruturada de documentos, entrevistas com informantes-chave (KIIs), discussões de grupos focais (FGDs) e visitas de campo. A avaliação, que decorreu entre 27 de Julho e 18 de Setembro de 2020, foi organizada em torno dos quatro Pacotes de Trabalho (WP) do programa, ao mesmo tempo que verifica os resultados mais gerais do programa e a sua sustentabilidade, bem como vários temas transversais.

Como resultado da pandemia COVID-19, da equipa de consultores, os três especialistas internacionais não puderam visitar Moçambique e fazer trabalho de observação direta. Pelo mesmo motivo, devido a práticas de distanciamento social e um prazo limitado, os dois consultores locais realizaram visitas in loco a três cidades (apenas) onde tinham contato limitado com os beneficiários. No entanto, devido à extensa triangulação de dados primários e secundários, evidências suficientes foram coletadas - apresentadas neste relatório - e uma vasta quantidade de recomendações são fornecidas tanto para o período restante deste programa quanto para a próxima fase (PO75).

### RESULTADOS

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No geral, o programa teve um desempenho muito bom e provavelmente alcançará os resultados esperados até ao seu final. A sustentabilidade dos resultados e efeitos além do período do programa são, entretanto, duvidosos. O programa não tem uma estratégia de saída clara e, se não houvesse uma fase 3, a maioria dos resultados e efeitos provavelmente não teria longevidade após o final do mesmo.

A sustentabilidade financeira da AIAS e dos operadores de água e saneamento são os principais pontos de preocupação. A AIAS ainda está à espera de obter o seu estatuto de autonomia financeira, o que lhe permitirá reclamar diretamente as taxas de cedência dos sistemas aos operadores, em vez de ficar dependente do orçamento do estado (além do apoio orçamental da EKN e outros doadores) para cobrir os custos operacionais.

A maioria dos operadores também está lutando para administrar um negócio lucrativo, embora melhorias tenham sido alcançadas por meio do programa, por exemplo, na taxa de recuperação de custos dos operadores, eficiência de coleta e redução de água não contabilizada (NRW). Assim, mesmo se a AIAS

recebesse diretamente as taxas de cedência dos sistemas de água dos operadores, isso não seria de forma alguma suficiente para cobrir os seus custos operacionais. Com a deterioração da situação econômica por causa da resposta à pandemia da COVID-19, a probabilidade de se atingir maiores lucros diminuirá no curto prazo.

No entanto, a lógica de intervenção do programa (capacitação da AIAS (WP1) e dos operadores de água (WP2), combinada com algum apoio financeiro aos operadores na manutenção e melhoria dos seus sistemas (WP3), e também com a introdução de certas 'inovações' que visa melhorar a viabilidade dos operadores e outras empresas privadas (WP4)) faz muito sentido e provou ser muito eficaz. Isso é especialmente real para a componente de "abastecimento de água" do programa.

Os resultados no saneamento também são fortes, com a AIAS agora a ter uma equipa de saneamento completa com pessoal 100% atribuído ao saneamento, um aumento maciço nos investimentos em saneamento pela AIAS incluindo orçamento atribuído à construção de instalações de tratamento e eliminação em Vilanculos e Mocuba, e UMA ESTRATÉGIA para fechar o loop FSM em algumas áreas piloto. Os municípios-alvo também possuem grupos de saneamento e planos para a realização de serviços de saneamento, elevando o perfil do saneamento. Mais ainda, grande parte dos resultados (como aumento de pessoas com acesso ao saneamento) chegou a até um ano antes do término do programa. No entanto, a maior área onde o progresso pode ser alcançado dentro do PO75 é a consolidação de estratégias de mais longo prazo para encerrar o ciclo de gerenciamento de lamas fecais (FSM), no qual os pilotos estão apenas sendo testados e, portanto, o progresso está em estágios iniciais.

## **PONTOS-CHAVE DE APRENDIZAGEM**

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Com base nas conclusões dos diferentes pacotes de trabalho, encontramos os seguintes pontos principais de aprendizagem desta avaliação:

### **WP1: Desenvolvimento Organizacional AIAS e Gestão de Programas**

No domínio dos investimentos, tanto a AIAS como os parceiros do projeto conseguiram angariar fundos para infraestruturas de água e ajudar os operadores de água e grupos de saneamento a desenvolver e implementar propostas de investimento.

PO35 trouxe muito valor para AIAS. Por um lado, porque lhes permitiu recrutar mais pessoal para prestar serviços e fornecer mais fundos para sistemas e operadores de água adicionais. Além disso, a abordagem única e a vantagem comparativa da EKN (para outros programas) era apoiar a AIAS a se estabelecer a nível central e provincial com funcionários que são capazes de gerenciar seus ativos e com operadores privados que são capazes de fornecer serviços sustentáveis e gerar receitas. O consórcio liderado pela VEI ajudou a AIAS a estabelecer o Quadro de Gestão Delegado para garantir que todos os sistemas de água e saneamento sob seu mandato sejam administrados por entidades contratadas.

O PO35 e o PO75 (planejado) não têm uma estratégia de saída clara e o AIAS hoje depende quase inteiramente da EKN e de outros doadores para suas despesas operacionais. A proposta PO75 e seu plano de mobilização de recursos atualmente em desenvolvimento, visa alcançar a sustentabilidade organizacional e financeira no período 2021-2025. No entanto, ele precisa ser revisto por meio de medidas concretas para aumentar a parcela das taxas de aluguel das vendas de água em um número incremental de cidades, operadoras e conexões.

## **WP2: Desenvolvimento do Operador Local (Água e Saneamento)**

O apoio à capacitação proporcionado pelo programa é visto como muito relevante, tanto para as operadoras de água e saneamento. Os informantes-chave - operadores de água e membros do grupo de saneamento - avaliam os treinamentos como altamente relevantes, pois são baseados em problemas enfrentados pelos operadores, identificados a partir de ferramentas de monitoramento e missões de monitoramento de campo AIAS. As melhorias (reduções) em NRW e "tempo de inatividade" devido a falha técnica indicam claramente a eficácia dos esforços de capacitação.

No geral, o estabelecimento de um operador privado que administra blocos de banheiros públicos, juntamente com a criação de grupos de saneamento para promover o uso dos banheiros, tem sido um sucesso e ajudou a melhorar o saneamento e a higiene nas cidades. A presença dos operadores contribui ainda para a longevidade das instalações, uma vez que as mantêm limpas, realizam pequenos trabalhos de manutenção e evitam o vandalismo. No entanto, a operação das instalações como um negócio está longe de ser considerada um sucesso em todos os casos; alguns estão totalmente fechados e outros não estão em pleno funcionamento devido à ausência ou problemas com as ligações de água e à relutância dos usuários em pagar por esses serviços, que se agravou em decorrência das consequências econômicas da pandemia COVID-19. Também existem problemas de capacidade técnica insuficiente dos operadores de sanitários devido à não aplicação rigorosa dos critérios de seleção conduzidos pelas autoridades locais/municípios, o que também contribui para a ineficiência da operação.

Os operadores (de água) estão cientes da necessidade de garantir a sustentabilidade dos sistemas, mas sublinharam a necessidade de a AIAS refletir sobre o tipo e duração dos contratos. Os contratos são padronizados por um período de 5 anos, o que do ponto de vista da operadora é muito curto para permitir investimentos para a expansão do sistema que operam.

Como resultado da crise do COVID-19, muitos consumidores não podem mais pagar suas contas de água. O governo impôs que os consumidores não sejam multados ou cortados por não pagarem suas contas durante a crise. Dado que as instituições públicas são os maiores consumidores (e devem, portanto, gerar a maior parte das receitas), mas também alguns dos piores clientes quando se trata de pagar suas contas (e os primeiros a não pagar suas contas se não tiverem que pagar crise da COVID-19), resulta em uma perda substancial de receita para as operadoras de água. Como resultado, os operadores de água estão encontrando cada vez mais dificuldade para continuar as operações, quanto mais para obter lucro.

## **WP3: Infraestrutura, desenvolvimento e investimento**

Os blocos de banheiros públicos (PTB) estão longe de ser sustentáveis pelo menos no curto e médio prazo, devido à falta de usuários suficientes para torná-los lucrativos. A situação piorou como resultado da pandemia COVID-19 e seus efeitos econômicos. Além disso, em Moamba, por exemplo, os vendedores do mercado estão afirmando que já estão pagando uma taxa de mercado<sup>2</sup> que eles acreditam que deveria cobrir para usar as latrinas públicas (de mercado) gratuitamente.

O programa avançou bastante no aumento da demanda por produtos e serviços de limpeza doméstica. Um grande número de latrinas domiciliares foi construído, aumentando significativamente o número de pessoas com acesso ao saneamento básico. A criação e capacitação de grupos de saneamento foi o fator chave de sucesso na aceitação dos produtos de saneamento.

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<sup>2</sup> Uma taxa paga para poder vender no mercado.

#### **WP4: Desenvolvimento de modelos de negócios inovadores**

Os dois / três pilotos escolhidos para expansão até agora mostraram um caso de negócios viável nas áreas onde estão sendo implementados e, portanto, há um caso forte para considerar a expansão do modelo para outros municípios e fazer comparações de custo-eficácia entre esses pilotos para determinar as possíveis limitações que podem ser corrigidas e aprendizados que valem a pena replicar. As operadoras que usam o modelo seriam uma parte interessada importante no modelo de expansão, pois sua experiência pode ser usada para convencer outras operadoras a aceitar essa inovação. Além disso, com base em entrevistas e documentação de outros programas de WASH em implementação em Moçambique, mais poderia ser feito para compartilhar a experiência com eles e, assim, rever a possibilidade de expansão para além do escopo dos municípios PO75.

O PO75 deve se concentrar em medir como as inovações que estão sendo implementadas no momento criam eficiências de custo na entrega do modelo ou estão ajudando a atingir o impacto em uma ou mais das áreas de foco do programa. Embora o indicador selecionado para esta fase tenha sido adequado, visto que o PO35 estava focado principalmente na criação de ideias para aumentar a sustentabilidade ou os modelos de negócios de água e saneamento, para o PO75 o indicador deve se concentrar não no 'número de inovações implementadas', mas em como (muito) essas inovações estão ajudando a concretizar as mudanças que o programa precisa criar para atingir seu objetivo principal.

#### **Áreas Transversais**

A estratégia de gênero da AIAS foi finalizada em dezembro de 2018 e aprovada internamente no início de 2019. No entanto, um plano de implementação, o financiamento para entregá-lo e, portanto, a implementação real ainda não começou. Este foi o resultado de uma decisão tomada pela Direção Nacional de Abastecimento de Água e Saneamento (DNAAS) em meados de 2019, que solicitou que todas as estratégias de gênero no âmbito da DNAAS fossem harmonizadas, para que uma estratégia única coordenada pudesse ser estabelecida. É importante focar o PO75 na aceleração desse processo de aprovação e focar na implementação, principalmente entre as operadoras. AIAS já mostra um forte empenho na concretização das ações estratégicas propostas, mas os operadores podem enfrentar alguns obstáculos para garantir a aplicação, tanto por falta de recursos como por falta de compreensão sobre como isso pode ser implementado.

Por outro lado, o COVID-19 e a situação de segurança em Cabo Delgado não parecem ter grandes efeitos na entrega do PO35, mas as consequências econômicas de ambas as questões podem ter fortes implicações no modelo de sustentabilidade para o PO75.

#### **RECOMENDAÇÕES**

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A avaliação apresenta 24 recomendações para o período restante deste programa, bem como para a - prevista - próxima fase do mesmo, PO75. Todas as 24 recomendações são apresentadas nos respectivos capítulos em inglês e português. Os indicadores mais relevantes para o alcance da sustentabilidade e maior progresso na próxima etapa são:

- a. Desenvolver indicadores SMART e metas mais ambiciosas, com ênfase em resultados e impacto. O projeto PO75 pode aumentar sua ambição e focar em medir: (a) ganhos de eficiência de custo na entrega dos serviços, (b) aumento no número de comunidades que têm tratamento e descarte FSM adequados, (c) uma melhor medição da satisfação do cliente com o serviços prestados e mudanças qualitativas observadas nos comportamentos dos usuários, (d) indicadores compostos para medir as realizações na estratégia de gênero, e (e) medir a inovação não pelo número de atividades

implementadas, mas sim pelos impactos alcançados em qualquer uma das áreas críticas de o programa.

- b. Definir metas mais ambiciosas com a respetiva estratégia de implementação, sempre que seja possível. Por exemplo, ter como objetivo um NRW <25 ou 30% (em vez de <40%) terá um impacto significativo em vários aspetos (ou seja, as receitas / taxas de arrendamento da AIAS e - portanto - as receitas da AIAS e - como consequência - a sua sustentabilidade financeira etc.).
- c. A busca da AIAS para obter o Estatuto autónomo permanece fundamental durante a próxima fase do PO75. É urgente trabalhar em conjunto para se conseguir isso no mais rápido possível. Uma vez que esta é uma questão persistente por quase uma década, e que tem um enorme impacto na sustentabilidade da AIAS e, portanto, no sucesso do programa, recomenda-se que a EKN levante isso com outros doadores e venha com uma abordagem conjunta a fim de alcançar uma solução com o Ministério das Finanças.
- d. Outros atores a nível de gestão e técnico também recomendaram a criação de linhas de investimento (concursos / desafios), que são lançadas para promover inovações de origem local de empresários e operadores locais, e que podem criar novas iniciativas ao nível da aldeia e da comunidade. No entanto, um problema potencial com estes, é (i) a possibilidade de gastar todos os recursos no desenvolvimento de novas iniciativas, em vez de focar na criação de um modelo sustentável para os que já existem, e (ii) outras iniciativas semelhantes foram implementadas por outros doadores com diferentes níveis de sucesso.

No Anexo D (em Inglês e Português), a equipe de avaliação apresenta em mais detalhes as ações propostas para alcançar a sustentabilidade financeira e institucional da AIAS até 2025.

## 1. INTRODUCTION

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This report presents the outcomes of the end evaluation of the programme “Capacity building for operations of secondary urban water systems and urban sanitation systems, under the mandate of AIAS, phase 2”, also known as PO35. This programme which started in September 2017 and will end in December 2020, aims to increase access to sustainable water and sanitation services in small towns in Mozambique, and expects to reach 130.000 additional people served with water and 47.800 additional people with access to sanitation.

The programme is commissioned by the Embassy of the Kingdom of The Netherlands in Mozambique (EKN) to *Administração de Infraestruturas de Água e Saneamento* (AIAS; Administration of Water and Sanitation Infrastructure). To support AIAS with the implementation of the programme, they have contracted the Dutch entity VEI, who, in turn, subcontracted the services of SNV and BoPInc for the implementation of specific (sub-) components of the programme.

This evaluation was requested by EKN, who finances PO35 (and similarly financed phase 1; PO15 which run from September 2013 to December 2018), and has three specific objectives:

- i. assess the likelihood of achieving the programme’s objectives by December 2020,
- ii. draw lessons from what worked well and what didn’t work well during the implementation of the programme, and
- iii. provide recommendations for the third phase of the AIAS programme (PO75), planned for the period 2021-2025.

## METHODOLOGICAL APPROACH

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The evaluation team used assessment tools and extensive data triangulation through the 'mixed methods' approach. These included: i) a review of project results from recipients, ii) in-situ assessment of results (i.e. changes in practices, ability or capabilities) and iii) analysis of the methods and means used.

The evaluation consisted three phases:

- a) Inception phase, which included the detailed evaluation design, development of data-collection and analysis tools and a structured document review,
- b) Primary data collection and analysis phase, including key-informant interviews (KIIs) and discussions with a wide variety of (national level) stakeholders, field visits to Praia de Bilene, Moamba and Mandlakazi with further KIIs, Focus Group Discussions (FGDs) and observations, and preliminary data-analysis, and
- c) Synthesis phase, in which all primary and secondary data was analysed, synthesized and verified (through a debriefing session with key-stakeholders), resulting in this evaluation report prepared.

## EVALUATION CRITERIA

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The evaluation is organised around the four Working Packages (WP) of the programme and its related four specific objectives:

**WP1.** Organizational development AIAS and programme management: Stable AIAS organisation at central and provincial level with capacity to guarantee sustainability of services to attract more funding from third parties

**WP2:** Local operator development (water and sanitation): Sustainable operation of urban drinking water and sanitation services in up to 35 towns under the mandate of AIAS



**WP3:** Infrastructure, development and investing Mechanisms in place for extension of infrastructure and increased number of water and sanitation facilities

**WP4:** Development innovative business models: Establishment of an enabling environment and support system to foster the development of small domestic private operators, contributing to the sustainability of services.

Each of the WPs were analysed using the Evaluation Questions (EQ) defined in the Terms of Reference (ToRs). The EQs were associated with the respective WPs and slightly adjusted in accordance to the OECD-DAC criteria (relevance, coherence, effectiveness, efficiency, impact and sustainability), with guiding questions added to orientate data collection and analysis. The gender strategy was analysed as a cross cutting point of analysis and two evaluation question were added to:

- i. provide recommendations regarding the potential to integrate nutrition components within the next phase of the programme, and
- ii. analyse the effects of the COVID-19 pandemic and the deterioration of the security situation in Cabo Delgado to the ongoing and next phase of the programme.

The Evaluation Design Matrix is included in Annex A.

## SCOPE AND TIMING

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The evaluation took place between 27 July and 18 September 2020. Remote data collection was done between 10 to 22 August 2020, and in-field/direct data collection between the 17 to 22 August.

The field assignment covered the municipalities of Praia de Bilene, Moamba and Mandlakazi, which were selected in agreement with EKN (based on limitations imposed by COVID-19 and security limitations in the northern provinces of Mozambique). These municipalities are considered a representative sample of the 35 in which the programme worked; however, the evaluation team is conscious about the fact that these towns are relatively close to Maputo, which does have consequent advantages over other, more further towns.

## FRAMEWORK AND TOOLS

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The evaluation used a unique Data Collection Tool for both Document Review and Key Informant Interviews, which supported the team in analysing, synthesising and verifying all findings, structured around the WPs and EQs, and in drawing conclusions. For each Working Package a mapping of the key stakeholders was completed during the inception phase, and an appropriate tool defined for each.

Key Informant Interviews and Group Interviews (GI) were done for stakeholders with specialised knowledge of the planning and delivery of the WPs. KIIs and GIs were semi-structured but following the structure of the aforementioned WPs and EQs. This meant that according to the stakeholder (group) being interviewed, relevant questions were selected from the EQs, together with remaining, probing questions from other data sources (document review or previous KIIs/GIs).

Focus Group Discussions (FGDs) were held with community leaders and user groups and covered questions regarding beneficiaries'/customers' satisfaction with service delivery and project implementation, their assessment of the financial sustainability of the new service delivery model and whether the intended behavioural change as a result of the WASH sensitization campaigns was obtained.

In total, 42 individual stakeholders and 4 beneficiary groups were consulted. The list of the stakeholders consulted is included in Annex B.

## DATA ANALYSIS

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Using the above Data Collection Tool, the following steps were taken to analyse and validate results and information:

- a. During the secondary review, the information obtained was triangulated across the different documentary evidence. When evidence provided was not consistent, or the data was not supported by additional evidence, this was signalled in our data management system and added to the questions to be asked during KIIs and field data collection.
- b. During remote KIIs with members of AURA, VEI, SNV and BZDR we requested individual teams to validate any results claimed but not validated by additional documentation. As with primary research, we signalled gaps in the analysis or unsubstantiated claims and results that needed to be validated in the field or with additional evidence. Additional evidence was again requested from partners when the one available was deemed insufficient, and as a result a total of 9 additional documents were received and added to the secondary research data collection tool for analysis.
- c. During field research, local researchers focused on validating the results claimed specifically in the municipalities consulted. Clarifications were requested regarding some of the indicators as detailed in Annex C.
- d. Finally, during the validation of this report by partners, they provided 4 additional documents to correct information provided for the sanitation and innovation components. All the above resulted in the completed Data Collection Tool.

Evidence used to validate results against each of the programme indicators found is included in Annex C.

## LIMITATIONS AND CHALLENGES

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As a result of the COVID-19 pandemic, the three international experts were unable to visit Mozambique and do direct observational work. Nonetheless, an experienced team of local consultants delivered primary data collection in the three areas chosen. In Maputo, the meeting with the DNAAS Director was not completed as a result of last-minute work that the Director needed to complete as a response to the pandemic. The Director nonetheless shared some observations via email.

A similar issue occurred with the Maputo Province Public Works and Infrastructure WASH Department, who unexpectedly had to prepare for a Presidential visit, again related to the promotion of hygiene campaigns related to the pandemic. Information expected to be received by this stakeholder was mainly for verification purposes, as most of the results obtained in the province were well documented in secondary data and included in interviews with the general AIAS team.

Furthermore, there was limited time and contact with beneficiaries, both because of social distancing practices resulting from the pandemic and a small timeframe to collect the information. Nonetheless in each of the municipalities at least one FGD was conducted with beneficiaries of water supply systems, and another with those targeted with sanitation interventions. In Madlakazi the consultants had two sanitation FGD, one with a sanitation group and the second with community leaders and sanitation leaders. In all meetings we had participation of public sanitation operators and local artisans.

## 2. EVALUATION FINDINGS

In this chapter, we present the evaluation's main findings and conclusions, structured around the Work Packages and respective Evaluation Questions.

### GENERAL

#### **What are the results and effects of the PO35 programme till date? What is the likelihood that the programme, within the planned time, will achieve the expected results and effects?**

When strictly appraising the key-performance indicators (KPIs) and targets from the logical framework, the programme clearly performs very well to date and will most likely achieve the expected results by the end of the programme. This appears to be true when looking at the indicators of the overall objective as well as of the four specific objectives:

**Table 1: Overall objective indicators**

Indicator	Gender	Target 2017-2020	Expected realization	On target?
Additional people with access to water	Total	130,000	130,000	YES
	Female	65,000	65,000	YES
Additional people with access to sanitation	Total	47,800	74,521	YES
	Female	28,860	44,712	YES
Number of people who report positive behavioural change as a result of the WASH sensitization and training campaigns	Total	90,000	124,700	YES
	Female	49,500	68,585	YES

**Table 2: Specific objectives' indicators**

ID	Indicator	Target 2017-2020	Expected realization	On target?
1.1	AIAS' revenues generated from operators' fees as a % of its operational costs	Not defined	26%	YES
1.2	# of water operators satisfied with the services delivered by AIAS	35	50	YES
2.1	# of water operators having an operational cost recovery ratio > 1.0	20	20	YES
2.2	# of water operators having an NRW inferior to 40%	20	20	YES
2.3	# of water operators having a collection efficiency of at least 80%	25	25	YES
2.4	# of towns for which sanitation plans have been developed	25	27	YES
2.5	# of project towns in which the principal activities of the sanitation action plans have been implemented	25	27	YES
2.6	# of towns with constructed public toilet block facilities	14	16	YES
2.7	# of towns in which sanitation and hygiene campaigns have been implemented	25	27	YES
2.8	Number of people reached by the sanitation and hygiene campaigns	300,000	386,394	YES
2.9	# of latrines sold by trained artisans	9,000	11,702	YES
2.10	# of schools at which sanitation awareness campaigns have been implemented	30	108	YES
3.1	There is an online registration system for the principal assets of the water and sanitation operators	Yes	Yes	YES
3.2	# of water operators supported with small investments	35	38 to 56	YES <sup>3</sup>
3.3	# of towns with constructed public toilet block facilities (cumulative)	14	16	YES
4.1	# of innovative business models for water and sanitation implemented	2	3	YES

<sup>3</sup> Based on additional documentation provided by partners and described below.

The only indicator which was not on target according to the latest reports<sup>4</sup>, is the number of water operators that have been supported with small investments by the PO35. It is however almost certain that also this target will be met at the end of the programme, as in the current year, additional material is being supplied to many operators. For example, Mabote extension works are in progress (with Water for Life -WFL financing). Water quality meters are also being provided to an additional 24 towns<sup>5</sup>, as well as repair kits to an additional 18 towns<sup>6</sup>. Furthermore, with the kick-off of the new innovation Smart Connections Financing as part of WP4, the platform partners have managed to get a commitment of one pre-paid water meter supplier to provide 50% financing on the off-factory price against 5% annual interest (over 5 years).

Looking at some of the indicators in more details, does exposure some concerns, especially with regards to those of Working Package 1. There are only two indicators for this (most) significant component of the programme, of which one (1.1) does not have a target defined and the other – less relevant indicator (1.2) - is being measured in a not-so scientific manner, and is somewhat meaningless: The evaluation showed that operators were merely asked (once) if they were satisfied with the services delivered by AIAS, which is the sole measure for this indicator (1.2).

The more significant indicator on the proportion of AIAS' operational costs being covered by revenues does not have a target. Yet, it is reported that with an expected realization of 26%, the programme is on target. The project proposal anticipates that "by 2024 AIAS will be able to fully cover [these] operational costs from the revenues." The financial projections (Figure 2 in the project proposal) indicate that the revenues should be 70% of the operational costs by 2020 to make this a reality. From this perspective, the programme is – with 26% - thus not on track. This underperformance has significant consequences to the viability and functioning of AIAS, and ultimately to the sustainability of the programme (results).

Equally to having a (financially) healthy AIAS, the viability of the operators' businesses is extremely important to the success of the programme and to continuity thereafter, i.e. to the sustainability of the towns' water systems. The evaluation team thus thinks that a more ambitious target for indicator 2.1 could have been set, i.e. an operational cost-recovery ratio > 1.0 for all water operators/systems.

### **To what extent will the obtained results and effects be sustainable beyond the programme period?**

As outlined above, the sustainability of the results and effects beyond the programme period are doubtful. The programme does not have a clear exit strategy, and if there would not be a phase 3, most results and effects would most likely have no longevity after the end of the programme.

It is commendable that the programme supported AIAS in hiring and capacitating skilled personnel, significantly improving the organization's capacity. However, at the end of the programme, many of AIAS staff are still being paid for by the programme. PO75 should have a clearer exit strategy, including the phasing-out of paying AIAS staff salaries, otherwise it will find itself in a similar situation five years from now, at the end of PO75.

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<sup>4</sup> At the end of 2019, from the Annual progress report 2019.

<sup>5</sup> Afungi, Balama, Buzi, Chiure, Fingoe, Guro, Homoine, Inhaminga, Lugela, Mabote, Macia, Macossa, Maganja, Maringue, Marrupa, Massangena, Massingir, Milange, Mocimboa, Mossuril, Mueda, Pebane, Quissico, Tambara.

<sup>6</sup> Marrupa, Maringue, Maganja, Mabote, Macossa, Macia, Chigubo, Mandlakazi, Nhamayabue, Balama, Buzi, Lugela, Massangena, Tambara, Chiure, Milange, Fingoe and Mossuril.

Another positive outcome of the programme – related to sustainability - is that it engaged local institutions such as AdeM and CFPAS. Overall, building in-country capacity will obviously have a lasting effect, irrespective of (high) turn-over of staff, as it will still benefit Mozambique.

The sustainability of the town's water systems is another point of concern. The programme has made great progress in attracting operators/firms and showcasing that water supply can be an interesting business case. It has done so, however, by intensively supporting the operators. Whether the operators will sustain without this support – or with reduced support – is a question that cannot be easily answered. With the intention of a phase 3 of the programme, this question doesn't yet need to be answered, but should definitely be addressed as part of the design (of the exit strategy) of PO75.

One suggestion to making the operators' business more viable/profitable is by a further reduction of non-revenue water (NRW) for all operators. In the current programme the target is an NRW < 40% for only a proportion of operators/systems. By reducing this further, for all operators/systems, the systems not only become more lucrative, but it also allows for more investments and (thus) expansion of the systems.

UNICEF mentioned positive results from its "innovative financing mechanism". Through this mechanism, water operators are more/better enabled to expand their water system and to making it more viable. It should be investigated if this mechanism can be incorporated in phase 3 of the programme (PO75).

**What has been realized, what is the consistency across the WP/ objectives and what needs to be done for post-programme monitoring?**

There is certainly a logic between the working packages: building capacity on governance (AIAS) and that of the (quality and viability of) water operators, combined with some financial support to operators in maintaining and improving their systems, and the introduction of certain 'innovations' also aimed at improving the viability of the operators and other private businesses proves to be an effective strategy.

Especially on the water component the results are clear and present, albeit that the earlier-mentioned issues of sustainability need to be overcome in the next phase of the programme. The results on sanitation are also strong, with AIAS now having a full sanitation team with staff 100% allocated to sanitation, a massive increase in sanitation investments by AIAS including budget allocated to construction of treatment and disposal facilities in Vilanculos and Mocuba, and an iterative strategy for closing the FSM loop in some pilot areas. Target municipalities have also sanitation groups and plans for realising sanitation services, raising the profile of sanitation.

Yet, those interviewed highlighted that sustainability in the sanitation component is more difficult to achieve. That this is often the case in WASH programmes (i.e. PO35 is no exception nor performing worse than other, similar programmes) because it is generally much more complicated to make a 'sanitation business case' than a 'water supply business case'. Both consumers and corporates tend to have a much greater appetite for water than for sanitation. For one, because the demand for, and hence, the willingness to pay for water supply are much greater than for sanitation services. This, in effect, is mirrored in the greater interest of politicians and authorities in water supply over sanitation, which again is reflected in available funds and investments.

The evaluation recognised this divide or siloed approach (water vs. sanitation) also in the design, management, and implementation of PO35. The programme is very well designed towards the water sector, with clear mandates of the various stakeholders (VEI, AIAS, municipalities, water operators) and a well-developed and comprehensive support programme (especially targeted towards AIAS and the water

operators). In the sanitation component, there is room for great change in policy and strategies: mandates and responsibilities (of AIAS, municipalities and private operators) seem to be less clear, as do the strategy and long-term vision of the programme, although iterative strategies have been set in place by the implementers in order to better adapt to the local context. It goes without saying that many 'issues' of the programme's sanitation component are a result of the (poor) enabling environment in Mozambique, including its governing structures and a challenging business environment.

The programme still managed to achieve and even exceed the sanitation targets (as presented in Table 1 and in Table 2; Indicators 2.4 – 2.10). However, as outlined above, concerns remain about the sustainability of the results. The evaluation found little progress nor a consistent approach on the management and operating modality of the public sanitation blocks. And even though it is commendable that more household latrines have been sold than planned, the biggest area where progress can be achieved within PO75 is the consolidation of more long-term strategies to close the faecal sludge management (FSM) cycle<sup>7</sup>.

A key challenge in this respect, is that many of the AIAS towns do not have sufficient demand<sup>8</sup> for improved sludge collection, transport and treatment processes. The programme partners have been working on guidance for such improved sludge management and on the consolidation of pilots and innovative iterative strategies that are likely to be the most suitable for the context. This includes a review of larger towns with the potential to support more complete FSM services and successful advocacy to AIAS management to plan and start developing services using FSD, including two pilot facilities at Vilanculos and Mocuba, consisting of simple drying beds and planted drying beds.

### **What has been the effectiveness of the PO35 programme's management structure?**

All key informants express that the collaboration between AIAS and the VEI-led consortium and within the consortium has been excellent. AIAS is taking its responsibility and role as ultimate 'manager' of the programme with VEI and the other partners providing valuable 'mentoring' support. The Dutch consortium is highly appreciated for the expertise and experience it is bringing in; particularly VEI in the water supply sector and SNV on sanitation. Whereas VEI's support appears to be primarily towards AIAS, who transfers it (newly acquired expertise) to the level of the operators, SNV works both at the level of AIAS and of the municipalities. This is a logic response to the fact that AIAS is already much further developed and capacitated towards the water sector/operators, and less so with regards to sanitation.

Although AIAS is making big strides in developing its 'sanitation expertise', the fact that its sanitation mandate is not crystal clear or fully entrenched (internally and/or to other stakeholders, such as municipalities) remains a point of concern. Whereas AIAS is seen and respected as *the* authority for small town water supply systems and operators, this is not (yet) the case for sanitation.

AIAS' representatives interviewed, both in Maputo and Gaza, mentioned the urgent need for further decentralization. Senior management mentioned that managing 35 towns already puts a strain on AIAS' capacity and exposes the limits of the organization. If in phase 3 the number of towns will increase to 75, these limits will be exceeded. This does not only require more provincial delegations, but these delegations should be further capacitated and empowered. The AIAS delegation in Gaza for example, expressed that there is little communication with and delegated empowerment from AIAS Maputo to

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<sup>7</sup> It should be noted that no direct FSM target or indicator is set within PO35.

<sup>8</sup> I.e. number of users/consumers and toilets than can be properly de-sludged.

them. Most communication happens between AIAS Maputo and the local operators, which side-lines the local AIAS delegations and thereby hinders their capacity to relate and act at local level.

### **Review the balance and interdependency of technical assistance and investments?**

The technical assistance provided by PO35 was seen as highly relevant, both in the water systems management component and in the sanitation area. Operators and municipalities also mentioned that they were considering using a similar approach to develop local skills and competences for future professionals in the area of water systems management. In general, Technical Assistance has been adequately balanced with investment in water infrastructure, with TA even providing capacity in terms of how to manage new infrastructure or innovative investments (WP4: Smart Water Network and Pre-paid Water Provision). But the balance has not been as adequate in term of sanitation infrastructure and investment, where additional infrastructure, innovation and particularly behavioural changes are needed.

## **WP1: ORGANIZATIONAL DEVELOPMENT AIAS AND PROGRAMME MANAGEMENT**

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### **How has AIAS performed in terms of resource mobilization for investments in water and sanitation?**

Within the domain of investments, the project partners assist the water operators and sanitation groups developing investment proposals. Furthermore, AIAS engages with national and international institutions with the objective to obtain funding for the implementation of these and other proposals. Part of the necessary funds for the implementation of the proposals is covered by the project's own budget lines for investments. The following has been achieved with regards to resource mobilization:

- The completion of the Government of Mozambique's PRAVIDA program which finances construction works in 21 AIAS towns. The PO35 team assisted in the elaboration of the design of the water systems for these towns.
- The elaboration of feasibility studies with Operation Water for resource mobilization and PPP-initiatives for 20 towns.
- Netherlands (D2B): studies for rehabilitation of water supply systems in 11 towns.
- Obtained Climate Resilient Infrastructure Development Facility (CRIDF) investment funding for water system rehabilitation in two towns.
- Obtained Japan International Cooperation Agency (JICA) investment funding for water system rehabilitation in 5 towns in Niassa.
- Obtained UNICEF/Netherlands investment funding for water system rehabilitation in 1 town in Nampula.
- UNICEF setting up an innovative investment fund consisting of grants, loans, multilateral, bilateral and private bank funds for extension of water supply in 30 towns since 2016, accompanied by increased capacities and business plans provided by UNICEF partners in the field.
- The financing, with PO35 funds, of among others (i) the delivery of water material to five towns, (ii) boreholes in four towns, (iii) emergency works to the Nametil water supply system, (iv) cleaning of the water reservoir in Ribaue, (v) investment proposals for the towns of Ancuabe, Caia and Nametil.
- An additional VEI contribution of EUR 540,000 to deliver 2,000 kits for the realization of 2,000 household water connections in Chibuto and to realize a total of 39 kilometers of network extensions in Praia de Bilene, Mandlakazi, and Espungabera.

- The construction of public toilet blocks in 16 towns

### **To what extent has EKN's support contributed to the organisational development of AIAS?**

The programme has brought a lot of value to AIAS, for one, because it allowed them to recruit more staff to provide services to AIAS and to provide more funds for additional water systems and operators. Furthermore, EKN's support also consisted capacity building activities of AIAS and private operators. EKN unique approach and comparative advantage (to other programmes) is to support AIAS to establish itself at central and provincial level with staff that is able to manage its assets and with private operators that are able to provide sustainable services and generate revenues. As such, EKN support focus capacity building activities on the following areas: business planning, operational issues (production, distribution and reduction of non-revenue water) and management and commercial aspects. With a well-functioning organisation, AIAS has been strengthened to negotiate with other development partners investments to rehabilitate water systems; EKN contribution has had a leverage effect in finding additional investments in the water and sanitation sector from most organizations involved in the water sector, in recruiting more staff, in fostering involvement of private operators and in goods and services suppliers.

### **How has AIAS and the PO35 programme benefited from the technical assistance provided by the consortium led by VEI?**

The VEI consortium used a range of mostly local service providers to deliver the required services to AIAS and the water and sanitation operators. Examples of local supporting organizations are CFPAS, AdeM, Eticadata Mozambique, and local capacity building organizations at town level. In the field of water, AIAS has also worked on formalizing the relationships with those municipalities who opt to have an autonomous public entity running the water system rather than having a private operator.

The VEI Consortium assisted AIAS to set up the Delegated Management Framework to ensure that all the water and sanitation systems under its mandate are being run by contracted entities. The external financial and technical support provided by the Consortium was a guarantee of the continued capacity building of operators of water systems and the establishment of sanitation groups.

The Consortium was an asset for AIAS, and in particular its Department of Planning and Tariffs (DPT), who maintained a closer interaction with technical assistance, both with SNV as well as with VEI. A strong point has to do with the flexibility of the processes on the part of the consortium. Operators benefit from Dutch experience, exchange of experience and training of national technicians.

### **How has the AIAS management been including internal control and financial management with a particular emphasis on the risk management component? Is AIAS capable of managing programmes and funds of this size and beyond?**

AIAS' DPT is responsible for monitoring the technical component. Furthermore, departments' coordinators, unit chiefs and supervisors have the responsibility of regular monitoring based on the work plans. DPT participates in the planning, implementation and evaluation of all key activities of the project and in this way has control of what is done. There is an operator's spreadsheet that serves as a monitoring tool (completed on a monthly basis). However, AIAS does not have a corporate-level document for risk management / mitigation. Each project has its own risk matrix, which is assessed jointly. There is a monitoring meeting in the first week of each month. The meeting is attended by the Director, heads of department, project coordinators, technicians, and others is held.



With its partners, AIAS supported by two consultants does joint external monitoring exercises to the project sites in order to check the progress of activities undertaken in the implementation phase, and it assists AIAS and the Dutch partners in the defined tasks, making recommendations on corrective measures on key issues that are discussed at bi-annual meetings of the steering Committee.

By means of annual progress reports and annual plans the EKN, in addition to regular meetings with project staff, is provided with inputs to monitor project progress as well. External auditors' reports of 2018 and 2019 did not mention any problem related to management of funds of this size.

Since November 2015, AIAS has an **internal control unit** that consists of one internal auditor who reports directly to the Executive Director of AIAS. The internal auditor regularly carries out reviews of AIAS' financial functions and procedures at both department and project level. To this end an annual internal auditing plan has been developed which has been approved by the Executive Director. The internal auditor also ensures that the recommendations of external auditors are being followed upon. To this end, follow-up matrixes have been prepared. There was not a formal risk management structure before the introduction of PO15.

***- Is there any evidence that the changes, if any, have contributed to make the management Structure more sustainable?***

In risk management, there is a very clear internal procedure for payments. Each contract manager monitors payments with an appropriate software, which avoids payment above the contract value. The internal and external auditors also help in executing risk management. Every year there is a risk matrix being filled in to find out if there is a petition or complaint that has not been resolved, and also works towards fighting corruption. The major problem with regards to procurement is to find more qualified companies which are knowledgeable of AIAS procurement rules.

***- How do these strategies and structures look now? How have they change, and why?***

A risks and mitigation strategy has been prepared for PO15, PO 35 and PO75 with contextual risks, programme risks and risks related to implementing partners. These tables are regularly reviewed by AIAS management in collaboration with the VEI Consortium for updates and corrective measures. Significant issues and corrective measures are brought to the attention of the steering committee. A risk assessment is furthermore included in each progress report (2018 and 2019) with an update of measures taken during the year.

In June 2019, AIAS approved a Manuel of internal administrative and financial procedures for its staff and partners. AIAS staff has been trained to comply with it. The Department of Administration and Tariffs (DAT) together with the head of the procurement unit monitor and control compliance.

***What is the current progress and outlook regarding the institutional and financial sustainability of AIAS?***

The process to revise AIAS statutes is being discussed with the Government of Mozambique since 2016 and not fully under the control of AIAS itself as many stakeholders are involved (up to the Council of Ministers and legislative body). As a result, some donors, like UNICEF, express discontent and do not understand why Government is not granting the autonomy-status.

In order to be considered for the status of financial autonomy AIAS needs to show that it can cover two thirds of its operational expenditure from its own resources. The model as depicted in PO75 shows that,

if only considering the **net lease fee** (i.e. the gross lease fee minus bad debts and the Treasury retention<sup>9</sup>), AIAS can reach this threshold level by the year 2026. If, considering the **gross lease fee** – ignoring bad debts and the Treasury’s retention – projections are that AIAS would already be able to cover two thirds of its operational expenditure by the year 2022. The PO75 financial model shows that AIAS could theoretically cover its operational costs from water operators’ lease fee by the year 2024. However, taking into account that the factors of ill-paying operators and/or a part of the lease fee remaining at the Treasury this process might take longer.

On the positive side, the beginning of revenue collection since 2018, combined with the increase in the number of systems and the increase in customers are strengthening AIAS revenue base. During PO35, AIAS continued invoicing the lease fee to the water operators. This fee has been established at 12% over the operators’ total revenues. For the period January-December 2019 AIAS issued invoices with a total value of MZN 11 million (or EUR 157,143), corresponding to 26% of AIAS’ operational costs for the year 2019<sup>10</sup>. AIAS continues its efforts to increase the revenues collected and thus its lease fee received, including through supporting operators in reducing non-revenue water (NRW) and improving collection-efficiency, by sensitizing and encouraging consumers (including households and institutions such as hospitals and military barracks) to pay their bills.

Even though AIAS has been successful in obtaining the interest of both public and private sector operators, investors consider the lack of financial autonomy a major impediment. Therefore, the quest to achieve this status remains paramount during the next phase of the programme.

The interviews conducted with main stakeholders at the field level resulted in the following observations relevant to institutional sustainability:

- AIAS continues to operate mostly from the central level without providing the human, technical and financial means to its provincial delegations to become fully operational. As a result, the delegates feel left alone and often informed afterwards of decisions involving private operators, district authorities and municipalities. The decentralization process is so far incomplete. This is still hindering AIAS’ growth to reach out to more operators and get more revenues.
- Even though AIAS has been able to involve a good number of operators, they are reluctant of investing more in water supply expansion due to lack of financial incentives and security of their potential investments (due to AIAS lack of financial autonomy).
- There is an urgent need to clarify roles and responsibilities between AIAS (central and provincial level), operators, municipalities and to set up regular communications among them. As an example of ambiguity, AIAS is currently pushing to renew the contract of operators without involving municipality/district authorities who object against contracting the same ones because of under-performance. This is another hindrance to institutional sustainability and growth.

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<sup>9</sup> AIAS will only retain a certain share of the lease fee as a part will be considered “bad debt” (i.e. 20% of the gross fee charged), and another part may remain with the Treasury. For the period 2021-2025 the PO75 model assumes a Treasury retention fee of 60% until 2025 and 20% for the period 2026-2030.

<sup>10</sup> The remainder of AIAS’ operational budget is covered by a state budget (estimated at MZN 9.4 million or EUR 134,286 in 2019) and the PO35 contribution to operational costs (EUR 472,000 in 2019).

### **What would be the best possible mechanism to phase out the EKN-financed performance incentives mechanism whilst safeguarding AIAS' organisational structure?**

Annual sustainability checks have not been carried out. AIAS understood that this would be upon EKN's initiative to happen.

AIAS' performance-based incentive mechanism was updated in 2017. Specific goals are identified for each staff member and appraised annually. Employees can receive bonuses depending on their performance against the set goals. Paying incentives is necessary to retain the trained and qualified staff. The level of salaries including incentives is in line with what is currently being paid elsewhere in the water sector in Mozambique. In parallel, the working conditions have improved substantially as a result of the modernization of offices and provision of more working tools including the means of transport for staff. The combination of rigorous management (by objective) and improvements in compensation and working conditions resulted in a significant rise of the commitment of staff to the institutional goals. There is teamwork, as well as a high degree of self-confidence amongst AIAS' staff.

The incentives paid out to the employees during PO35 range from EUR 400 to EUR 1150 monthly. Annually this leads to a total expenditure from the project budget of EUR 190,000 to EUR 200,000. The annual amount appears in the annual progress reports under the line "Performance incentives" in WP 1.2.

For AIAS to be able to continue by itself it would need: 1) financial autonomy status to allow it to do so as per government regulation, 2) sufficient income from the operator lease fees. These two conditions have not been met yet. Therefore, it is essential that EKN continues its support to the incentives' mechanism, whilst other financial and organizational strengthening measures are being taken. If EKN's support would discontinue, much of the progress made will be lost again. To enable EKN to phase-out this support, it should monitor progress made by AIAS to reach net lease fee targets in line with the financial projections (financial model from PO75) and how well AIAS is progressing in finding additional funding for its operations from alternative sources. One option to speed up AIAS' coverage of its operational costs could be for AIAS to negotiate an increase of the net lease fee<sup>11</sup>.

### **Which measures are needed to assure the sustainability of AIAS as an organisation and which exit-strategies could be considered to ensure that the impact on AIAS' performance of EKN's gradual phase-out of institutional support is minimized?**

Sustainability is woven into the program through the intensive involvement of AIAS personnel and Mozambican partners in order to ensure that activities continue after the end of the project. For instance, with respect to the activities in the water component, rather than relying on Dutch experts alone, the project has contracted water experts from – local, Mozambiquan - institutions such as AdeM and CFPAS. In this manner, in-country technical expertise is created such that the assistance to the water operators can continue after the project has come to an end. In addition, for the same reasons, AIAS staff has joined the Dutch partners' technical missions.

Furthermore, to the extent possible, for each activity that members from the Dutch partners undertook, AIAS counterpart staff have been assigned. This strategy, which was applied within the scope of PO15/35, ensures that capacity within AIAS itself is built up. Successful examples of this strategy during PO15/35 are the recruitment of an AIAS economist in tariff negotiations and modelling, an AIAS ICT-expert for the

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<sup>11</sup> I.e. by reducing the Treasury Retention rate and not the gross lease fee, as this would have negative effects on the net income of the water operator.

implementation of Eticadata and BIAS software, and a sanitation expert to oversee the sanitation component. In fact, these activities are currently being led by the respective AIAS staff members.

PO35 and PO75 plan do not have a clear **exit strategy** and AIAS today depends almost entirely on EKN and other donors for its operational expenses. If EKN would end AIAS' funding, they would hardly be able to continue to implement the current activities of the project. EKN intends to continue supporting the organization through paying the salaries of most of the staff that were contracted under PO15/35 during phase 3 (PO75). PO75 will also ensure continuity of other support, including the fielding of an AIAS project manager.

The PO75 proposal and its resource mobilization plan currently being developed, aims to achieve organizational and financial sustainability over the period 2021-2025. At present, roughly 25% of AIAS' personnel costs are covered by the state budget with other/external donors covering 75%. Although EKN's contribution of MZN 132 million (or EUR 1.8 million) to AIAS' operational costs only corresponds to 10% of PO75 entire (proposed) budget, it does cover about half of AIAS' overall operational costs budget for the 2021-2025 period. This clearly shows that EKN's contribution to AIAS' operational costs during that period remains essential. Without EKN's contribution AIAS would not be able to meet its operational costs, let alone have the capacity to grow (decentralise)<sup>12</sup> and further strengthen the organisation, or implement its investment program.

Achieving financial sustainability or viability of AIAS remains to be a major challenge. In order to ensure that AIAS will have sufficient capacity to implement its mandate it requires an increasing number of skilled staff and an increase of its revenues.

AIAS main (or sole) mechanism it has available to increase its income, is by increasing the share of lease fees from water sales in incremental number of towns, operators and connections. From every cubic metre a water operator sells to an end-client, a certain share (*taxa de cedente* or lease fee) accrues to AIAS through the Treasury. The institution uses those lease fees to finance its operational cost structure. It goes without saying that having a larger number of rehabilitated systems with capacitated operators in place will have a positive impact on AIAS' revenue base and will thereby directly contribute to AIAS' financial sustainability. According to the financial model (used in the PO75 proposal), the lease fee will be able to cover 100% of AIAS' operational costs by 2024/2025<sup>13</sup>.

These financial projections are made, based on the following criteria:

- The lease fee set at 12% of overall operator revenues.
- The number of operators the lease fee is charged to, i.e. the number of operational water systems.
- The average number of connections per system.
- The average consumption per customer per month.
- An agreed water tariff.
- The level of other turnover (e.g. from selling water connections) the operators realize in addition to direct water sales.

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<sup>12</sup> Partly as a consequence of its decentralization process, AIAS is anticipated to grow from 43 staff members today to 63 by 2030.

<sup>13</sup> In the PO35 proposal, it was projected that this milestone (of water revenues covering 100% of AIAS' operational costs) would be achieved by 2024.

How realistic these projections are and whether or not AIAS will be able to fully cover its operational costs by itself, depends on several important factors:

- a) AIAS financial autonomy status and security provided to private operators' investments
- b) Strengthening of provincial delegations and increased responsibilities of municipalities in operators' performance (for instance involving municipalities having qualified water and sanitation technicians to pilot the delegated management framework with some operators, with AIAS oversight)
- c) The expansion of the clustered approach and cross-subsidization of operators
- d) Speeding up the pace of water system rehabilitation to reach 96 towns by 2025
- e) Additional investment funds to sustain expansion of water supply and rehabilitation of existing systems
- f) Reducing non-revenue water including those of public institutions, hospitals and military barracks
- g) Managing/mitigating the impacts of COVID-19 on revenues and AIAS operations<sup>14</sup>.

robust

The weakness of the financial model (and thus the impediment to AIAS' financial sustainability) is illustrated by the fact that in the running fiscal year (2020), AIAS does not receive any lease fee. Due to a 'legal issue', operators pay this fee to the Treasury instead of AIAS.

To realize its investment plan 2021-2025, targeting to rehabilitate an additional 48 water supply systems, reaching 96 operational systems by 2025, AIAS would furthermore need an **investment budget** of over EUR 100 million. The state budget is only sufficient to rehabilitate approximately 5 systems/towns per year, so AIAS will need to attract additional funds to realize its investment plan and its ambitions. As said, the more operational water systems, the more money is coming in to AIAS to cover its operational expenses. The (proposed) PO75 budget includes EUR 5 million for minor system improvements and expansions. This will be partly used to purchase 'hardware' and partly to support AIAS and operators in developing investment plans and alternative funding sources.

Given the growing number of systems, opportunities of **cross-subsidization** arise. For instance, by joining the operations of various systems into the hands of one single operator, those systems that are profit making can cover up for the losses of the commercially less-interesting locations. This 'clustered approach' is already being applied, as is presented in the section on WP2.

## WP2: LOCAL OPERATOR DEVELOPMENT (WATER AND SANITATION)

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### What is the efficiency and effectiveness of the chosen capacity building model for operators?

One important aspect of the programme was to strengthen the capacity of water system operators to manage and maintain the water systems delegated to them. Respective capacity-building activities were carried out in 48 towns with 19 water operators (of which 18 are private operators and one a public entity), as presented in Figure 1. They included a combination of on-the-job training and classroom training sessions for operators, covering topics as financial and commercial management, water

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<sup>14</sup> The COVID-19 crisis has already had an effect on both AIAS and water operators, as well as on the implementation of the PO35. The main concern is that customer (households and institutional consumers) are not (able to) paying their water bills anymore, resulting in a loss of income to water operators and AIAS. Other – more practical – issues are the fact that no international consultants can be used and also the consortium members may need to re-assess their staffing and strategy.

production and distribution and electrical systems and maintenance, and were offered on the basis of identified gaps and demand from operators,

Company	Nr	Towns						
Collins	7	Ulongue	Morrumbene	Mopeia	Moamba	Jangamo	Inharrime	Homoine
Kutenda	6	Mossuril	Mocimboa	Marrupa	Chiure	Balama	Ancuabe	
World Class	5	Quissico	Nhamayabue	Massangena	Mabote	Fingoe		
COPRESS LDA	4	Pebane	Milange	Maganja da Costa	Lugela			
PB Construcoes	4	Nametil	Manjacaze	Espungabera	Chigubo			
Aguas de Sena	4	Marringue	Caia	Buzi	Inhaminga			
FIPAG	4	Mueda	Mocuba	Ilha	Chibuto			
Engepesquisa	2	Nhamatanda	Massingir					
SIP	2	Tambara	Macossa					
Aguas da Bilene	1	Bilene						
Associação Flor Projecto e Construções	1	Mabalane						
Commissao de trabalhadores	1	Montepuez						
EMA	1	Vilanculos						
Eco gep	1	Malema						
ECOPS & Consultores SA	1	Alto Molocue						
GM Servicos	1	Afungi						
Massinga Comércio Investimento Serviço	1	Massinga						
Sociedade Técnica de Cons. e Cons.	1	Ribaue						
Xirico Comercial	1	Guro						
<b>Total</b>	<b>48</b>							

  

<b>Legend</b>	
<span style="background-color: #d9ead3; border: 1px solid black; padding: 2px;">Town</span>	Contracted by AIAS
<span style="background-color: #d9ead3; border: 1px solid black; padding: 2px;">Town</span>	Contracted by local authorities
<span style="background-color: #d9ead3; border: 1px solid black; padding: 2px;">Town</span>	Contracted to FIPAG

**FIGURE 1: WATER OPERATORS BY TOWN**

On sanitation, the project targeted 27 towns. These towns are supported with the establishment and development of sanitation groups, to be led by local authorities and with active participation from a range of stakeholders, including the departments of health and education, community leaders and private sector partners. The programme aims to build the capacity of these sanitation group and supports them in the development of a sanitation plan. The programme then also offers support in the implementation of the plans, including in developing and carrying out awareness raising campaigns, and in the design, siting, contracting and construction of public sanitation facilities. Other (capacity building) activities the programme has carried out include WASH in schools and training of local artisans to respond to the increased demand for private latrines.

The capacity-building support provided by the programme is seen as very relevant, both for water and sanitation. Key-informants – water operators and sanitation group members - indicated that they considered the trainings received relevant and it capacitated them both technically and administratively. Water operators benefited from theoretical and on-the-job trainings, covering areas such as equipment repair and maintenance, hygiene and safety training, and monitoring and reporting. Trainings are relevant as they are based on issues operators face, identified from monitoring tools and AIAS field monitoring missions. The operators can request specific training and AIAS is very responsive to these requests as well as in providing on-site assistance.

That the water operators' capacity has improved is illustrated by the fact that operators show an increase in their collection efficiency to 65% in Praia de Bilene, 75% in Moamba and 88% in Mandlakazi. The operational cost recovery ratio, furthermore, reached 1.0 in Mandlakazi and Moamba (yet is 0.7 in Praia de Bilene), and non-revenue water (NRW) reduced to 20% in Mandlakazi and Praia de Bilene (but is still 44% in Moamba). Ultimately, all three (sampled) water operators, reported an increase in household connections, and thus an increase in access to water in these three towns:

**TABLE 3: INCREASED ACCESS TO WATER SERVICES IN THREE TOWNS**

Town	People with access to water (Baseline: Aug 2017)	People with access to water in July 2020	Additional beneficiaries	Coverage
Moamba	15 556	3433 household connections = appr. 17165 people Additional connections (PO15 and PO35) = 337	1609	≈ 75%
Mandlakazi	6 045	2122 household connections = appr. 10610 people Additional connections (PO15 and PO35) = 600	4565	≈ 88%
Praia de Bilene	2401	1200 household connections = appr. 6000 people Additional connections (PO15 and PO35) = 337	3599	≈ 65%

The operators also confirmed that their capacities on water systems management improved as a result of the training and technical assistance from the PO 15/35 programme. They are conscious about the need to ensure the sustainability of systems but stressed the need that AIAS should reflect on the type and duration of contracts. Contracts are standard for a 5-year period, which from the operator's viewpoint is too short to allow for investments for the expansion of the system they operate.

Water system operation was initially not considered a business, but more and more firms/operators are coming to terms with the idea that it can be an interesting and viable business. Beyond the above-mentioned need to reflect on the type and duration of the contracts, the operators also would like to see more transparency (from AIAS) on the contracting process and procedures. For example, they questioned (during KIIs/GIs) "why all water systems that prove to be economically viable tend to be contracted to FIPAG for their management?"

The contract also only allows them to invest in network expansions of maximum 500 meters, as any expansion above 500 meters is the responsibility of AIAS. The capacity of AIAS to respond and invest on network expansion above 500 meters is however slow and limited. Expansion of systems is however a necessity, both to respond to an increased demand from municipalities and consumers, as well as to making the operators' business (more) viable, i.e. profitable.

The above constraint clearly results in discord between the operators and the local government, especially with local governments being unhappy (with the operators) indicating that the water services are not being expanded to reach more areas and beneficiaries. This is not entirely fair, since local government (municipality) is signatory of the (tri-party) regulatory agreement with the operator and AIAS. The evaluation found that these frictions are caused by a lack of communication between operators and local governments, and between AIAS and local governments. Whilst there is good communication and collaboration between AIAS (Maputo) and the operators, the involvement of local governments in the (operation, maintenance and expansion of) water supply and sanitation systems appears to be lacking.

Since the start of the programme, AIAS has developed and improved tendering, selection and contracting of water system operators. More and stricter selection criteria are now being applied to select the best operators possible. This is also possible now, as the market of professional and capable operators (firms) has increased over time. AIAS has also moved from selection individual operators in just one town to a clustered approach. This allows one operator to run more than one water system, even located in different towns. The reason for that, is opportunity to allow the best operator to manage different water systems in same time, that will allow to create economy of scale, and can compensate some water systems that are not capable to recover all costs of operation and not attractive for operators. This approach has clearly worked, e.g. with *Collins* in Moamba who manages 13 systems throughout the country and *PB Construções* in Mandlakazi, managing 4 systems. Aside the economic advantages, these operators also indicate that they have an opportunity to share (human) resources over the different towns and water systems and of cross-learning among their staff.

The evaluation found that beneficiaries in Mandlakazi and Praia de Bilene are satisfied with the water services, however in Moamba they are not. In Moamba, the operator is considered reluctant in responding to complaints, mostly related to low water pressure, constant supply interruptions, poor water quality, especially during the rainy season, and incorrect billing<sup>15</sup>.

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<sup>15</sup> Consumers expressed that they believe they are being billed for more than they consume. The operator recognized that in some cases there is the possibility for mistakes in the bills, as information collected from the counters at the local level is

As a result of the COVID-19 crisis, many consumers cannot pay their water bills anymore. The government has imposed that consumers cannot be fined or cut off for not paying their bills for the duration of this crisis. Given that public institutions are both the largest consumers (and should thus bring in the most revenues) but also some of the worst customers when it comes to paying their bills (and the first ones not paying their bills if they don't have to due to the COVID-19 crisis), results in a substantial loss of income to the water operators. As a result, water operators are finding it more and more difficult to continue operations, let alone to making a profit.

### **What is the capacity and commitment of the sanitation groups and leadership for implementation of sanitation activities in towns related to the programme?**

The sanitation groups are trained on developing a sanitation plan and supported to implement the plan in their respective town. AIAS facilitates and provides technical assistance to this process. The plans include WASH in schools (both 'hardware', i.e. construction of facilities, and 'software', i.e. training and sensitization to raise awareness) and the provision of public toilets, mainly in markets and bus stops. As part of WASH in school's component, selected pilot schools benefited from improved sanitation facilities.

The programme's supports in implementing the sanitation plans include the engagement of local sanitation activists promoting sanitation awareness campaigns in the communities as well as supporting school sanitation and hygiene interventions, including the construction of sanitation facilities for selected primary schools. Unfortunately, schools have closed because of COVID-19, so these facilities have not yet been put into use. But, given the fact that the demand for sanitation and water in schools was constantly presented in the FGDs, the programme clearly responded to a relevant need. These schools are surely in a better position when they re-open, especially to comply with the heightened sanitation and hygiene measures required in the context of COVID-19.

Municipalities expressed gratitude and satisfaction with the assistance they are receiving in the field of sanitation and hygiene promotion and awareness raising. Some are even hiring volunteer activists to be permanent staff, indicating an increased interest in, and understanding of the relevance of sanitation and hygiene. The fact that municipalities embrace sanitation and take respective activities into their own hand is also promising to the sustainability of this component of the programme.

The programme also invested in the construction of public toilet facilities. The evaluation did find that the operating arrangements of these facilities are not well organized. Aside from several technical issues (such as poorly constructed toilet blocks and toilet blocks missing a water connection), there is a lack of understanding – between local governments, AIAS and operators – about operational responsibility. Also, there seems to be no clear or uniform business model for these facilities. Some are (planned to be) privately operated, whereas others are (planned to be) managed by the municipality, making it also unclear to users whether or not they should be paying for these services. Key-informants indicated that it is unclear what falls under AIAS' mandate and responsibility with regards to certain sanitation aspects (e.g. drainage, faecal sludge management (FSM) and investment in public toilets).

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then transferred to the company's headquarters in Maputo where the billing is completed. This means that there are possibilities for information to be mistyped, but also that validations are difficult to do immediately. Yet, they mentioned that in most of the cases, where costumers argue a miscalculation, this is the result of bad consumer practices, and thus they have increased their efforts to sensitize local communities about best practices to save water. In this sense, pre-paid meters and automatic verification meters, which are being piloted by the programme are a possible solution.



Despite several requests, the evaluation team could not meet with the *CORAL* in the three municipalities visited. The *Conselho Regilador de Água Local* (Local Water Regulatory Councils) have responsibilities at the towns and district level, similar to AURA, and thus help to regulate tariffs and resolve related disputes problems at local level. From FGDs with the sanitation groups, it was found that they actually play the *CORAL* role and being a better-established group in the district. It may be strategic for AURA to reflect on how to promote coordination between sanitation groups and *CORAL* members.

In the three towns assessed under this evaluation, all had a sanitation plan developed. The members of sanitation groups are proud of their role, but recognize their limitations to implementing the sanitation plans, especially those activities that require capital investments. In all three towns visited, the sanitation plan has been approved by municipal assembly and district governments, which means that the municipality commits to implementing the plan and to including it into its investment plans and budgets.

### **What is the capacity of beneficiary towns to practice to full FSM chain?**

The implementation of FSM chains is a relatively new component within the programme, which only started to be discussed in December 2019. The investment plan for 2020 provided resources for the construction of two faecal sludge treatment stations (in Vilankulos and Mocuba municipalities as a pilot), the purchase of equipment for the management of FSM and small-scale training of some sanitation groups on these issues.

The results expected from the two municipal pilots were expected to be replicated, as part WP4, but have not yet being consolidated or thus shared, because none of the stations has yet being built and the procurement process is yet ongoing.

On the other hand, field visits and interviews showed that FSM capacity, particularly in smaller towns, is quite limited. For example, despite FSM being included in the sanitation plans of the three municipalities visited, Interviews reflected lack of awareness about the need for this service across the communities, lack of capacity amongst local operators, as well lack of interest from the private sector to purchase the equipment's needed for this services, given the limited demand.

Other WASH programmes also experienced the same issues. UNICEF WASH programme for small towns, for example, had to abandon a plan to support small-scale independent faecal sludge cleaners equipped with manual evacuation unit. This was the result of perceptions that the market opportunity would be too small, due to the use of dry pit latrines, and the size of the plots which allow the households to build another latrine once the previous one has been filled up.

Yet, the interest to do more on the area, still exist within municipal authorities and AIAS. For example, one operator in Chibuto Municipality is setting up another FSM station with support from AIAS (not supported by this programme), which can yield information additional to that of the two pilots mentioned.

## **WP3: INFRASTRUCTURE, DEVELOPMENT AND INVESTING**

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### **What is the sustainability of the initiative with regards to sanitation infrastructure established and being operated in the PO15 & PO35 towns supported with sanitation?**

AIAS is prioritizing to transfer to Municipalities or District Governments the sanitation facilities once the construction works is completed. As such, AIAS let them take full responsibility of the infrastructure, and in turn local authorities delegate to private operators, the responsibility to operate, manage and maintain the public toilet blocks. However, despite such efforts, the public toilet blocks (PTB) are far from being

sustainable at least in the short and medium term, due the lack of sufficient users to make them profitable. The situation has worsened as a result of the COVID-19 pandemic and its economic effects. Also, in Moamba for example, market vendors are making the point that they are already paying a market fee<sup>16</sup> which they believe should cover for making use of the public (market) latrines for free.

### **Review the factors for successful operation of public toilet blocks and improving level of service that can be provided**

The construction of public toilet blocks starts with interaction between AIAS and the municipality or local government<sup>17</sup> to plan for, design and site public latrine blocks. After agreement has been reached, AIAS takes care of contracting and supervising<sup>18</sup> the construction works. Once the facility has been completed it is handed over to the local authority/municipality, who then is responsible to find, select and contract a private operator.

Overall, the establishment of private operator run public toilet blocks along with the creation of sanitation groups to promote the use of the toilets has been a success and helped to improve sanitation and hygiene in towns. The presence of operators furthermore helps the longevity of the facilities as they keep them clean, carry out minor maintenance works and prevent vandalism. However, the operation of the facilities as a business is far from being considered a success in all cases; some are completely closed and others are not in full operation due to the absence or problems with the water connections and the reluctance of users to pay for these services, which has been worsened as a result of the economic consequences of the COVID-19 pandemic. There are also problems with insufficient technical capacities of toilet operators due to non-strict application of selection criteria conducted by local authorities/municipalities which also contributes to inefficiency of the operation.

To improve the management and operation of the public toilet blocks, AIAS jointly with local authorities need to review and define more clearly the selection criteria of the public toilet block operators. Criteria should include: i) business management knowledge and experience; ii) being familiar with the local area and its population, i.e. being from the area; and iii) having some minimal liquid assets (starting capital) to run public toilet blocks. SNV has prepared guidance on this.

Furthermore, the programme needs to work on clarifying and agreeing the roles and responsibilities of the different stakeholders (AIAS, municipalities, sanitation groups and operators) regarding the design, siting, construction, quality assurance, operation and maintenance of public toilet blocks.

Other issues that were observed during the site visits are the fact that some public toilets, despite having an access ramp for disabled people, do not have the handrail to facilitate their mobility; and none of the toilets visited were equipped to facilitate menstrual hygiene management, making it uncomfortable for women to use them. In the latest design/guidance available in the programme, these issues have been addressed.

### **Review current quality assurance of programme infrastructure constructed and recommend how this can be improved?**

Quality assurance of infrastructure constructed under the project PO35 is conducted in an independent manner. AIAS hires independent construction inspectors for this through public tenders. In addition,

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<sup>16</sup> A fee paid to be allowed to sell on the market.

<sup>17</sup> In the case of district towns

<sup>18</sup> An independent construction supervisor (for quality assurance, QA) is also contracted by AIAS.

inspectors and technicians from AIAS' Technical Department (DTP) monitor the construction process and its progress.

The evaluation did however find poor quality construction works, for example the public toilet located at the public transport stop in front of the central market in Moamba. In the male section of this facility, one toilet is not operational due to a blockage in the sewer pipe. According to the operator, this was already the case when the facility was delivered, indicating that quality assurance has not been optimal.

### What is the progress in taking-up sanitation products at household level?

The programme has made great progress in increasing the demand for household sanitation products and services. A large number of household latrines have been constructed, significantly raising the number of people with access to basic sanitation. The creation and capacitation of sanitation groups was the key success factor in taking-up the sanitation products.

The programme also reports some positive results with regards to solid waste management at household level. For example, in Moamba, a group of youngsters has been trained by the programme and collect waste from households and the market at a fee. The waste collected is taken for recycling and the recycled (base-)product is later sold in Matola. People from Moamba are however unwilling to pay for the waste collection as they are already paying EdM (*Electricidade de Moambique*; the national electricity company) for this service (although EdM is in reality not collecting the waste in Moamba). This is obviously very discouraging for the youngsters, as they are not making any profit, and they are likely to stop operating.

## WP4: DEVELOPMENT OF INNOVATIVE BUSINESS MODELS

According to secondary information provided by VEI, from a target of 2 to 3 innovative business models for water and sanitation needed to be explored, PO35 explored a total of 19, of which 7 were validated, 4 were identified for scale up, and only the 2020 Smart Connections Financing and Smart Networks been taken forward to focus on locally embedded sustainable services:

TABLE 4: WP4 SPECIFICS AND STATUS AT THE END OF 2019<sup>19</sup>

WP4: Modelos inovadores de água e saneamento	Process Flow			
	1. Blueprint	2. Validate	3. Prepare	4. Scale
<b>PO15</b>				
Biogas / DW2V			NOT SCALING	
Mobile Water Management				
PULA Sanitation Waste			PIVOTING	
HydroSand		STOPPED		
Innovative Sanitation Marketing (x2)			STOPPED	
Aspirational Bathroom / Toilet Start-Up			STOPPED	
Toilet Financing with Letshego		STOPPED		
<b>PO35</b>				
Smart Water Network			REQUIRES FUNDING	
Resource Performance Assessment / CIS			REQUIRES FUNDING	
Prepaid Pilot			REQUIRES FINANCING SOLUTION	
Digital Water / AIAS ICT Strategy			NEEDS COORDINATION	
Asset Usage Data Integration (Resource Usage)				
Smart Connection Financing	Under preparation with prepaid			
Walifi Water			ATTRACTING FUNDING	
Walifi Waste	Under evaluation with FINISH Global			
Wamina	STOPPED, no funding			
Sanitation Capacity Development Platform	STOPPED, funding but no priority			
Public Sanitation / Biogas (DW2V) Scaling			NO FUNDING OBTAINED	

<sup>19</sup> Source: "Results AIAS PO35 Work Package 4 Development Innovative Business Models" document.

It should be considered that the current Smart Network Services initiative consists of two specific pilots/initiatives, the Resource Asset Assessment and Customer Survey Service (RAS) and with smart metering and monitoring of created districts (SWN), thus the actual number of innovations taken forward is four.

The main issue regarding the 'failure' of some of the initiative has been the possibility to scale up. The Evaluation found that private sector has certainly an interest to get involved in the water and sanitation sector, but it still requires a better enabling and competitive environment to work in. This reflects previous findings in WP2 and also follows the experience from PO15. Two particular initiatives were highlighted:

**THE SMART WATER NETWORK AND RESOURCE PERFORMANCE ASSESSMENT.**

The services and technology for this were piloted in Mandlakazi till end 2019. The pilot was able to consolidate a Resource Asset Assessment and Customer Survey Service (RAS), alongside a smart metering and monitoring. This included Automatic Meter Readings (AMR) which created project cost-efficiencies by saving time required by operators to check the readings, but also allows them to monitor Minimum Night Flow (MNF), which can be a strong indication of leakage. Furthermore, the non-revenue water provision was reduced from around >15% to <10% (average 6%).

The pilots have so far shown a viable business case in Mandlakazi (+€50.000 nett benefit on 7 years depreciation period of AMR ready bulk meters) and operators being interested to take the services for other networks (*Espungabera, Nametil*). During the field visits, the operator in Mandlakazi also indicated that is happy with the initial experience and it has given them the opportunity to interact with other private operators from Kenya and exchange experiences, improving private sector view about water system management and business. Thus, a key recommendation for PO75 is to consider expansion of the model to other municipalities and doing cost-efficiency comparisons across these pilots to determine possible limitations that could be fixed and learnings worth replicating.

The operators using the model would be a key stakeholder in the model of expansion, as their experience can be used to convince other operators to take on this innovation. Furthermore, based on interviews and documentation from other WASH programmes being implemented in Mozambique, more could be done to share the experience with them, and thus reviewing the possibility to expand beyond the scope of PO75 municipalities.

**PRE-PAID WATER PROVISION.**

This innovation was tested in Mandlakazi and Praia de Bilene, with the private sector company Mapi Investimentos. The operator indicated that the pilot consolidated 200 pre-paid meters in Mandlakazi and 10 in Praia de Bilene. The priority for the pre-paid meters was given to public entities and some private beneficiaries which experienced problems on paying the water bill on time. Based on experiences elsewhere and information collected on the field, the pre-paid meters have shown to be a good mechanism for poor households to exercise more control about their level of spend on the service, having clarity in the value for money they are obtaining, but also to exercise a stronger control over operators in case of damages, as the flow of payments towards the operators would stop immediately in those cases.

The pilot also demonstrated that pre-paid services as a technology do work in Mozambique. They have been able to improve non-revenue water (water leakage, illegal connections, meter losses) and customers satisfaction (with more customers requesting for prepaid water, also having experienced the benefits of prepaid energy, and less reports of inaccurate readings). It also eliminates the costs associated with

reading the meters regularly and emitting corresponding invoices and creates a more stable business model for operators which work on the basis of income they have already received.

Yet the model also showed that prepaid models requires a strong management and governance structure beyond the level of the operators as it requires the consolidating of a prepaid vending platform, the realization of a dense network of digital resellers, and support to operators and ecosystem to ensure 24/7 maintenance and equipment support all require scale to become viable. The business case for the model relies on revenue, cost and cash flow benefits in comparison to scaling with traditional water meters.

Operators interviewed in the field (Moamba) are now considering giving a priority to commercial and industrial connections considering that they can contribute to improve operator cash flow by pre-paying water services.

Furthermore, the Smart Connections Financing (SCF) initiative is setting up a shared platform and service for the water operators, not restricted to AIAS operators as also AFORAMO and DNAAS have interest in the service. It allows investors, AIAS and operators to finance new connections and replacements and provides an open and governed vending and settlement solution that aims to provide cost effective service to the sector.

In light of the evidence, the evaluation team finds that the target expected in this area was delivered, as more than two of the ideas have been taken forward to focus on locally embedded sustainable services. Yet, it is uncertain whether these two/three areas of innovation result in a wider application or result in the expected improvements in water and sanitation services. The evaluation team also believes that the above two areas of innovation have the potential to transform wider service delivery in Mozambique, but in order to better assess its impact and cost-efficiency, the WP4 team can develop mechanisms to measure changes in the cost-efficiencies created by these models within the pilots and present the evidence in the mid-term review of PO75 to explore wider application of the model. Specific recommendations have been added below in this area.

## CROSS-CUTTING ISSUES

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### **Has the approved gender strategy been implemented effectively?**

AIAS' gender strategy was finalised in December 2018 and approved internally in early 2019. However, an implementation plan, the funding to deliver it, and thus actual implementation has not yet started. This was the result of a decision taken by the National Directorate for Water Supply and Sanitation (DNAAS) in mid2019 which requested all gender strategies within the umbrella of DNAAS to be harmonized, so a single coordinated strategy could be set in place. This concertation is taking place within AIAS and DNAAS with support of the programme, but its finalisation is dependent on the progress done by other organisations that are part of DNAAS.

In terms of content, the AIAS gender strategy which was supported by the programme meets all minimum requirements and set six immediate strategic actions:

- a) Creation of the Gender Units within AIAS in HQ and in each municipality (to implement and monitor the strategy),
- b) Integration of a Gender approach in the 130 water supply and sanitation systems under the mandate of AIAS,

- c) Equitable participation of women and men in the management of the 130 water supply and sanitation systems,
- d) Equitable participation of women and men in decision-making forums,
- e) Integration of the gender approach in planning documents (PES), and
- f) Development of technical capacities from a gender perspective.

In terms of implementation, and despite the above-mentioned limitations, AIAS has already advance in implementation in areas where additional approvals and funding is not required. For example, AIAS continued with a consistent polity to encourage female leadership, particularly in management-level positions. Operators are also required to have a gender clause in the contracts, designed to set gender-focused principles, targets and actions within their Action Plans. Gender sensitivity is furthermore considered during the design of sanitation plans, including reviewing the location of communal sanitation infrastructure, and consulting women and girls' views and needs when consolidating them.

Primary data collected through the field visits, also showed a positive inclusion of women and girls in the programme decision-making process. The participation of women in mobilizing communities to change hygiene-behaviour was notorious. In the three municipalities visited the activists mobilizing communities to promote hygiene and sanitation were mostly women (100% of activists in Moamba are women, and 80% in Mandjekazi and Praia de Bilene). Although positive, this also casts doubt on whether the lack of male participation might not play against efforts in promoting hygiene and sanitation behavioural changes. This is a question worth reviewing with local operators in more depth.

In terms of inclusion, the operators reported that they are offering 30% reduction of the official connection tariff to encourage more new connections and benefit people with limited capacity to pay for a new network. AURA has also defined a subsidized tariff for the consumers with a maxim of 5m<sup>3</sup> per month as an inclusion strategy, which is highly expected to benefit women (either in – mostly poorer - female-headed households, or because it diminishes the need and risks related with collecting water outside of their households).

According to AIAS, the challenge for implementation lies with system operators, as all system managers are managed by men. Ideally an analysis of the reason behind this tendency needs to be undertaken, but informally operators blame the lack of capacity at local levels.

### **How can nutrition be integrated in future programming?**

A possible new area of work for PO75 is the integration with nutrition interventions. The Evaluation Team was requested to consolidate information about whether this approach was already being considered or implemented in other WASH interventions in the country, as well as any recommendations from secondary data. Primary data indicated that this linkage was being trialled already by WFP and UNICEF with EU funding and for small towns, where data was easy to be controlled for variables and externalities. This intervention is focused on activities as hygiene promotion, access to safe-drinking water and promoting better FSM.

A similar approach as the one applied by UNICEF and WFP can be taken by EKN in PO75, including:

- Larger focus on sanitation programming in line with the comments provided above and recommendations below. A key learning from UNICEF and WFP programmes has been that linkages between nutrition and sanitation do not necessitate for specific nutritional components to be created, but rather for water and sanitation interventions to be strengthened. Some of the specific

interventions suggested by those interviewed, and which in many cases are already part of the project include:

- Focus on creating good hygiene behaviors, with particular focus on handwashing and food hygiene. Given the fact that PO35 has been a strong part of the Mozambican efforts to tackle COVID-19, these two activities won't need to be added only strengthen. Studies show handwashing with soap can reduce incidences of diarrhea by 42 to 47%, and it is simple, effective and cost-efficient (WHO Safe Water, Better Health, 2008).
- Focus on closing the FSM change. Safe disposal of faeces is the foundation for reducing pathogens in the environment and protecting human, a holistic approach to addressing faecal risks from source to safe provides. Improvements in sanitation, especially in eliminating open defecation, are associated with a 4 to 37 percent reduction in stunting in rural settings and with a 20 to 46 percent reduction in urban settings (Cochrane Review, 2013).
- Consolidating low-cost strategies to treat and safely store drinking-water at the point of consumption. Some examples of innovation being consolidated in these areas were seen during PO15, and can be reviewed given a new emphasis on nutrition.
- Gathering sufficient baseline data to measure the extent and location of undernutrition, diarrhoeal diseases, access to improved water and sanitation, hygiene behaviors and food insecurity in the geographical areas where the programme will be implemented. According to WFP, a large dataset of information is already available within the Ministry of Health webpage, but detailed information per cities is only starting to be consolidated. EKN PO75 can add value by helping in closing these gaps particularly in areas that are not yet being supported by any other programmes.
- Selecting pilot locations in which variables and externalities that can contribute (positively or negatively) to the results, are easy to control or measure. This should be done in coordination with AIAS, AURA, the Ministry of Health.
- Coordinate efforts with other donors. Any new intervention from EKN should avoid implementing in the same sectoral or geographical areas as the larger two nutritional programmes in Mozambique. USAID's Food and Nutrition Technical Assistance (FANTA) and the Scale-Up Nutrition (SUN) programme managed by WFP/UNICEF and funded by other various donors.
- Joining existing monitoring support systems (e.g. the integrated Food Security and Nutrition Information System being set up by WFP) to ensure that linkages between the interventions and achievements can be appropriately measured.

From our primary review, we also found that. the. AIAS management team is open to explore the integration of nutrition in WASH interventions. However, AIAS as a public entity, this is not part of their mandate. It will be important to initiate intervention as an (additional) activity of the partner implementing the sanitation component, while seeking to institutionalize based on results and evidence as part of the AIAS approach, through greater participation in the local nutrition platforms, current led by sectors as health and agriculture.

### **How have externally unplanned situations affected project implementation (security situation in Cabo Delgado and the COVID-19 pandemic)?**

With the deterioration of the security situation in the Cabo Delgado province (starting mid-2019), the sanitation component activities stopped completely in Mueda and Mocimboa da Praia since third quarter

of 2019. Yet in other towns within the province, activities continued normally. Within the water components, the project was unable to send project monitoring and infrastructure teams to the affected areas since late 2019. Yet, to ensure that training and capacity building are continued, technicians from within the region have been sent, following public health protocols

In contrast, COVID-19 has both brought opportunities and challenges. For example, as a response to COVID-19, SNV signed Memorandums of Understanding (MoUs) with local authorities to help engage in WASH awareness activities, which could support the government's public sanitation activities. In fact, the pandemic may contribute to increased WASH awareness, and willingness to pay for sanitation and water.

Yet, the pandemic has also increased operating costs. Protocols to ensure the application of public health best-practices were established and implemented amongst local offices and operators, creating limitations in its ability to deliver on the ground. For the water component, given international travel restrictions, Mozambique-based consultants are being used only, which reduced the level of competitiveness and availability of expertise with negative implications over the costs. If the situation continues, the budget will need to be re-assessed. According to information provided by the Programme Team, given the above, the project is on the path of lossmaking if no travel is allowed in the future.

Furthermore, there are concerns about the user's ability to pay water bills or new connections, as the economic situation continues to deteriorate. On one side the current government policy is already that people shouldn't be cut-off if they are paying their bills, but subsidies for operators have not been consistently set up to cover the costs of the operators. With the economic situation deteriorating, more families are taking advantage of this policy, thus leading to larger funding gaps for local operators. As said before, that the project's financial projections/model is very fragile, thus coping with these externalities can have larger effects on the sustainability of the programme.



### 3. RECOMMENDATIONS

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As outlined in the previous chapter, the PO35 programme is on track to meet all of its overall and specific objectives. Many targets will even be exceeded by the end of the programme, at the end of 2020. However, when looking more closely at the overall objective, one significant aspect is not being met, and that is the increased access to **sustainable** services. Sustainable services can only be provided by a structure or a system which consists financially and institutionally sustainable actors. It is for a reason that the trend in the sector is to work on **strengthening WASH systems**<sup>20</sup>.

Despite significant progress made, the main (local) stakeholders of PO35 – AIAS, water operators, municipalities and sanitation groups – are all a long way from achieving this financial and institutional sustainability. PO35, preceded by PO15, has made significant strides towards this, and it is for a large part on account of the support of EKN and the Dutch consortium that these (local) stakeholders are as developed and (somewhat viable) as they are today. Continued support is however required, as without this, most progress made would soon be lost again.

EKN intends to continue its support by funding phase 3 of the programme (PO75; 2021-2025). Besides a reflection and independent appraisal of PO35, this evaluation is also intended to identify points of improvement and provide lessons and recommendations for the design and implementation of this next phase. Points of improvements and lessons (to be) learned have been presented throughout the previous chapter. Below we present the recommendations.

#### GENERAL AND PROGRAMME-WIDE RECOMMENDATIONS

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1. Develop ‘SMART-er’ indicators<sup>21</sup>. The indicators used to evaluate the programme were adequate as PO35 was intended to transform a localized and smaller intervention, into a wider model for business sustainability. As mentioned in many of the areas above and recommendations below (sanitation - FSM cycle, gender, innovation), PO75 can increase its ambition and focus on measuring: (a) cost-efficiency gains in the delivery of the services, (b) increase in the number of communities that have adequate FSM treatment and disposal, (c) better measuring customer satisfaction with the services provided and qualitative changes observed in user behaviors, (d) composite indicators to measure achievements in the gender strategy, and (e) measuring innovation not by the number of activities implemented but rather by the impacts achieved in any one of the critical areas of the programme.
2. Develop more ambitious targets with respective implementation strategies, where possible. For example, aiming for an NRW < 25 or 30% (instead of <40%) will have a significant impact on various aspects (i.e. operators’ and – thus – AIAS’ revenues/lease fee and – as a consequence – their financial sustainability etc.).
3. Improve donor/sector-coordination:
  - i. There are several donors/actors supporting AIAS. Coordination and collaboration between them will improve Cohesion.

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<sup>20</sup> A WASH system can be defined as “all the social, technical, institutional, environmental and financial factors, actors, motivations and interactions that influence WASH service delivery in a given context.” [Source: [https://www.ircwash.org/sites/default/files/wash\\_system\\_and\\_building\\_blocks\\_wp2018.pdf](https://www.ircwash.org/sites/default/files/wash_system_and_building_blocks_wp2018.pdf)]

<sup>21</sup> SMART indicators are Specific, Measurable, Achievable, Relevant and Time-bound.

- ii. There is great potential for cross-sector/donor/actor learning, for example on the WASH and Nutrition nexus<sup>22</sup>, and UNICEF’s ‘financing facility’ for water operators. Experiences can be collected from both within Mozambique as well as internationally. A potential promising example is the alignment with Unitel, Operation Water, AFORAMO and DNAAS on financing and smart financing services that are ongoing and are related to innovations set in WP4 (Smart Connections Financing).
4. More emphasis should be given to the programme’s exit-strategy. For one, it should be based on a more sophisticated (robust and realistic) financial model. More thought should also be given on how to phase-out of the salaries’ and incentives’ support to AIAS staff.
5. Consider reorganizing the programme structure and management arrangements. Currently, VEI is the consortium-lead. VEI is primarily water focused, AIAS is (also) more capacitated on water, and water supply outcomes appear to be better. To get sanitation higher on the agenda and improve programme outcomes, it could be considered to i) put more emphasis on it in PO75 including an increase in the implementing partners capacity in the area (e.g. having senior staff with the AIAS central, increasing the capacity for advising with the municipalities, having advisors in all delegations covered geographically), ii) have the sanitation partner as lead agency, iii) clarify the mandate of AIAS in sanitation and strengthen their advocacy capacity (e.g. solid waste fee paid by energy users in the electricity bill), and iv) improve the process of documenting and institutionalizing hygiene and sanitation approaches in towns (including from other AIAS partners).
6. The programme should reconsider its approach with regards to selecting, piloting and upscaling innovations. Several suggestions and recommendations are provided in the Findings chapter, under Paragraph WP4: Development of innovative business models.
7. With regards to the implementation of the Gender Strategy, AIAS and VEI should continue its efforts in achieving its full approval by DNAAS. To hasten the process, active lobbying by EKN could be considered. In addition, the draft strategy can be shared with (a selected number of) operators in order to better understand the challenges they might face when trying to implement the strategy, particularly in regard to increasing the number of women in middle and high-level positions. Once approved by DNAAS, the programme should ensure and monitor compliance to the Strategy by all stakeholders. For this, and corresponding to recommendation #1, a composite indicator can be consolidated so the strategy is measured in terms of the qualitative and quantifiable achievements in each of the six areas of the Gender Strategy.

## RECOMMENDATIONS CONCERNING WP1/AIAS<sup>23</sup>

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8. AIAS’ quest to obtain the autonomous status remains paramount during the next phase of PO75. There is an urgency to work together to achieve this as soon as possible. Since this is a lingering issue for almost a decade which bears an enormous impact on AIAS’ sustainability, and therefore the success of the programme, it is recommended that EKN should take this up with other donors and come with a joint approach in order to reach a solution with the Ministry of Finance.

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<sup>22</sup> An interesting starting point in this sense is the joint WHO/UNICEF/USAID publication: “[Improving nutrition outcomes with better water, sanitation and hygiene: practical solutions for policies and programmes.](https://scalingupnutrition.org/nutrition/integrating-wash-and-nutrition-actions/)” Further sources can be found on <https://scalingupnutrition.org/nutrition/integrating-wash-and-nutrition-actions/>

<sup>23</sup> In Annex D (in both English and Portuguese), the evaluation team presents in more detail proposed actions to reach AIAS’ financial and institutional sustainability by 2025.

9. In order to speed up AIAS' coverage of its operational costs, AIAS should negotiate with the Treasury an increase of the net lease fee.
10. In PO75, it will be relevant to have, in the monitoring sheet of operators, an evidence of the paid amount of AIAS fee per period.
11. AIAS should improve communication channels and clarify the roles and responsibilities of the main interveners of the Delegated Management Framework: provincial delegations, municipalities and operators. It is important that AIAS works more closely with municipalities in order for them to get a stronger ownership of the process since they are closest to operators and customers. During PO75, AIAS should envisage to outsource some activities to municipalities (contracting the operators with AIAS control) and to the private sector (if AIAS and/or the relevant national authorities can provide guarantee and security to private sector's investments).
12. AIAS should empower the provincial delegations to take decisions and actions relevant to their roles and responsibilities with additional capacity building and human, technical and financial resources.
13. The selection of towns and operators in P075 should be carefully assessed for future investments in order to maximize the number of connections and potential of revenue returns. Selection should be based on the number of potential customers, population density, social cohesion, commitment and leadership of local authorities, and the presence of potential operators with experience in WASH or other public services. In order to prevent exclusion of less-promising towns and to "Leave No-one Behind", AIAS should propose the Government to introduce social tariffs or other targeted subsidy mechanisms (e.g. vouchers or Output-based Aid) to allow the most vulnerable households to have equal access to improved water services.
14. Opportunities for cross-subsidization should be reinforced by means of a 'clustered approach' of tendering.
15. AIAS' procurement process should be improved by better and more transparent publication of procurement information packages and organizing information sessions to the private sector so that interested parties better understand and comply with the conditions, criteria and minimum requirements.
16. Prepare publications on the AIAS water operator capacity building approach (including a synopsis of training materials<sup>24</sup>) in order to further increase the interest and participation of the private sector in the delegated management framework.
17. The Evaluation team is of the opinion that communicating results is key to ensure that the effects are lasting and that other players, which may even include private operators who are not contracted by AIAS, can reap the benefits from the project's efforts. To this end, the project team should regularly communicate (publish) on project results (for example on Akvo: <https://rsr.akvo.org/en/project/1868/>) and showcase the programme in trade fairs and conferences such as FACIM, Aquashare and *Plataforma Moçambicana da Água* (PLAMA).

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<sup>24</sup> As proposed in PO75

## RECOMMENDATIONS CONCERNING WATER AND SANITATION OPERATORS

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18. More clarification should be provided on the mandates, roles and responsibilities of the different sanitation operation stakeholder: AIAS, municipalities, sanitation groups, private operators, CORAL and AURA. Stakeholders should discuss and agree on who does what with regards to the design, siting, construction, quality assurance, operation and maintenance of public toilet blocks.
19. Furthermore, improved (and more stringent) tendering and contracting procedures should be followed when attracting and selecting private operators. When it is agreed that municipalities or sanitation groups take on this role, they should be supported and capacitated accordingly.
20. Unless the business model for public facilities is drastically revised, i.e. stakeholders recognizing that these public services should be entirely public and thus subsidized (by the respective municipality), public awareness should be raised on the fact that people need to pay for these services and why.
21. In regard to increasing the capacity for municipalities to apply the full FSM chain, recommendation for PO75 is to incorporate the FSM component from the start of the programme, ensuring that the two pilots are actually implemented (and yield lessons/learning) before starting any new activity. The priority for the next phase (PO75) should be on consolidating sufficient knowledge and understanding from these pilots, using the learning and knowledge acquired from these two/three pilots to create a better understanding of the conditions that need to be present to have a highest chance of success in closing the sanitation chain, and then set a growing strategy<sup>25</sup>. The last few months of this phase (PO35) can also still be used to get a full in-depth understanding of the challenges and best practices for the implementation of FSM chains, based on the experience of other rural and urban programmes either supported directly by AIAS or other donors.

## RECOMMENDATIONS FOR THE INNOVATION COMPONENTS

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22. The project takes a long time to identify and test innovative options as show in the experience of PO15 and PO35. This has led to stakeholders in technical, management and financial areas to recommend that for PO75 the project takes an exclusive focus on those successful experiences from PO15 and PO35, and scale after further validation with stakeholders (particularly on technical areas and further consulting costumers experiences).
23. Furthermore, EKN should review what is their key purpose in taking up these innovation activities: strengthening the local system (i.e. institutions, primarily AIAS) or increase access to water and sanitation services to the population. Some of the above interventions provide joint solutions, but the emphasis will determine whether technical or management actions are privileged.
24. As stated in recommendation #1, PO75 should focus on measuring how the innovations being implemented at the moment create cost-efficiencies in the model delivery or are helping to achieve impact in one or more of the areas of focus of the programme. Although the indicator selected for this phase was adequate, as PO35 was mainly focused on creating ideas to increase the sustainability or the water and sanitation business models, for PO75 the indicator should focus not on the '*number of innovations implemented*', but on how this innovation are helping in delivering the changes that the programme needs to create to achieve the programme's primary objective.

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<sup>25</sup> This recommendation and the suggestions/recommendations presented under WP4 go against what is currently being proposed for PO75. The current (draft) PO75 proposal concentrates primarily on the scaling of 'digitalization water' innovations as they appear most promising. The evaluation recommends to (also) work on innovations in the sanitation domain. This also relates to the recommendation to overall put greater emphasis on this domain in PO75 (Recommendation 5).

25. Depending on the above, some additional ideas were given for potential innovative interventions in PO75:

- The one most commonly mentioned was the need for additional research on faecal sludge and solid waste management components. In Moamba, our team of local evaluators found a group of young entrepreneurs that are already providing these services, They work on the basis of the existence of an already existing market in Maputo, but indicated that without further support (particularly in terms of specialized machinery the activity would not be viable in the long term). In this area is important to remember some of the recommendations already provided for FSM chain management included in WP2. As mentioned previously, other donors have already taken some grassroots/community-based initiatives with small success, the challenge being the lack of demand for the service, rather than a technological/innovation challenge being the issue.
- Partners in the area of sanitation mentioned that during PO35, innovative redesign of public sanitation and operations was planned yet no funding was obtained or allocated. For example, PULA an app for fecal sludge management was developed, in partnership with WSUP, as a platform to emptying truck operators and optimize transport routes and costs over time, as well as collection/disposal points. Innovative start-ups were introduced on household sanitation, including partners for innovative financing (LETSHEGO) and innovative marketing (VR marketing) and business model to provide agents/activators for sanitation with an opportunity to bundle activation and sales of other products to have a viable income from activation in partnership with a private sector below the line company. These, initiatives require enforcement and support of license/regulator/municipality for operators to use it.
- Related with the above, a common recommendation given by operators in the field was to focus any new innovations on the area of sanitation (instead of water). If the focus is to incentivize private operators to work in the provision of the services, the need is higher in sanitation than in water. Focusing on creating innovations that can make sanitation more cost-efficiency or further incentivize demand on the services is a critical point for any future programme.
- Improvement of toilet designs depending on the context. Currently all toilets design use running water and electricity. The stakeholders consulted mentioned the need of autonomous electricity systems (use of solar energy), water holes for the sanitary block, and others, to make the system, more sustainable in the future.
- Stakeholders at the management and technical level also recommended creating investment lines (contests/challenges), which are launched to promote locally sourced innovations from local entrepreneurs and operators, and which can create new initiatives at the village and community level. Yet, a potential issue with these, is (i) the possibility to spend all resources on developing new initiatives, instead of focusing on creating a sustainable model for those that already exist, and (ii) that similar funds have been implemented by other donors with different levels of success.
- Allocate more resources to the sanitation component, because currently it has a limitation of actions (ideas) due to the limitation of resources allocated for sanitation.
- Finally, in terms of creating further cost-efficiencies that incentivize/attract private operators to come into the system, innovation is needed to reinforce the capacity to

monitor works internally, ensure accomplishment of deadlines and quality, and create the capability to anticipate problems and react quickly (e.g. even in terms of simplified but transparent contractual systems).

### 3B. RECOMENDAÇÕES (VERSÃO EM PORTUGUESE)

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Conforme descrito no capítulo anterior, o programa PO35 está no caminho certo para atingir todos os seus objetivos gerais e específicos. Muitas metas serão até superadas ao final do programa, que termina no final de 2020. No entanto, ao olharmos mais próximo o objetivo geral, um aspecto significativo não está sendo cumprido, que é o aumento do acesso a **serviços sustentáveis**. Os serviços sustentáveis só podem ser fornecidos por uma estrutura ou sistema que consiste em atores financeira e institucionalmente sustentáveis. É por esta razão que a tendência do setor é trabalhar no **fortalecimento dos sistemas de WASH**<sup>26</sup>.

Apesar do progresso significativo feito, os principais atores (locais) do PO35 - AIAS, operadores de água, municípios e grupos de saneamento - estão todos muito longe de alcançar esta sustentabilidade financeira e institucional. O PO35, precedido pelo PO15, deu passos significativos nesse sentido, e é em grande parte por causa do apoio da EKN e do consórcio holandês que essas partes interessadas (locais) estão tão desenvolvidas e (com alguma viabilidade) como são hoje. No entanto, é necessário um suporte contínuo, pois sem ele, a maior parte do progresso alcançados seriam imediatamente perdidos novamente.

A EKN pretende continuar a apoiar financiamento da fase 3 do programa (PO75; 2021-2025). A presente avaliação, para além de trazer uma reflexão e avaliação independente do PO35, também visa identificar pontos de melhoria e fornecer lições e recomendações para o desenho e implementação desta próxima fase. Os Pontos de melhorias e lições a serem aprendidas foram apresentados ao longo do capítulo anterior. Abaixo apresentamos as recomendações.

#### RECOMENDAÇÕES GERAIS PARA TODO O PROGRAMA:

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1. Desenvolver indicadores ‘SMART-er’, especialmente para WP1<sup>27</sup>. Os indicadores utilizados para avaliar o programa foram adequados, pois o PO35 pretendia transformar de uma intervenção menor e localizada, para um modelo mais amplo de um negócio sustentável. Conforme mencionado em muitas das áreas acima e nas recomendações abaixo (saneamento - ciclo FSM, gênero, inovação), o PO75 pode aumentar a sua ambição e se concentrar em medir: (a) ganhos de eficiência de custo na provisão dos serviços, (b) aumentar no número de comunidades que têm tratamento adequado dos FSM e a sua eliminação, (c) uma melhor medição a satisfação do cliente com os serviços prestados e na observação das mudanças qualitativas nos comportamentos do usuário, (d) indicadores compostos para medir as realizações na estratégia de gênero, e (e) medir inovação não pelo número de atividades implementadas, mas sim pelos impactos alcançados em qualquer uma das áreas críticas do programa.
2. Definir metas mais ambiciosas com a respetiva estratégia de implementação, sempre que seja possível. Por exemplo, ter como objetivo um NRW <25 ou 30% (em vez de <40%) terá um impacto significativo em vários aspetos (ou seja, as receitas / taxas de aluguel dos operadores e - portanto - AIAS, e como consequência - sua sustentabilidade financeira, etc.).
3. Melhorar a coordenação do doador / setor:
5. Existem vários doadores / atores apoiando AIAS. A coordenação e a colaboração entre eles irão melhorar a coesão.
6. Há um grande potencial para aprendizagem intersectorial / doador / ator, por exemplo, sobre o nexo WASH e Nutrição e o ‘mecanismo de financiamento’ do UNICEF para operadores de água. As

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<sup>26</sup> Um sistema de WASH pode ser definido como “todos os fatores sociais, técnicos, institucionais, ambientais e financeiros, atores, motivações e interações que influenciam a prestação de serviços de WASH em um determinado contexto”. See 22.

<sup>27</sup> Os indicadores SMART são específicos, mensuráveis, alcançáveis, relevantes e com limite de tempo.

experiências podem ser recolhidas tanto em Moçambique como internacionalmente. Um exemplo potencial e promissor é o alinhamento com Unitel, Operation Water, AFORAMO e DNAAS em financiamento e serviços de financiamento inteligente que foi iniciado e está em andamento e está relacionado às inovações definidas no WP4 (Financiamento de Conexões Inteligentes).

4. Mais ênfase deve ser dada à estratégia de saída do programa. Por um lado, deve ser baseado em um modelo financeiro mais sofisticado (robusto e realista). Mais reflexão também deve ser dada sobre a forma de eliminar os salários e incentivos do apoio ao pessoal da AIAS.
5. Considerar a reorganização da estrutura do programa e os arranjos de gerenciamento. Atualmente, a VEI é o líder do consórcio. VEI esta principalmente focado na água, AIAS é (também) mais capacitado em água, e o componente de abastecimento de água do programa parece ter o melhor desempenho quando comparado com a componente do saneamento que fica para trás em todas as frentes (desempenho, resultados, governança (incluindo clareza, propriedade e mandatos) e sustentabilidade). Para colocar o saneamento no topo da agenda e melhorar os resultados do programa, pode-se considerar i) colocar mais ênfase no PO75 incluindo um aumento na capacidade dos parceiros de implementação na área (por exemplo, ter pessoal sênior na central AIAS, aumentar a capacidade de aconselhar os municípios, ter conselheiros em todas as delegações cobertas geograficamente), ii) ter o parceiro de saneamento como agência líder, iii) esclarecer o mandato da AIAS em saneamento e fortalecer sua capacidade de defesa (por exemplo, taxa oeste sólida paga pelos usuários de energia na conta de eletricidade) e iv) melhorar o processo de documentação e institucionalização de abordagens de higiene e saneamento em cidades (incluindo outros parceiros).
6. O programa deve reconsiderar a sua abordagem no que diz respeito à seleção, teste e aprimoramento de inovações. Várias sugestões e recomendações são fornecidas no capítulo Inovações, no subcapítulo WP4: Desenvolvimento de modelos de negócios inovadores.
7. No que diz respeito à implementação da Estratégia de Gênero, AIAS e VEI devem continuar com os seus esforços para obter sua aprovação plena pela DNAAS. Para acelerar o processo, o lobby ativo da EKN pode ser considerado. Além disso, o documento estratégia embora não estando aprovado oficialmente poderia ser compartilhado com (um número selecionado de) operadores para já começarem a entender melhor os desafios que eles podem enfrentar ao tentar implementar a mesma, especialmente no que diz respeito ao aumento do número de mulheres em cargos de nível médio e alto. Uma vez aprovado pela DNAAS, o programa deve garantir e monitorar o cumprimento da Estratégia por todas as partes interessadas. Para isso, e correspondendo à recomendação nº 1, um indicador composto pode ser consolidado para que a estratégia seja medida em termos de realizações qualitativas e quantificáveis em cada uma das seis áreas da Estratégia de Gênero.

## RECOMENDAÇÕES PARA WP1/AIAS<sup>28</sup>

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8. A busca da AIAS para obter o Estatuto autônomo permanece fundamental durante a próxima fase do PO75. É urgente trabalhar em conjunto para se conseguir isso no mais rápido possível. Uma vez que esta é uma questão persistente por quase uma década, e que tem um enorme impacto na sustentabilidade da AIAS e, portanto, no sucesso do programa, recomenda-se que a EKN levante isso com outros doadores e venha com uma abordagem conjunta a fim de alcançar uma solução com o Ministério das Finanças.

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<sup>28</sup> Em Anexo D (em Inglês e Português), a equipe de avaliação apresenta em mais detalhes as ações propostas para alcançar a sustentabilidade financeira e institucional da AIAS até 2025.



9. A fim de acelerar a cobertura da AIAS nos seus custos operacionais, a AIAS deve negociar com o Tesouro um aumento da taxa líquida de arrendamento.
10. In PO75, it will be relevant to have, in the monitoring sheet of operators, an evidence of the paid amount of AIAS fee per period.
11. A AIAS deve melhorar os canais de comunicação e clarificar os papéis e responsabilidades dos principais intervenientes do Quadro de Gestão Delegado: delegações provinciais, municípios e operadores. É importante que a AIAS trabalhe mais de perto com os municípios para que tenham uma maior apropriação do processo, uma vez que estão mais próximos dos operadores e clientes. Durante o PO75, a AIAS deve prever a terceirização de algumas atividades para os municípios (contratando os operadores com o controle da AIAS) e para o setor privado (se a AIAS e / ou as autoridades nacionais competentes puderem fornecer garantia e segurança aos investimentos do setor privado).
12. A AIAS deve capacitar as delegações provinciais para tomar decisões e ações relevantes para os seus papéis e responsabilidades com capacitação adicional e recursos humanos, técnicos e financeiros.
13. A seleção de cidades e operadoras em P075 deve ser avaliada cuidadosamente para investimentos futuros, a fim de maximizar o número de conexões e o potencial de retorno de receita. A seleção deve ser baseada no número de clientes potenciais, densidade populacional, coesão social, compromisso e liderança das autoridades locais e a presença de operadores potenciais com experiência em WASH ou outros serviços públicos. A fim de evitar a exclusão de cidades menos promissoras e "Não deixar ninguém para trás", a AIAS deve propor ao governo a introdução de tarifas sociais ou outros mecanismos de subsídio direcionados (por exemplo, vouchers ou ajuda baseada em resultados) para permitir que as famílias mais vulneráveis têm igual acesso a melhores serviços de água.
14. As oportunidades de subsídios cruzados devem ser reforçadas por meio de uma "abordagem agrupada" de licitações.
15. processo de procurement/aquisições da AIAS deve ser melhorado por meio de uma publicação melhor e mais transparente de pacotes de informações de aquisição e da organização de sessões de informação para o setor privado, de modo que as partes interessadas entendam e cumpram melhor as condições, critérios e requisitos mínimos.
16. Preparar publicações sobre a abordagem de capacitação de operadores de água da AIAS (incluindo uma sinopse de materiais de treinamento<sup>29</sup>) a fim de aumentar ainda mais o interesse e a participação do setor privado na estrutura de gestão delegada.
17. A equipa de Avaliação é de opinião que comunicar os resultados é fundamental para garantir que os efeitos são duradouros e que outros intervenientes, que podem até incluir operadores privados não contratados pela AIAS, possam colher os benefícios dos esforços do projeto. Para este fim, a equipe do projeto deve se comunicar regularmente (publicar) sobre os resultados do projeto (por exemplo, na Akvo: <https://rsr.akvo.org/en/project/1868/>) e apresentar o programa em feiras e conferências, como FACIM, Aquashare e *Plataforma Moçambicana da Água (PLAMA)*.

## RECOMENDAÇÕES SOBRE OPERADORES DE ÁGUA E SANEAMENTO

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18. Mais esclarecimentos devem ser fornecidos sobre os mandatos, funções e responsabilidades das diferentes partes interessadas na operação de saneamento: AIAS, municípios, grupos de saneamento, operadores privados, CORAL e AURA. As partes interessadas devem discutir e concordar sobre quem

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<sup>29</sup> Conforme proposto no PO75.

faz o quê com relação ao projeto, localização, construção, garantia de qualidade, operação e manutenção de blocos sanitários públicos.

19. Além disso, devem ser seguidos procedimentos de licitação e contratação aperfeiçoados (e mais rigorosos) para permitir atrair e selecionar operadores privados. Quando for acordado que os municípios ou grupos de saneamento assumem esse papel, eles devem ser apoiados e capacitados de acordo.
20. A menos que o modelo de negócios para infraestruturas públicas seja drasticamente revisto, ou seja, todos os atores reconhecem que esses serviços públicos devem ser inteiramente públicos e, portanto, devem ser subsidiados (pelo respectivo município), a consciência pública deve ser aumentada para explicar as pessoas a importância e a necessidade de pagarem por esses serviços.
21. Em relação ao aumento da capacidade dos municípios de implementar a cadeia FSM completa, a recomendação para o projeto PO75 é incorporar a componente FSM desde o início do programa, garantindo que as duas iniciativas pilotos sejam realmente implementados (e produzam lições de aprendizagem) antes de começarem com qualquer nova atividade. A prioridade para a próxima fase (PO75) deve ser a consolidação de conhecimento e compreensão suficientes desses iniciativas pilotos, usando o aprendizado e o conhecimento adquirido desses dois / três pilotos para criar um melhor entendimento das condições que precisam estar presentes para se ter uma melhor chance de sucesso no fechamento da cadeia de saneamento e, a partir daí, definir estratégia de crescimento<sup>30</sup>. Os últimos meses desta fase (PO35) também podem ser usados para obter uma compreensão completa e aprofundada dos desafios e melhores práticas para a implementação de cadeias FSM, com base na experiência de outros programas rurais e urbanos apoiados diretamente por AIAS ou outros doadores.

## RECOMENDAÇÕES PARA O COMPONENTE DE INOVAÇÃO

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22. projeto leva tempo demais para identificar e testar opções inovadoras como mostram as experiências de PO15 e PO35. Isso fez com que os atores nas áreas técnicas, de gestão e financeira a recomendar que para o PO75 o projeto tenha um foco exclusivo nas experiências bem-sucedidas do PO15 e PO35, e escala após validação adicional com as partes interessadas (particularmente nas áreas técnicas e outras experiências de consultoria dos clientes).
23. Além disso, a EKN deve rever qual é o seu objetivo principal ao assumir essas atividades de inovação: fortalecer o sistema local (ou seja, instituições, principalmente AIAS) ou aumentar o acesso aos serviços de água e saneamento para a população. Algumas das intervenções acima fornecem soluções conjuntas, mas a ênfase determinará se as ações técnicas ou de gestão serão privilegiadas.
24. Conforme mencionado na recomendação nº 1, o PO75 deve se concentrar em medir como as inovações que estão sendo implementadas no momento criam eficiências de custo na entrega do modelo ou estão ajudando a obter impacto em uma ou mais das áreas de enfoque do programa. Apesar de acharmos que o indicador selecionado para esta fase foi adequado, já que o PO35 estava focado principalmente na criação de ideias para aumentar a sustentabilidade ou os modelos de negócios de água e saneamento, para o PO75 o indicador não deve focar no 'número de inovações

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<sup>30</sup> Esta recomendação e as sugestões / recomendações apresentadas no WP4 vão contra o que está sendo proposto para o PO75. A proposta atual (rascunho) PO75 concentra-se principalmente no dimensionamento das inovações de 'digitalização da água', pois parecem mais promissoras. A avaliação recomenda (também) trabalhar com inovações no domínio do saneamento. Isso também se relaciona com a recomendação de colocar maior ênfase geral neste domínio no PO75 (Recomendação 5).

implementadas', mas em como essa inovação está ajudando a entregar as mudanças que o programa precisa criar para atingir o objetivo principal do programa.

25. Dependendo do ponto acima, algumas ideias adicionais foram fornecidas para potenciais intervenções inovadoras no PO75:

- A mais amplamente mencionado foi a necessidade de pesquisas adicionais sobre a gestão das lamas fecais e a componentes de gestão de resíduos sólidos. Na Moamba, a nossa equipa de avaliadores locais encontrou um grupo de jovens empresários que já prestam estes serviços, trabalham com base na existência de um mercado já existente em Maputo, mas a iniciativa mostra que sem mais apoios (nomeadamente em termos de maquinaria especializada a atividade não seria viável a longo prazo). Nesta área é importante lembrar algumas das recomendações já fornecidas para a gestão da cadeia FSM incluídas no WP2. Conforme mencionado anteriormente, outros doadores já testaram algumas iniciativas de base / comunidade com pouco sucesso, sendo o desafio a falta de procura pelo serviço, e não necessariamente um problema tecnológico ou inovação.
- Parceiros da área de saneamento mencionaram que durante o PO35 foi planeado um redesenho inovador de saneamento público e operações, mas nenhum financiamento foi obtido ou alocado. Por exemplo, o PULA um aplicativo para gerenciamento de lodo fecal foi desenvolvido, em parceria com a WSUP, como plataforma para esvaziar lamas para os operadores de caminhões e otimizar as rotas e custos de transporte ao longo do tempo, bem como pontos de coleta / disposição. Start-ups inovadores foram introduzidos em saneamento doméstico, incluindo parceiros para financiamento inovador (LETSHEGO) e marketing inovador (marketing VR) e modelo de negócios para fornecer agentes / ativadores para saneamento.
- Relacionado com o acima exposto, uma recomendação comum dada pelos operadores no campo era de se focalizar algumas inovações na área de saneamento (em vez de água). Se o foco é incentivar os operadores privados a se empenharem na prestação dos serviços, a necessidade é ainda maior em relação ao saneamento do que na água. Focar na criação de inovações que possam tornar o saneamento mais eficiente em termos de custos e incentivar ainda mais a procura pelos serviços é um ponto crítico para qualquer programa no futuro.
- Melhoria dos designs dos sanitários dependendo do contexto. Atualmente todos os projetos de banheiros utilizam água canalizada e eletricidade da rede geral. Os parceiros consultados referiram a necessidade de sistemas elétricos autónomos (aproveitamento de energia solar), furos de água para o bloco sanitário, entre outros, para tornar o sistema mais sustentável no futuro.
- Outros atores a nível de gestão e técnico também recomendaram a criação de linhas de investimento (concursos / desafios), que são lançadas para promover inovações de origem local de empresários e operadores locais, e que podem criar novas iniciativas ao nível da aldeia e da comunidade. No entanto, um problema potencial com estes, é (i) a possibilidade de gastar todos os recursos no desenvolvimento de novas iniciativas, em vez de focar na criação de um modelo sustentável para os que já existem, e (ii) outras iniciativas semelhantes foram implementadas por outros doadores com diferentes níveis de sucesso.
- Destinar mais recursos ao componente de saneamento, pois atualmente possui uma limitação de ações (ideias) devido à limitação de recursos alocados para o saneamento.
- Finalmente, como forma de trazer mais eficiências aos custos de modo a incentivar / atrair operadores privados para entrar no sistema, a inovação é necessária para reforçar a capacidade

de monitorar as obras internamente, garantir o cumprimento de prazos e qualidade e criar a capacidade de antecipar problemas e reagir rapidamente (por exemplo, mesmo em termos de sistemas contratuais simplificados, mas transparentes).

## ANNEX A. ASSESMENT CATEGORIES AND EVALUATION CRITERIA

Analysis Categories	OECD Crit.	Q#	Evaluation Criteria	Judgement Criteria: Relevant baseline indicator and or additional questions	Source of information
Overarching Programme Impact	Impact	Q1	What are the results and effects of the PO35 programme till date? What is the likelihood that the programme, within the planned time, will achieve the expected results and effects?	Additional people with access to water	Programme proposal, BEMO, baseline and results framework, against last progress and audit reports, with possible information from previous programme evaluation,. Interviews with stakeholders related to the three working packages (see stakeholder mapping), particularly related to the reasons why some objectives have not been achieved.
				Additional people with access to sanitation	
				Number of people who report positive behavioral change as a result of the WASH sensitization campaigns	
				Number of people using public toilets facilities	
				Number of people reached by the sanitation and hygiene campaigns	
				- What is still missing to be achieved, and why? - Will these be finished before the end of the programme? If not, why? How is this being mitigated?	
	Sustainability	Q2	To what extent will the obtained results and effects be sustainable beyond the programme period?	Same as above but focused on whether the three results will be sustainable: - How is AIAS planning to maintain these results?	Programme progress and audit reports, annual plans, AIAS strategic plans and previous programme evaluation. Additional assessment of sustainability to be based on interviews with AIAS leadership, service operators, implementing consortia and representatives of government partners. Each WP to be examined in terms of sustainability.
				- Is there a sustainability strategy? Do all operating stakeholders know it? If not, are there plans to set one before the end of the project?	
				- Does this strategy include roles and responsibilities? Do those with R&R know and have the capacity to do those R&R?	
				- How are the three main indicators is going to be kept track of? - Do beneficiaries show a consistent change in attitudes?	
	Efficiency/ Coherence	Q3	What has been realized, what is the consistency across the WP/ objectives and what needs to be done for post-programme monitoring?	- Did the project have a Monitoring, Evaluation and Learning Plan? If not, what tool was the programme using to do monitoring?	Programme proposal, results framework, evaluation of phase 1 and programme reports. More in depth information to be taken from interviews with members of implementing consortia, EKN Programme Manager and AIAS key points of contact to verify that MEL plan has been implemented.
				- Has the MEL approach include a focus on ensuring coherence across the WP/objectives?	
- What have been the main activities?					
WP 1: Organizational development AIAS and programme management.	Efficiency	Q4	How has AIAS performed in terms of resource mobilization for investments in water and sanitation?	- What has the project done in terms of resource mobilization for water and sanitation?	AIAS strategic. Plan, programme reports and annual plans. Additional information from any internal documentation from AIAS and interviews with key stakeholders of this organisation.
				- What has been achieved already?	
	Effectiveness	Q5	To what extent has EKN's support contributed to the organisational development of AIAS?	- What evidence exists that this is being achieved or in the process of being achieved?	
				- What has the project done in this area according to the reports? - What does AIAS thinks that the project has done? Do they think this is enough to achieve the aim?	

Analysis Categories	OECD Crit.	Q#	Evaluation Criteria	Judgement Criteria: Relevant baseline indicator and or additional questions	Source of information
				- What added value (comparative advantage) did the Project bring to AIAS? (compared to what other projects / funder?)	documentation from AIAS and interviews with key stakeholders of this organisation, implementing consortia (particularly VEI) and EKN key stakeholders.
				- What else could have been done?	
	Sustainability Effectiveness	Q6	What would be the best possible mechanism to phase out the EKN-financed performance incentives mechanism whilst safeguarding AIAS' organisational structure?	- What is the EKN-financed performance incentive mechanism? How does it work?	Same as above, with most information coming from qualitative information coming from interviews with AIAS, EKN and VEI key stakeholders.
				- Has an exit strategy been set up already so funding could be stopped?	
				- What other resources could replace this funding? Are they easy to obtain? What are the obstacles to obtain them?	
	Effectiveness	Q7	What has been the effectiveness of the PO35 programme's management structure?	- What is the programme management structure?	Programme proposal, annual plans and progress reports. Comparison of programme management structure in paper and in reality to be consolidated from interviews with implementing consortia, EKN and AIAS key stakeholders.
				- What was the logic behind that specific structure, if any?	
				- What was expected to be achieved with that specific management structure?	
	Effectiveness	Q8	How has AIAS and the P35 programme benefited from the technical assistance provided by the consortium led by VEI?	- In what consisted the technical assistance from the VEI consortium? What were its components?	AIAS strategic. Plan, programme reports and annual plans. Most information will be qualitative and based on KIIs with AIAS and comparison with achievements set by implementing consortia, EKN and reports.
				- Is there evidence that the technical structure helped to ensure any of the aims?	
Effectiveness	Q9	How has the AIAS management been including internal control and financial management with particular emphasis on the risk management component. Is AIAS capable of managing programmes and funds of this size and beyond?	- What were the risk management strategy and internal control structures that AIAS had before the project started?	AIAS internal procedures manual, audit reports and risk assessment in progress reports. Evaluation of actual risk management to be done comparing risk assessments against description of risk and risk management structures within the implementing consortia, AIAS and EKN Programme Manager.	
			- How do these strategies and structures look now? How have they change, and why?		
			- Is there any evidence that the changes, if any, have contributed to make the management Structure more sustainable?		
WP 1 and WP2	Efficiency / Sustainability	Q10	What is the current progress and outlook regarding the institutional and financial sustainability of AIAS?	AIAS revenues generated from operator's fees as a % of its operational cost	As on Question 2. Adding information on key water system performance indicators based in AIAS/AURA existent report matrix, and tariffs vs service offered from the perspective of operators and users.
				- What has the project done to ensure the financial sustainability of AIAS?	
				- What is AIAS doing differently now to achieve this?	
				- What evidence exists that this is being achieved?	
	Sustainability	Q11	Which measures are needed to assure the sustainability of AIAS as an organisation and which exit-strategies could be considered to	- What from the above has not been done?	As on Question 2. Focus on KIIs with AIAS and implementing consortia, and review achievement in sustainability
				- Who can do it and how?	
- Is there willingness?					

Analysis Categories	OECD Crit.	Q#	Evaluation Criteria	Judgement Criteria: Relevant baseline indicator and or additional questions	Source of information	
			ensure that the impact on AIAS' performance of EKN's gradual phase-out of institutional support is minimized?	- Are there responses available?	recommendations from Evaluation Report in Phase 1.	
WP 2: Local operator development (water and sanitation)	Efficiency/ Effectiveness	Q12	What is the efficiency and effectiveness of the chosen capacity building model?	Number of operators having operational cost recovery ratio >1.0	Programme proposal against progress reports, training reports. Most information will come from interviews with trainees and training participants and reports, AIAS and implementing consortia members.	
				Number of water operators having NRW inferior to 40%		
				Number of water operators having collection efficiency of at least 80%		
				- How was the capacity building model built and why?		
						- What has this capacity building model achieved?
	Efficiency	Q13	How do the water operators apply the acquired capacity?	- What did the capacity building model intended to achieve within the operators?		As on question 12.
				- Was it achieved?		
				- How has capacity changed in the operators and what do we think is behind the change?		
	Efficiency/ Coherence	Q14	Review the balance and interdependency of technical assistance and investments?	- How did the implementing partner aimed to ensure consistency between the technical assistance and the infrastructure investments?		As on question 12, adding financial information from reports.
	Efficiency	Q15	What is the capacity of beneficiary towns to practice to full FSM chain?	- What were the key indicators that the implementers were using to measure this?		Programme reports. Most information will come from interviews with AIAS, operators in the field and representatives from local operators and governments representatives.
				- What was achieved according to the reports/stakeholders?		
				- What should be avoided in the future?		
- What could have been done differently/better?						
			- What could be done more off			
WP 3: Infrastructure, development and investing	Effectiveness	Q16	Review in progress in taking-up sanitation products at household level?	Number of people who report positive behavioral change as a result of the WASH sensitization campaigns	Programme reports against baseline, and any additional reports done by local operators. FGDs and interviews with local communities in the communities selected for field work.	
				- How was this being measured?		
				- What do the results show?		
	Efficiency	Q17	Review the capacity and commitment of the sanitation groups and leadership for implementation of sanitation activities in towns related to the programme?	Number of programme towns in which principal activities of the sanitation action plans have been implemented		Programme reports against baseline. Most information will come from interviews with AIAS, operators in the field and representatives from local operators and governments representatives.
				- Who and what are the sanitation groups?		
				- What were the key issues with these groups and the leadership in the beneficiary towns?		
			- What was done to change/ diminish these issues?			
			- Was anything achieved?			

Analysis Categories	OECD Crit.	Q#	Evaluation Criteria	Judgement Criteria: Relevant baseline indicator and or additional questions	Source of information
	Impact/ Effectiveness	Q18	Review impact of trainings conducted and external factors affecting the training process, considering future turnover of local government staff, trained technicians and sanitation group members and how to mitigate against this?	- What were the aims/objectives of the trainings?	As on question 12. Additional information to be requested from AIAS in terms of turnover rate and assessment of where the training participants are working currently.
				- What is the staff turnover rate at local level?	
				- How did the implementer aimed to measure the achievement of these objectives? What validation mechanisms were used?	
				- Were those objectives achieved? What is the evidence to support it?	
	Sustainability	Q19	What is the sustainability of the initiative with regards sanitation infrastructure established and being operated in the PO15 & PO35 towns supported with sanitation?	- How is sustainability being assessed?	Programme reports. Most information will come from interviews with AIAS, operators in the field and representatives from local operators and governments representatives.
				- What have been the main efforts to ensure sustainability in sanitation infrastructure?	
	Efficiency	Q20	Review the factors for successful operation of public toilet blocks and improving level of service that can be provided?	- How did the implementing partner and/or donor aimed to measure the "successful operation of the public blocks and service improvement"?	Programme reports. Main information to come with KIIs with local operators, AIAS representatives at the local level, field visits and FGDs with local communities.
				- Was this measured/reviewed and how?	
				- Is there evidence of change (positive or negative) in this area?	
	Efficiency	Q21	Review current quality assurance of programme infrastructure constructed and recommend how this can be improved?	- How was quality assurance of programme infrastructure being measured and by whom?	Programme and audit reports, Annual Plans and a review initial planning from results framework and MEL plan, if available.
				- Is this quality assurance done in an independent manner?	
				- What is the coherence between this WP and the others?	
- What do the results of these quality assurances processes show?					
WP 4: Development innovative business models	Cross-cutting	Q22	Which changes are needed, if any, to attract and develop more private operators? What could AIAS do (which services should AIAS improve or start) to stimulate private sector involvement?	Number of innovative business models for water and sanitation implemented	Qualitative interviews with local operators, AIAS representatives and if available other local sanitation experts.
				- What are the key limitations /challenges that do not incentivize other private operators to be part of the service provision?	
				- Has anything been done to diminish these limitations? Has anything being achieved in this respect?	
				- What innovative models were implemented?	
				- Why were they innovative? What made them different/better?	
	- Did they achieve more positive outcomes?				
Sustainability	Q23	What recommendations would you give for future scale-up of this project considering the need to ensure sustainability of previous work?	- Are there specific activities that can be scaled up?	As on questions 2, 10 and 11. We will consider possibly reporting all information together into a single sustainability section in the final report.	
			- What should be avoided in the future?		
			- What could have been done differently/better?		
			- What could be done more off?		
			- What else can be done to promote innovation and sustainability?		
Cross-cutting areas		Q24		- What does literature review say about the linkage of these two areas?	



Analysis Categories	OECD Crit.	Q#	Evaluation Criteria	Judgement Criteria: Relevant baseline indicator and or additional questions	Source of information
	Cross-cutting, Coherence		Are there any linkages between nutrition and WASH initiatives? What can be done differently in the future to create stronger links?	- What do the WASH and nutrition teams in the Embassy and implementing partner think the connection is (including teams working on nutrition in the Embassy)? Do the actors find a combination of WASH and Nutrition useful and strategic in terms of intervention in the small towns?	Documentary review from open available resources particularly research and evaluations done from programmes implemented by WHO, UNICEF and nutrition-sensitivity approaches being implemented in WASH programmes implemented by other donors including EU, UK DFID, USAID.
				- Are there any examples of similar programmes (in similar geographic areas) where these connections is explored and implemented?	
				- How other programmes ensure cohesion between these two areas?	
				- How could this be applied for this programme in the future?	
	Cross-cutting, Coherence	Q25	What other WASH programmes exist in the geographical area covered (or neighbouring)? What are they doing differently/better?	- What are other donors doing in this area?	As above but focused only on setting a short programmes mapping, with emphasis on possible nutrition-sensitive WASH programmes, or nutrition programmes with WASH components.
				- Is there cohesion between the different WASH interventions in the geographical areas benefited, have they avoided duplication? Did the donor or implementing partner tried to create cohesion or some cross learning with other programmes?	
				- What can be learned (positive or negative) from other programmes?	
	Cross-cutting	Q26	Has the approved gender strategy been implemented effectively?	- What was the gender strategy?	AIAS Gender Policy, programme reports and KIIs with implementing consortia to determine roles and responsibilities in the strategy implementation and what has been done so far. Depending on. Initial KIIs, additional question on the area to be added to the FGDs.
				- Who was responsible to implement it?	
- Is there any evidence of it being implemented? What has been done/achieved?					

## ANNEX B. STAKEHOLDERS INTERVIEWED

Working Packages	Q#	Relevant Evaluation Criteria	Stakeholder			Completed? When?
			Organisation	Name	Role	
Overarching Programme Impact	Q1	What are the results and effects of the PO35 programme till date? What is the likelihood that the programme, within the planned time, will achieve the expected results and effects?	AIAS	Rute Nhamucho	Executive Director	Yes, 10 August. Additional questions shared by email.
			VEI	Joep Vonk	Project Manager	Yes, 05 August. Additional questions shared by email.
			AIAS	Frederico Martins	Programme Manager	
			AIAS	Valdemiro Matavela	Head technical department (DCOAT)	Yes, 10 August. Additional questions shared by email.
			AURA	Suzana Sarranga Loforte	Water Regulatory Authority Delegate	Yes, 18 August. Additional communication via messages.
	Q2	To what extent will the obtained results and effects be sustainable beyond the programme period?	AIAS	Venisio Moiane	Head financial department (DAF)	Yes, 10 and 12 August. Met during field visits as well.
			AIAS	Laurinda Foliche	Head department planning and tariffs (DPT)	Yes, 10 August. Additional questions shared by email.
	Q3	What has been realized on M&E and what needs to be done for post-programme monitoring?	AIAS	Sergio João	Head procurement (UGEA)	Yes, 10 August
			AIAS / VEI	Pedro Manjate	Judicial specialist	Yes, 10 August
WP 1: Organizational development and programme management	Q4	How has AIAS performed in terms of resource mobilization for investments in water and sanitation?	AIAS	Laurinda Foliche	Head department planning and tariffs (DPT)	As above.
	Q5	To what extent has EKN's support contributed to the organisational development of AIAS?	AIAS	Samuel Sefane	Staff DPT, specialization: ICT	Not in DPT meeting 11 August.
	Q6	What would be the best possible mechanism to phase out the EKN-financed performance incentives mechanism whilst safeguarding AIAS' organisational structure?	AIAS / VEI*	Hassane Lange	Staff DPT	Yes, 11 August.
	Q7	What has been the effectiveness of the PO35 programme's management structure?	AIAS / VEI	Olga Cumbe	Financial consultant	Yes, 12 August. Included Gender Strategy review.
	Q8 Q9	How has AIAS and the P35 programme benefited from the technical assistance provided by the consortium led by VEI? How has the AIAS management been including internal control and financial management with particular emphasis on the risk management component. Is AIAS capable of managing programmes and funds of this size and beyond?	AIAS	Leonel Muando	Staff UGEA	Yes, 12 August.
			AIAS	Hugo Laisse	Internal auditor	Yes, 12 August.
		Municipal authorities	Moises Domingos, Head of the Moamba Headquarters Administraive post. Moamba sanitation group. Mandlakazi City Council; Mandlakazi sanitation group; Praia de Bilene sanitation group, Sanitation Councilor, Municipal Council of Praia de Bilene		Yes, 18-19-20 August	
WP 1 and WP2	Q10	What is the current progress and outlook regarding the institutional and financial sustainability of AIAS?				Yes, 10 and 11 August.
	Q11	Which measures are needed to assure the sustainability of AIAS as an organisation and which exit-strategies could be considered to ensure that the impact on AIAS' performance of EKN's gradual phase-out of institutional support is minimized?	Laurinda, Samuel, Valdemiro and Eurico And from a HR and procurement side Venisio, Olga, Hugo, Leonel, Sergio.			Yes, 10 and 11 August.

Working Packages	Q#	Relevant Evaluation Criteria	Stakeholder			Completed? When?
			Organisation	Name	Role	
WP 2: Local operator development (water and sanitation)	Q12	What is the efficiency and effectiveness of the chosen capacity building model?	AIAS	Valdemiro Matavela	Head technical department (DCOAT)	Yes, 10 August.
			AIAS	Eurico Macuacua	Staff DCOAT	Yes, 10 August
	Q13	How do the water operators apply the acquired capacity?	AIAS / VEI	Carlos Capitaó	Water production and distribution expert	Yes, 10 August
	Q14	Review the balance and interdependency of technical assistance and investments	Local operators CORALS (not available)	COLLINS, Moamba water operator; PB Construções, Mandlakazi water operator; Mandlakazi/Praia de Bilene and Moamba Public Toilet Operators		Yes, 18-19-20 August
Q15	What is the capacity of beneficiary towns to practice full FSM chain?					
WP 3: Infrastructure development and investing	Q16	Review in progress in taking-up sanitation products at household level?	AIAS / VEI	Oswaldo Moiambo	Sanitation expert	Yes. 10 August.
			Sanitation Councils in each municipality			Yes, 18-19-20 August
	Q17	Review the capacity and commitment of the sanitation groups and leadership for implementation of sanitation activities in towns related to the programme?	SNV	Horacio Quembo	Sanitation expert North	Yes. 11 August.
	Q18	Review impact of trainings conducted and external factors affecting the training process, considering future turnover of local government staff, trained technicians and sanitation group members and how to mitigate against this?	SNV	Zito Mugabe	Sanitation expert South	Yes. 11 August.
	Q19	What is the sustainability of the initiative with regards sanitation infrastructure established and being operated in the PO15 & PO35 towns supported with sanitation?	SNV	Alex Grumbely	WASH portfolio coordinator SNV	Yes. 11 August.
	Q20	Review the factors for successful operation of public toilet blocks and improving level of service that can be provided?	Mandlakazi, Praia de Bilene and Moamba public toilet operators			Yes, 18-19-20 August
	Q21	Review current quality assurance of programme infrastructure constructed and recommend how this can be improved?	AIAS	Idolina Matavela	Staff UGEA	Yes. 11 August.
WP 4: Development innovative business models	Q22	Which changes are needed, if any, to attract and develop more private operators? What could AIAS do (which services should AIAS improve or start) to stimulate private sector involvement?	BZRD	Taco de Nies	Consultant for work package 4, innovation	Yes. 11 August.
	Q23	What recommendations would you give for future scale-up of this project considering the need to ensure sustainability?	Included in all interviews.			
Others	Q24	Are there any linkages between nutrition and WASH initiatives? What can be done to create stronger links?	UNICEF	Jesus Trelles, Mayza Tricamegy	WASH Project Manager and Project Officer	Yes, 18 August
			DFID; USAID; WFP			Secondary review, from documents shared by UNICEF
	Q25	How was the project affected by externalities (COVID, security situation in Cabo Delgado)?	Management and Programme Team	Rute Nhamucho; Joep Vonk; Frederico Martins; Valdemiro Matavela		Email correspondence – 18 to 20 August
	Q26	Has the approved gender strategy been implemented effectively?		Olga Cumbe	Financial consultant	Yes, 12 August

## ANNEX C. EVIDENCE COLLECTED AGAINST EACH INDICATOR

ID	Indicator	Target	Expected realization	On target?	Type of verification mechanism(s) used to verify the realisation of the target	Was evidence supported by findings in the filed visit? Specific examples.
1.1	AIAS' revenues generated from operators' fees as a % of its operational costs	Not defined	26%	Uncertain	Documentary Review: 2017 to 2019 financial reports and auditors' reports; and verification of 3 systems in the field.	All operators of the 3 systems visited indicated that they pay the transfer fee to AIAS. The amount to pay is reported in the monitoring sheet, but the monitoring matrix does not demonstrate the amount paid. The Mandlakazi operator said that because AIAS asked him to manage the Xigubo water system, which is not yet viable and requires a lot of investment from the operator, it is not charged at 100% of the fee it should pay for the other systems it manages (Manjakaze in Gaza and Nametil in Nampula). The Bilene water system operator mentioned that the payment is not regular.
1.2	# of water operators satisfied with the services delivered by AIAS	35	50	YES	Documentary Review; and verification of 3 systems in the field.	The 3 operators visited are satisfied with the support received from AIAS (including training) but point out that the contracts should be improved so that they have the security to invest to expand and increase beneficiaries / clients.
2.1	# of water operators having an operational cost recovery ratio > 1.0	20	20	YES	Operators Monitoring worksheets	Monitoring worksheets from the 3 visited sites (January-July 2020). Moamba: 0,94; Mandlakazi: 1,04; Bilene: 0,82.
2.2	# of water operators having an NRW inferior to 40%	20	20	YES	Operators Monitoring worksheets	Monitoring worksheets from the 3 visited sites (January-July 2020). Moamba: ≈44%; Mandlakazi: ≈21%; Bilene: ≈20%.
2.3	# of water operators having a collection efficiency of at least 80%	25	25	YES	Operators Monitoring worksheets	Monitoring worksheets from the 3 visited sites (January-July 2020). Moamba: 78%; Mandlakazi: 90%; Bilene: 69%.
2.4	# of towns for which sanitation plans have been developed	25	27	YES	Sanitation plan document	In accordance to Sanitation Plan documents obtained independently in 3 visited towns.
2.5	# of project towns in which the principal activities of the sanitation action plans have been implemented	25	27	YES	Draft sanitation plans.	Sanitation plan document from Moamba, Mandlakazi and Bilene in implementation, and a copy was received.
2.6	# of towns with constructed public toilet block facilities	14	16	YES	Reported by FGD / Sanitation groups / Municipalities	Visited PTB in towns / schools in Moamba, Mandlakazi and Bilene
2.7	# of towns in which sanitation and hygiene campaigns have been implemented	25	27	YES	Reported by FGD / Sanitation groups / Municipalities	Information verified in the three municipalities covering the field visits. Information also consistent with information provided in KIIs with AIAS and AURA.
2.8	Number of people reached by the sanitation and hygiene campaigns	300	386,394	YES	Provision of training and training sheets were verified during field visits with the sanitation clubs.	Specific number is not possible to verify directly, but training records for the three municipalities visited are consistent with the data provided, and data was validated also during KIIs with AIAS and VEI teams.
2.9	# of latrines sold by trained artisans	9	11,702	YES	Field visit.	Visit to production site selling artisan sanitation materials. Information seem consistent in terms of numbers of latrines sold.
2.10	# of schools at which sanitation awareness	30	108	YES	Field visit.	Information verified in the three municipalities covering the field visits. Information also consistent with information provided in KIIs with AIAS and AURA.

ID	Indicator	Target	Expected realization	On target?	Type of verification mechanism(s) used to verify the realisation of the target	Was evidence supported by findings in the filed visit? Specific examples.
	campaigns have been implemented					
3.1	There is an online registration system for the principal assets of the water and sanitation operators	Yes	Yes	YES	Field visits, access to the system.	Online registration system was shown by the operators during field visits. The system is partly online. For the monitoring sheets the operators send it monthly via email, and the "assédio" registration a survey is conducted periodical and updated.
3.2	# of water operators supported with small investments	35	14	YES	Field visits and additional information provided by VEI alongside supporting documentation.	The visited artesans refered to benefit from the investments and trainings in the PO 15 phase.
3.3	# of towns with constructed public toilet block facilities (cumulative)	14	16	YES	Field visits and additional documentation showing adjustments done to the old toilet block facilities.	Four toilet block facilities visits, two of them new, and two adjusted in accordance to new standards. Additional document provided: Passos Desenvolvimento PTBs, Catálogo de operação e manutenção básica do sanitário público, Sanitários Públicos nas vilas do PO15/35
4.1	# of innovative business models for water and sanitation implemented	2	3	YES	Documentary Review and verification of the 3 pilots in the field.	Yes, 3 pilots observed in the field. Pilot on smart water network and resource performance assessment included as one pilot. Additional document provided: Results AIAS PO35 Work Package 4: Development Innovative Business Models.

## ANNEX D. PROPOSED PATH TO AIAS' SUSTAINABILITY

#	Action	Process Indicator	Deadline
1	Getting financial autonomy status to allow AIAS to get net lease fee directly from operators as per government regulation	<p>Status obtained</p> <p>However, it will be difficult to guarantee this; the change of status process is not "in control" from the AIAS side; depends on AIAS advocacy ability to demonstrate to Ministry of Finance internal financial capacity (generate funds, management, etc.) and have (AIAS) strong support for the Public Works and Hydraulic Resources Ministry on this. We suggest for AIAS to develop a document of the process with information on:</p> <ul style="list-style-type: none"> <li>AIAS actions conducted so far and results; key issues that must be overcome in order for AIAS to have this status; strategy and action plan to have financial autonomy; schedule; risks and mitigation measures.</li> <li>For the PO 75 phase, AIAS/EKN should ensure that this will be one of the strategic result, demanding specific milestones for monitoring.</li> <li>In the new financing cycle (PO 75), AIAS/EKN should test the financing model / disbursements based on results and evidence (see issue 7), in aspects related to the institutional development of AIAS.</li> </ul>	December 2020
2	Supporting operators in reducing non-revenue water (NRW)	NRW reduction targets negotiated with each operator in 2021 supported by AIAS.	2021-2025
3	Supporting operators in improving collection efficiency	<p>80% collection efficiency reached by 90% operators in 2025</p> <p>Define the results according to the stage of engagement of operators. Operators, who were part of the PO 15, should be more autonomous and presenting better results, successively those who came to benefit from the PO 35 and so on.</p> <p>Focus WP4 for PO75 in innovations whose main benefit is supporting cost-efficiency in the work of water and sanitation operators. This include the two innovations currently piloting within PO35 (Smart Water Network, Resource Performance Assessment, and Pre-Paid Water Meters) and adding innovations that can create more cost-efficient solutions for the area of sanitation.</p>	Yearly targets negotiated between AIAS and operators
4	AIAS and municipalities sensitizing and encouraging consumers (including households and public institutions)	<p>Annual awareness raising campaign on the importance to pay the water bill with support of AIAS, municipalities, districts and operators</p> <p>In addition, lobby that there is a political orientation that guides public institutions to pay for the water they consume and ensure that the annual budgets of these institutions include funds for the payment of water.</p>	Annually
5	Providing the human, technical and financial means to AIAS provincial delegations to become fully operational.	<p>One provincial delegation per year provided with sufficient means to become fully operational.</p> <p>Provide delegations with some empowerment in planning and resource management, without much (total) dependency on headquarters. Part of the funding of the Project, it may have activities that its implementation is the responsibility of the delegations.</p>	5 delegations fully operational in the 2021-2025 period
6	Increasing the share of lease fees from water sales in incremental number of towns, operators and connections.	<p>1. Setting annual target for AIAS' revenues generated from operators' net fees as a % of its operational costs</p> <p>2. Negotiating with Treasury an increase of 1% of the lease fee percentage, set at 12% of overall operator revenue.</p> <p>There is currently no evidence of the payment being made. Probably the most important thing is to ensure that payments are made at 100% and on a regular basis as planned, before suggesting a rate increase.</p>	
7	Evidence of payment of the lease fee to AIAS by operators	Monitoring sheet of operators	AIAS Quarterly monitoring and EKN set up in 2021

#	Ação	Indicador de Processo	Prazo
1	Obter o status de autonomia financeira para permitir que a AIAS receba a taxa líquida de arrendamento diretamente das operadoras de acordo com a regulamentação governamental.	Status obtido No entanto, será difícil garantir isso; o processo de mudança de status não está "sob controle" do lado da AIAS; depende da capacidade de advocacia da AIAS para demonstrar ao Ministério das Finanças capacidade financeira interna (gerar fundos, gestão, etc.) e ter (AIAS) um forte apoio do Ministério de Obras Públicas e Recursos Hidráulicos neste aspeto. Sugerimos que a AIAS desenvolva um documento do processo com informações sobre: <ul style="list-style-type: none"> <li>Ações AIAS realizadas até agora e resultados; questões-chave que devem ser superadas para que a AIAS tenha esse status; estratégia e plano de ação para ter autonomia financeira; cronograma; riscos e medidas de mitigação.</li> <li>Para a fase PO 75, AIAS / EKN deve garantir que este será um dos resultados estratégicos, exigindo marcos específicos para o monitoramento.</li> <li>No novo ciclo de financiamento (PO 75), AIAS / EKN deve testar o modelo de financiamento / desembolsos com base em resultados e evidências (ver questão 7), nos aspetos relacionados ao desenvolvimento institucional da AIAS.</li> </ul>	Dezembro 2020
2	Apoiar as operadoras na redução das metas de redução de água não lucrativa (NRW)	NRW negociadas com cada operadora em 2021 com o apoio da AIAS.	2021-2025
3	Apoiando os operadores na melhoria da eficiência de coleta	80% de eficiência de coleta alcançada por 90% dos operadores em 2025 Definir os resultados de acordo com o estágio de engajamento dos operadores. Os operadores que faziam parte do PO 15 deveriam ser mais autônomos e apresentando melhores resultados, sucessivamente os que passaram a se beneficiar do PO 35 e assim por diante. Concentre o WP4 para o PO75 em inovações cujo principal benefício é apoiar a eficiência de custos no trabalho dos operadores de água e saneamento. Isso inclui as duas inovações atualmente testadas no PO35 (Rede Inteligente de Água, Avaliação de Desempenho de Recursos e Medidores de Água Pré-Pagos) e a adição de inovações que podem criar soluções mais econômicas para a área de saneamento.	Metas anuais negociadas entre AIAS e operadoras
4	AIAS e municípios sensibilizando e incentivando consumidores (incluindo agregados familiares e instituições públicas)	Campanha anual de sensibilização sobre a importância de pagar a conta da água com apoio de AIAS, municípios, distritos e operadoras Além disso, fazer lobby para que haja uma orientação política que oriente as instituições públicas a pagar pela água que consomem e garanta que os orçamentos anuais dessas instituições incluam fundos para o pagamento da água.	Anualmente
5	Proporcionar os meios humanos, técnicos e financeiros às delegações provinciais da AIAS para se tornarem plenamente operacionais.	Uma delegação provincial por ano com meios suficientes para se tornar totalmente operacional. Fornecer às delegações algum poder de planejamento e gestão de recursos, sem muita dependência (total) da sede. Parte do financiamento do Projeto, pode haver atividades cuja execução seja de responsabilidade das delegações.	5 delegações totalmente operacionais no período de 2021-2025
6	Aumentando a participação das taxas de aluguel das vendas de água em um número incremental de cidades, operadoras e conexões.	1. Definição de meta anual para as receitas da AIAS geradas a partir das taxas líquidas das operadoras como uma% de seus custos operacionais 2. Negociar com a Tesouraria o aumento de 1% do percentual da taxa de locação, fixada em 12% da receita total da operadora. Atualmente não há evidências do pagamento sendo feito. Provavelmente, o mais importante é garantir que os pagamentos sejam feitos a 100% e em uma base regular conforme planejado, antes de sugerir um aumento da taxa.	
7	Comprovativo de pagamento da taxa de arrendamento à AIAS pelos operadores	Folha de monitorio dos operadores AIAS	Monitoreo trimestral e EKN instituído em 2021

