Commissioned by:	UN Environment, CTCN, Adaptation Fund
Project Title:	Implementation of Water-Food-Energy nexus using digital technologies for local communities in Mozambique
Proposed by:	Agência de Desenvolvimento do Vale do Zambeze & Ministry of Science and Technology and High Education
Implemented by:	HUB & Practica
Country:	Mozambique
Deliverable:	1.3. Inception meeting Report

Deliverable 1.3 Inception meeting report

July 2024

This project has been proposed by Agência de Desenvolvimento do Vale do Zambeze.

With the support of the Ministry of Science and Technology and High Education

Implemented by PRACTICA & HUB

Commissioned by UN Environment, CTCN, Adaptation Fund

Disclaimer

This document is an output of the Technical Assistance Response in Mozambique. The present report is the output of the project ‘‘Implementation of Water-Food-Energy nexus using digital technologies for local communities in Mozambique’. The views and information contained herein are a product of the international TA implementation team led by PRACTICA & HUB.

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1. Introduction

This report is part of the deliverables for the implementation of Water-Food-Energy nexus using digital technologies for local communities in Mozambique, which was implemented by the consortium PRACTICA and HUB. The overall objective of the project is to develop a fit-for-purpose system for one selected farm in the Zambezi Valley in Mozambique that will include aquaponics, biodigester, bio composting, and hydraulic management systems (including water storage and solar pumping integrated systems for drip irrigation).

The present report presents the results of the inception meeting conducted with the working group in Chimoio, Mozambique. The working group was selected from the stakeholder mapping to up to five persons, see deliverables 1.1 and 1.2.

Following the analysis and mapping of stakeholders, a group of 5 members has been identified to form the working group for the project, namely, Serviço Distrital de Actividades Económicas (SDAE), Center for Research and Technology Transfer towards Community Development (CTTI), Instituto de Investigação Agrária de Moçambique (IIAM), Banco Nacional de Investimentos (BNI), and the selected smallholder farmers.

2. Inception meeting

2.1 Objectives

The overarching objectives of the inception meeting were to:

1. Present the project to the relevant actors identified in the stakeholder mapping.
2. Clarify the overarching goal, specific objectives, synergies and expectations of the project.
3. Build warm relations between the working group.
4. Share the work plan with the group, and reach common agreements.

2.2 Agenda

Inception Meeting for the project 'Implementation of Water-Food-Energy nexus using digital technologies for local communities in Mozambique'

Location: Residencial Chinfura
Local time: Mozambique (GMT+2)
Date:08 July 2024

Time	Activity
08:30-09:00	Registration and welcoming of participants
09:00-09:30	Presentation of the agenda and introduction of the team and participants Julia Barreto (HUB) & Berry van den Pol (PRACTICA)
09:30-10:00	Presentation of the project activities and objectives in general Berry van den Pol (HUB)
10:00-10:15	Coffee break
10:15-11:15	Discussion on expectations about the project from each participant Mediated by Berry van den Pol (PRACTICA) & Julia Barreto (HUB)
11:15-11:45	Participatory discussion on agreements on how to reach agreements for the project Julia Barreto (PRACTICA) & Berry van den Pol (HUB)
11:45-12:30	Update the final stakeholder working group agreement document Julia Barreto (Practica Foundation)
12:30-13:00	Q&A Wrapping up for next day field visits, coming activities
13:00-14:00	Lunch

No	Name	Institution	Gender

1	Dionísio Joao Gento	Agência de Desenvolvimentos do Vale do Zambeze (ADVZ)	Male
2	Luis Dias	Agência de Desenvolvimentos do Vale do Zambeze (ADVZ)	Male
3	Jorge Gouveia dos Santos Jalaicadza	Banco Nacional de Investimentos (BNI)	Male
4	Isac Daniel Mponha	Centro de Investigação e Transferência de Tecnologias (CITT)	Male
5	Luis Savanguane	Instituto de Investigação Agronómica de Moçambique (IIAM)	Male
6	Joao Antonio	Serviço Distrital de Actividades Económicas (SDAE)	Male
7	Jonas Domingos Tomas	Produtor selecionado	Male
8	Berry Van den Pol	Practica	Male
9	Júlia Liliana de Jesus Barreto	HUB	Female

2.3 List of Attendants

Note on gender: There is a clear gender imbalance among the participants in the working group. It has been requested to the organisations part of the working group to appoint women as part of the team for the next meetings, as gender representation is key to the overall achievement of technical assistance. This constraint will be closely monitored by the gender consultant throughout the whole project.

3. Main outcomes of the inception meeting

3.1. Presentation of the project and main objectives

Berry van den Pol, as the representative of the technical team in the consortium, presented an overview of the project, including its main objectives. He also provided a historical overview of the project, described the consortium, and outlined the roles and responsibilities of each stakeholder. Additionally, he gave a briefing on the selection farm activity and presented the project organigram[1]

The consortium clarified the expectations for the working group, detailing their involvement and the necessary preconditions. It was explained that the farm was identified based on evaluations conducted in the previous months, during which farms in four provinces along the Zambezi Valley were visited. This particular farm scored the highest in terms of assessment criteria, which included interaction and availability of a range of indicators such as resources, access to technologies, existing knowledge of the proposed technologies, and the farmer's profile

3.2. Clarifications of the project

After the detailed explanation of the project, the CITT representative raised a question about who would be the primary beneficiary of the project. Also, it is essential to inquire whether other organizations implementing similar technologies would be supported, considering that farmers may lack the resources to implement such technologies. CITT highlighted that they had already implemented the technologies proposed in the project but faced limitations due to insufficient funds for expansion and continuity. In response, ADVZ explained that the project will focus on the technical design and the provision of a sustainable business model that will include all necessary materials for further upscaling designing a model that consists of the materials needed for installation. It was also clarified that the working group would provide advice at all stages of the project, recommending technologies based on the specific conditions of local farmers.

SDAE representative suggested setting up a pilot to test different technologies. The consortium responded that, although there is currently no budget for this activity, it is a point to be considered in future steps, as practical knowledge transfer to farmers would facilitate the adoption of the proposed model. IIAM added that some projects fail due to a lack of support during the initial, establishment, or study phases. Therefore, the working group needs to maintain consistent involvement throughout the project. All participants agreed to this point.

[1] The slide deck can be accessed at: https://docs.google.com/presentation/d/1_ZsfC2ZQ28SB6OFK12RMCW8eBYPuIYxm/edit?usp=drive_link&ouid=112789746957537703336&rtpof=true&sd=true

3.3. Discussion on the project expectations of each member of the working group

Having clear expectations regarding the involvement of all the participants is critical for a successful engagement and participation throughout the different stages of the project. For this reason, part of the session was spent on having an open discussion in this regard. The main results can be found in the table below.

Table 1. Main expectations per organisation.

Organization	Main expectations
IIAM	Deadlines must be kept realistic. The consortium should communicate and share the work plan in a timely manner. IIAM envisions an agricultural landscape where local technologies support the production system of smallholder farmers.
CITT	Select a technology that reduces waste and improves the reutilization of plant and animal waste currently happening on farms. Also, they expect a second phase of the project (implementation) in which the design is piloted in the selected farm.
SDAE	The technical assistance will help identify problems and challenges in the sector, and this information will be used to improve a proposal for the project's second phase (in case it happens).
BNI	To obtain accurate information on how much income smallholder farmers can get by introducing these technologies into their daily practices. A strong and realistic business case would be a plus.

As for the challenges that the implementation can face, participants raised the following:

- **Water sources tend to be scarce in most of the farms in the Zambezi Valley**. Check on possibilities to explore different sources for multiple uses of water.
- Risk of farmers not obtaining **funds for implementing** the technologies. This will be addressed during the preparation of a sound business case behind the technical design.
- **Knowledge limitation among smallholder farmers** about low-cost technologies limits the possibility of upscaling the technologies presented in this technical assistance.
- **The valorisation of organic products is not highly developed**, and consumers are not willing to pay extra for organic products. To overcome this barrier, the implementation phase should consider market linkages.
- **Cultural and religious barriers can influence the non-adoption of cattle/ poultry manure for being used in agriculture**. Sensitization will be necessary, and communal gatherings supported by SDAE to promote organic production are envisioned for a second phase of the project.

Overall, there is a consensus that the project aligns with the strategic objectives set by the Government of Mozambique through the five-year plan[2], under the priority III ' Sustainable use of natural resources',, so all actions will have results that will contribute to the country's success.

3.4. Way Forward from the meeting

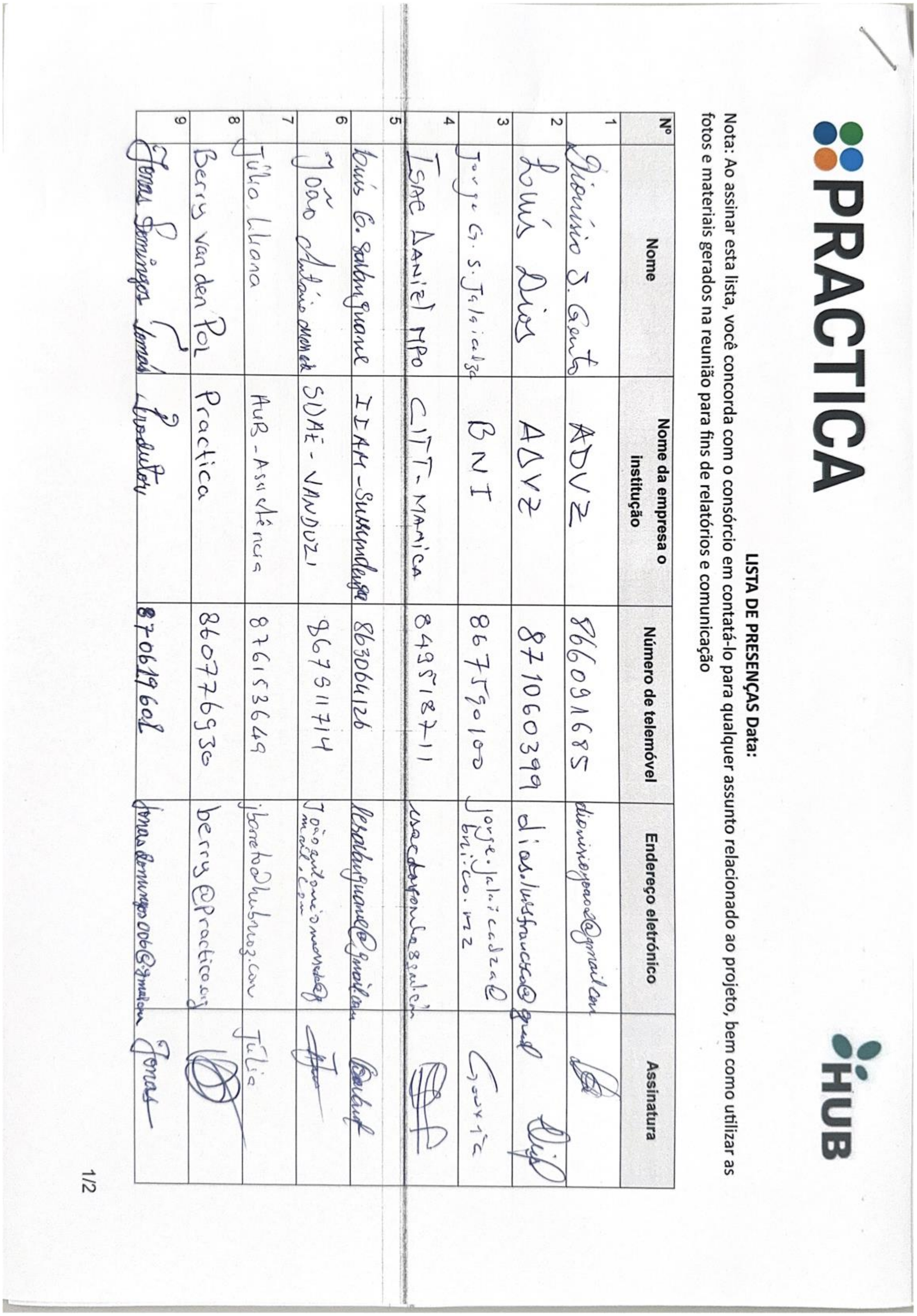
The meeting was productive and provided common ground for future project activities. The agreed actions are:

1. The consortium will create a WhatsApp group with the focal points to update on the planning for future meetings, field visits, clarify doubts, etc. The WhatsApp group will remain the primary communication channel for future sessions, document sharing, and project updates. This has already been done.
2. All the working group members will share the project documents at different government levels to identify possible future donors, considering the range of partners that the government has through its research institutions.
3. Once the first design is ready, all the working group members should visit the selected farm to obtain a more comprehensive idea of the system that is being designed.
4. Throughout the whole technical assistance, the consortium and the working group should keep in mind the challenges faced by farmers with few resources, which is the reality of the majority; the system model should be designed to fit and be compatible with the conditions of the majority.

[2] Access to the 5 years plan from Mozambique government: https://www.mef.gov.mz/index.php/todas-publicacoes/instrumentos-de-gestao-economica-e-social/programa-quinquenal-do-governo-pqg/pqgdoismilevinte-doismilevinteequatro/919-pqg-2020-2024-aprovado-pela-assembleia-da-republica/file?force-download=1

4. Annexes

4.1 List of Attendance



PRACTICA HUB

LISTA DE PRESENÇAS Data:

Nota: Ao assinar esta lista, você concorda com o consórcio em contatá-lo para qualquer assunto relacionado ao projeto, bem como utilizar as fotos e materiais gerados na reunião para fins de relatórios e comunicação

Nº	Nome	Nome da empresa o instituição	Número de telemóvel	Endereço eletrónico	Assinatura
1	Dionísio J. Gento	ADVZ	866091685	dionisiojoao2@gmail.com	[illegible]
2	Luís Dias	ADVZ	871060399	dias.luisfrancisco@gmail	Dias
3	Jorge G. S. Jalaicadza	BNI	867590100	jorge.jalaicadza@bni.co.mz	Gouveia
4	Isac Daniel Mpo	CITT-Manica	849518711	[illegible]	[illegible]
5	Luís G. Salanguane	IIAM-Sussundenga	863064126	lesalanguane@gmail.com	[illegible]
6	João António Momade	SDAE-Vanduzi	867511714	joaoantoniomomade@gmail.com	[illegible]
7	Júlio Llana	HUB-Assistência	876153649	jbarreto@hubmoz.com	Júlia
8	Berry van den Pol	Practica	860776930	berry@practica.org	[illegible]
9	Jonas Domingos Tomás	Produtor	870619602	jonasdomingos006@gmail.com	Jonas

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4.2. Pictures of the inception meeting

4.3 Agreement for the installation of the working group.

Agreement for the establishment of the working group for the project 'Implementing the Water, Energy and Food Nexus using digital technologies for communities in Mozambique'

Introduction

This agreement is part of the results of the project *"Implementation of Water-Food-Energy nexus using digital technologies for local communities in Mozambique".* This project is an effort of the project proponent Zambezi Valley Development Agency, and the Ministry of Science and Technology, implemented by the consortium PRACTICA and HUB.

The overall objective of the project is to develop a fit-for-purpose system for one selected farm in the Zambezi Valley in Mozambique that will include aquaculture, biodigester, bio composting, and hydraulic management systems (including water storage and solar pumping integrated systems for drip irrigation).

Duration of the project

The technical assistance lasts for 15 months, starting in March 2024. It is expected to be completed in May 2025.

The Working Group

The working group is an independent body of the consortium, whose main task is to provide *feedback* and the development and sustainability of technical assistance.

Roles and Responsibilities

From the consortium

Role

- Provide strategic leadership in the development, implementation, and sustainability of technical assistance.

Responsibilities

- Communicate to the working group the activities that have been carried out in the past, what are in preparation and what future activities are under the scope of the project.
- Monitor deliverables and bring technical assistance to a successful end. Communicate to the working group about any delay.

- Communicate with the working group at least three weeks in advance of any meeting.

Of the members of the working group

Role

- Monitor the progress of the consortium, provide knowledge information of the selected area, engage in discussions and provide a critical review of the deliverables.

Responsibilities

- Be present at the meetings that the consortium convenes.
- Actively participate in the meetings convened by the consortium.
- Provide feedback within the agreed timeframe.

The Working Group Meetings

- The meetings (face-to-face) will be called at least three weeks in advance.
- Each meeting will be held at a location to be indicated in the invitation.
- The meeting may only be held if at least three (3) full members of the working group are present. The absences of one of the members must be communicated in writing (via email) to the consortium team (Practica and HUB), preferably 48 hours before the convened meeting.

Items on the agenda

The consortium will provide a *draft* agenda at the beginning of the meetings. The first item on the agenda will be to discuss and agree on the proposed agenda before the start of the sitting.

Meeting Minutes and Documents

The minutes of the meetings will be prepared by the consortium and shared with all members of the working group, preferably by e-mail, but also by other means when e-mail is not possible; WhatsApp contacts and printed documents will be made available.

Communication

Communication will preferably be made by e-mail. To share meeting invitations and deliverables. If this is not possible, phone and WhatsApp messages will be sent.

Participation in the working group

Only one representative per institution of the working group will be supported with DSA for their participation in the meetings.

Gender equality and social inclusion

The consortium maintains high standards of inclusion and equal treatment. We do not tolerate any discrimination based on race, sex, age, caste, religion, sexual orientation or disability. All members of the working group are encouraged to adhere to these principles.

4.4. Work Plan approved by CTCN

Mandatory Deliverables:	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
i) Implementation plan	X														
ii) Monitoring and evaluation plan	X														
iii) Impact description document (initial and final version)	X														X
iv) Closure and Data Collection Report															X
Output 1: TA coordination mechanism established and inclusive stakeholder working group formed															
Activity 1.1: Map relevant stakeholders and establish a stakeholder working group															
Activity 1.2 Create a stakeholder working group for the implementation of the Technical Assistance															
Activity 1.3: Conduct an inception meeting with the stakeholder working group															
Deliverable:															
1.1 Stakeholder mapping report containing a complete stakeholder list.	X														
1.2 List of the members of the stakeholder working group with their name, position, respective entities, contact details, role, and sector of expertise.	X														
1.3 Minute of the inception meeting with photos, list of participants, material used for the implementation		X													
Output 2: Diagnose the need of the local farmers and benchmark international best practices															
Activity 2.1 Benchmark international best practices of this kind of holistic systems, including 4 components: aquaponic, biodigester, bio composting, and hydraulic management systems (including water storage and solar pumping integrated systems for drip irrigation)															
Activity 2.2 Assess the needs of the future users															
Activity 2.3 Organize a stakeholder consultation meeting at local level to select the unique farm for which a fit-for -purpose system will be designed.															
Activity 2.4 Map the selected farm															
Deliverable:															
2.1 Technological benchmarking of most suitable international best practices		X													
2.2 a. Needs assessment of the future users of the technology. 2.2 b. Minute of the on-site visit 2.2 c. Excel gathering primary data			X												
2.3 Stakeholder consultation at local level to select the farm for which the holistic system will be designed.				X											
2.4 Mapping of the selected area				X											
Output 3: Develop a complete flowchart of the system that will include the collection and pumping of the water through photovoltaic system, the use of integrated reservoirs for fish production coupled with horticulture (Aquaponics), the generation of compost, and the generation of biogas and bio fertilizers as well as organic food for the selected farm															

Activity 3.1 Draft the possible architecture of the system for the selected farm					■	■	■								

Activity 3.2: Conduct a stakeholder working group meeting							■								
Activity 3.3 Review the selected architecture							■	■							
Activity 3.4 Select appropriate technologies and elaborate fact sheets of each component of the system								■	■						

Activity 3.5 Organize a stakeholder consultation to select the technologies									■						
Deliverable:															
3.1 Draft architecture of the system for the selected farm (up to 5 possible options)							X								
3.2 Minute of the stakeholder meeting minute with photos, materials, list of participants disaggregated by gender							X								
3.3 Review of the architecture of the system until it is consensually approved by the stakeholder working group and the owner of the farm								X							
3.4 Fact sheets of the technologies that should be used for each component of the system									X						
3.5 Minute of the stakeholder-meeting minute with photos, materials, list of participants disaggregated by gender and the list of selected technologies for each component.									X						
Output 4: Define a cost estimation of the fit-for-purpose system															
Activity 4.1: Define cost estimation of the identified technologies under the configuration designed								■	■						

Activity 4.2: Organize a workshop with the stakeholder working group and the owner of the farm										■					
Activity 4.3: Design a business model in cooperation with the selected farm										■	■				

Activity 4.4: Business model Validation workshop												■			
Deliverable:															
4.1 Cost estimation of the fit-for purpose system										X					
4.2 Minute of the workshop										X					
4.3 Draft business model											X				
4.4 Minute of the workshop with the financial sector representatives												X			
Output 5: Elaborate and disseminate training's materials and workshops															
Activity 5.1: Prepare 3 sets of dissemination materials to spread knowledge about SPIS and the "pay as you irrigate model" to the users, to the investors and to the municipal officers 1/ Dissemination materials targeting users (smallholder farmers)									■	■	■	■			

Activity 5.3: Organize a stakeholder consultation workshop targeting the investors, private sector, and banking institutions															
Activity 5.4: Organize a training to Municipal and National officers															
Deliverable:															
5.1 a Dissemination material targeting the users 5.1 b Dissemination materials targeting the investors 5.1 c Dissemination materials targeting the national officers 5.1 d Dissemination strategy and planning.											X				
5.2 Minutes of the stakeholder consultation workshop with pictures, and a list of participants disaggregated by gender as well as materials used if any.												X			
5.3 Minutes of the stakeholder's consultation with the private sector and banking institutions with pictures, and a list of participants desegregated by gender as well as materials used if any.												X			
5.4 Minutes of the training to municipal and national officers with pictures, and a list of participants desegregated by gender as well as materials used if any.													X		