

Capitalization report Training of Trainers in Mozambique

Esra Nurja, Junior Expert in Training of Trainers at Enabel Mozambique (2021-2023) CB MIREME/ARENE MOZ 1403011

Belgian development agency

enabel.be

Table of contents

1	Int	roduction	4
2	To1	: Gender mainstreaming in the energy sector	4
	2.1	Context: Gender in the Mozambican energy sector	4
	2.2	Development process of ToT gender	5
	2.2.1	Content development of ToT gender	5
	2.2.1.1	Creation of a working group	5
	2.2.1.2	Organization of working sessions/workshops	5
	2.2.1.3	Collaboration with field experts	7
	2.2.1.4	Final product	ç
	2.2.2	Implementation of ToT gender	11
	2.2.2.1	Pedagogical training	11
	2.2.2.2	Training action plans of GFPs	12
	2.3	Conclusion	14
3	To1	: Energy data collection and management	15
	3.1	Context: Energy transition in Mozambique	15
	3.2	Development process of ToT energy data	15
	3.2.1	Content development of ToT energy data	15
	3.2.1.1	Creation of a working group	16
	3.2.1.2	Organization of working sessions	16
	3.2.1.3	Collaboration with field experts	16
	3.2.1.4	Final products	17
	3.2.2	Implementation of ToT energy data	19
	3.3	Conclusion	19
4	To1	: Renewable energy technologies	19
	4.1	Context: Renewable energy sector in Mozambique	19
	4.2	Development process of ToT RE technologies	20
	4.2.1	Content development of ToT RE technologies	20
	4.2.1.1	Creation of a working group	20
	4.2.1.2	Organization of working sessions	21
	4.2.1.3	Final product	21
	4.2.2	Implementation of ToT RE technologies	22
	43	Conclusion	22

5	Les	ssons learned from ToT	23
	5.1	Findings and recommendations	23
	5.1.1 import	Finding and recommendation 1: Definition of a proper baseline for each target group i ant	s 23
	5.1.2 owners	Finding and recommendation 2: Creation of a working group is important to facilitate ship and receive frequent input	24
	5.1.3 youth 6	Finding and recommendation 3: Collaboration with national Junior Experts (JEs) foster exchange	s 24
	5.1.4 training	Finding and recommendation 4: Being able to appoint trainers increases effectiveness g 24	of
	5.1.5	Finding and recommendation 5: Having mixed target groups	25
	5.1.6	Finding and recommendation 6: Allocate sufficient financial and operational resources	26
	5.1.7	Finding and recommendation 7: Foster collaboration allows for greater results	26
6	Su	mmary of outstanding activities	27
Α	nnex 1 -	Self-evaluation form	29

1 Introduction

This report capitalizes the development and implementation of a Training of Trainers (ToT) approach in Mozambique. It collects the lessons learned by Junior Expert (JE), Esra Nurja, who was contracted to introduce this approach within the Ministry of Mineral Resources and Energy (MIREME) and the Energy Regulatory Authority (ARENE) (2021-2023), as part of the Capacity Building project, CB MIREME/ARENE (MOZ 1403011), supervised by Evert Waeterloos, Intervention Manager.

The ToT approach uses a teaching and learning methodology, which equips the trainees to teach the material to others, after the training. The advantage of this approach is that it creates a cascade effect and, thus, reaches more people. The objective of this project was to imbed this ToT approach within MIREME and ARENE. Three priority areas were identified: gender mainstreaming within the (renewable) energy sector, energy data collection and management, and renewable energy technologies. The ToT on gender is the only one that could be completely developed and implemented. Implementation consisted of providing pedagogical training to the target group and implementing their individual training action plans. In total, three action plans have been implemented (see section 2.2.2.2. for more details). The other two ToTs were developed, but could not be implemented due to institutional and time constraints (see sections 3 and 4 for more details). Each ToT had a specific target group, as follows: for the ToT on gender, the Gender Focal Points (GFPs) of MIREME, ARENE, the Energy Fund (FUNAE), the National Institute of Irrigation (INIR), the Ministry of Gender (MGCAS) and the provincial infrastructure services (SPI); for the ToT on energy data collection and management, staff of MIREME and ARENE working on energy data and statistics; for the ToT on renewable energy technologies, staff of the National Directorate of Energy (DNE), ARENE and FUNAE working around renewable energies. The three ToT manuals were developed in close collaboration with partners and experts in each field. The development and implementation of each ToT will be discussed in a separate section in this report. As a conclusion, general lessons are drawn and a summary of outstanding activities and recommendations for their continuation are provided.

2 ToT: Gender mainstreaming in the energy sector

2.1 Context: Gender in the Mozambican energy sector

Energy poverty is one of the biggest challenges in Mozambique. According to the latest updates of the Ministry of Mineral Resources and Energy (MIREME), only 48% of the population has access to modern energy. Women and girls are particularly affected by this energy poverty in terms of health problems, due to indoor cooking, and limited access to education and decent jobs. Therefore, they are identified as potential powerful agents of change for improving energy access through the promotion of renewable energy. This justifies why gender mainstreaming in the energy sector has been identified as a priority within our project. It is generally viewed that there is a need to look at

women's participation in the energy sector from two perspectives: one in which clean, renewable energy complements conventional energy, and the other in which renewable energy in itself improves access to energy. Increasing the opportunity for women to have sustainable access to affordable, reliable, clean and modern energy (SDG 7) is a prerequisite for poverty reduction and women's economic empowerment¹.

In Mozambique, each government institution has in principle appointed Gender Focal Points (GFPs) to oversee gender-related activities and ensure gender mainstreaming in their respective institutions. However, according to a recent report of GreenLight Africa (2021), the GFPs of MIREME and its related institutions are not sufficiently equipped to ensure gender mainstreaming in the sector. This is due to a lack of understanding of gender concepts and a lack of resources to introduce gender mainstreaming approaches in the sector. Therefore, the objective of our ToT was to equip these GFPs with technical content on gender concepts and gender mainstreaming approaches within the (renewable) energy sector, as well as with pedagogical skills to enable further dissemination of this information within and outside their respective institutions.

2.2 Development process of ToT gender

This section details the development process of this ToT, which consists of two parts:

- 1. Content development
- 2. Implementation

2.2.1 Content development of ToT gender

The content development phase consisted of developing the content of the ToT manual. Therefore, the following actions were undertaken: creation of a working group, organization of working sessions and collaboration with experts in the field. Each action is explained separately below.

2.2.1.1 Creation of a working group

The working group was composed of 5 GFPs of the Ministry of Mineral Resources and Energy (MIREME), the Energy Regulatory Authority (ARENE) and the Energy Fund (FUNAE). Its composition was suggested by MIREME. The objective of this working group was to better understand the needs and expectations of the GFPs regarding this ToT, and to serve as a focal point throughout the whole content development phase for receiving input and feedback, but also for having access to relevant sector documents, such as legislations and strategies, as well as contacts.

¹ ENERGIA - international network on gender and sustainable energy (https://www.energia.org/impact-area/womens-economic-empowerment/)

2.2.1.2 Organization of working sessions/workshops

The following working sessions/workshops were organized during the content development phase:

- 1. Workshop of GreenLight Africa (28th May 2021): activities for gender mainstreaming in the promotion of sustainable energy access for all in Mozambique
- 2. **Working session 1 (18th June 2021):** identification of needs and expectations regarding ToT gender
- 3. Working session 2 (17th August 2021): presentation of first draft of ToT manual

Each event is described below.

Workshop of GreenLight Africa: activities for gender mainstreaming in the promotion of sustainable energy access for all in Mozambique (28th May 2021):

This workshop was organized by GreenLight Africa to present the results of their report and define, together with the GFPs, the priorities and actions to be taken. The following priorities were defined:

- 1. Technical capacity of GFPs on gender and renewable energy
- 2. Sensibilization on gender and (renewable) energy at community level
- 3. Promotion of productive use of energy
- 4. Development of gender indicators within the sector for evaluation purposes
- 5. Creation of a database of sex disaggregated data
- 6. Review of sector's key documents on gender aspects

Our ToT is a response to the first priority point.

Working session 1: identification of needs and expectations regarding ToT gender (18th June 2021):

After having defined the priorities of gender mainstreaming activities, a first working session with the working group was organized, in order to better understand the specific needs and expectations regarding the ToT. A first draft of the ToT structure and content was proposed.

The structure looked as follows:

- Capítulo 1: Contexto
- Capítulo 2: Energias renováveis
- Capítulo 3: Abordagem do género no sector da energia
- Capítulo 4: Pontos Focais de Género
- Capítulo 5: Formas de divulgação do conhecimento

Lessons learned for trainer:

- When facilitating a workshop in which participants are expected to contribute, use an interactive method, such as group work, to ensure involvement of all participants
- Give a clear introduction and instructions to the participants

- Do not let too much space to diverge from initial question or goal
- Even if the participants know each other, start the session with an ice-breaker
- Close the session with a recap of discussion and ensure that everything has been covered and understood (e.g. by asking questions or letting the participants summarize the session)
- Make sure to clearly define next steps and send follow-up email to all participants

After the first working session, a consultant was contracted to further develop the technical content of the ToT manual (see section 2.2.1.3. for more details), which was presented during the second working session.

Working session 2: presentation of first draft of ToT manual (17th August 2021)

A second working session with the working group was organized to present the content of the ToT manual developed with the consultant. It was a hybrid session (combination of presential and online) as some of the colleagues could not be physically present because of Covid, which made it more challenging in terms of interactions and logistics (see lessons learned below). The objective of this working session was to gather feedback from the working group on the developed ToT manual, which was documented and incorporated after the session.

Lessons learned for trainer:

 Avoid as much as possible hybrid working sessions as they create a barrier between colleagues who are physically present and those who are not. This affects the spontaneous interaction and can delay the session due to connection problems. Therefore, the trainer must be well prepared in terms of facilitation techniques and logistics

2.2.1.3 Collaboration with field experts

The content development of this ToT included two consultancies:

- 1. Gilda Monjane for developing the technical content of the manual
- 2. GreenLight Africa for providing a technical training on gender and renewable energy

Each consultancy is described below.

<u>Collaboration with Gilda Monjane, entrepreneur and specialist of gender and renewable energy</u> in <u>Mozambique</u> (July-August 2021):

This collaboration started on 20th July 2021, for 10 days spread over 1 month. The objective of this consultancy was to develop the technical content of the ToT manual and have a final product to be presented to the GFPs. This objective was not attained due to time constraints and COVID 19

restrictions, which impacted the proper involvement of the consultant (e.g. connection problems, loss of information, etc.) (see lessons learned below).

Lessons learned from collaborating with external consultants:

- Use a consultant working sheet, especially when remote work is included, to ensure effective planning and follow-up of timing. Important to respect the planning defined at the beginning
- If there are any delays during the collaboration, advise the consultant in time and review planning together
- Presential working sessions are more efficient than online due to connection problems.

 A lot of interaction and information can be lost this way
- Explain clearly what you expect from the consultant from the very beginning. Do not let room for doubt. In other words, ensure consultant fully understands his or her role (by asking frequent questions for example)
- Provide constructive feedback on time, especially when there is a lack of punctuality and involvement from the consultant's side, to leave room for improvement

As the objective of this consultation was not fully met, the JE had to further develop the content and reshape the document into a ToT format, by using literature and recommendations from GreenLight Africa (see below).

Collaboration with GreenLight Africa (October-November 2021):

The objective of this consultancy was to review the ToT manual and provide a 5-day training to the GFPs to test the manual and prepare them to be gender trainers. However, this objective had to be reshaped during the training because the basic knowledge on gender and renewable energy was weak amongst the GFPs, so instead of focusing on a training's pedagogical aspects, we had to focus on the technical content.

Participants' feedback on the manual was collected during this 5-day training and included in the final version of the ToT manual. The feedback collection was done by dividing the participants into smaller groups and attributing one particular module to each group.

Ove	erview of Gre	eenLight Africa's training:
1.	Who?	2 trainers: gender specialist and renewable energy specialist20 participants: GFPs of MIREME, ARENE, FUNAE, SPIs and the Electricity of Mozambique (EDM)
2.	What?	Training on gender and renewable energy
3.	Where?	Macaneta
4.	When?	22 nd - 26 th November 2021
5.	Why?	Test the developed ToT manual and collect participants' feedback
6.	Results?	20 GFPs were trained in gender concepts and renewable energy. During the training, we noticed that, although many GFPs had already received gender training in the past, their general knowledge and understanding was still limited. Therefore, to address this low level of knowledge, the trainers had to focus more on the technical content of the manual

Lessons learned for trainer:

- Establishing a baseline of the target group's knowledge is crucial to define the objective of a training
- When participants are asked to provide feedback on a large document, it is more
 effective to break the content into smaller parts and ask each participant or group of
 participants to contribute to a particular part

2.2.1.4 Final product

After GreenLight Africa's training, the ToT manual was finalized and ready for implementation (see cover page on the image below). The manual includes 6 modules as follows:

- Módulo 1: Orientações para o/a formador(a)
- Módulo 2: Conceitos de género
- Módulo 3: Abordagens de integração de género no sector de energia
- Módulo 4: Integração de género nos documentos-chave do sector
- Módulo 5: Energias renováveis
- Módulo 6: Papel de um Ponto Focal de Género (PFG)



Integração do género no sector de energia





Image 1. Cover page of training of trainers manual on gender integration in the energy sector

150 copies of the manual were printed and distributed to the GFPs of the different government institutions, as follows:

- ✓ MIREME: 70, from which 35 at central level and 35 to SPIs (southern and central region)
- ✓ ARENE: 5
- ✓ FUNAE: 35, from which 20 at central level and 15 to FUNAE's delegations in provinces
- ✓ INIR: 5
- ✓ EDM: 5
- ✓ Ministry of Gender: 15, from which 5 at central level and 10 to delegations in Maputo and Gaza
- ✓ Enabel: 5

The manual was also translated in English to allow for a broader dissemination within other Enabel projects.

Reference literature for the content development of ToT manual gender:

- GreenLight Africa, MIREME and Enabel (2021): Formulação de pontos de entrada conceituais e estratégicos para a integração de género na promoção do acesso sustentável à energia para todos em
 - This report formed the basis for identifying and prioritizing the content of this ToT manual. A document linking the report's recommendations and the ToT needs (based on first working sessions) was developed and contacts were established with Boris Atanassov, CEO of GreenLight Africa
- Ministry of Energy and Embassy of Norway in Mozambique (2014): *Guião de Formadores de Género*
 - This trainer's guide was used as a main inspiration for the development of this
 ToT. The objective was to complement and update relevant parts of the guide
- The following sources mainly contributed to the development of the manual's structure, module 1 and description of exercises:
 - Facilitator's toolkit: ARC resource pack (2009) by United Nations High Commissioner for Refugees (UNHCR)
 - o Farde de formation du formateur relais (2008) by CESI
 - Guide méthodologique pour l'élaboration du guide du formateur et du manuel du participant (2018) by Enabel
 - Manual de Formação em Planificação e Orçamentação na Óptica de Género (2017) by Associação da Mulher na Comunicação Social
 - Training of Trainers Module: Gender-sensitive community involvement in large-scale land investments in agriculture (2019) by PLAAS, Oxfam and PROPAC

Lessons learned for trainer:

- Always use your network to access relevant and existing documents to avoid duplication

The following box includes general suggestions for the trainer when starting the content development of a ToT (it is not limited to this ToT):

Suggestions for trainer for content development of a ToT:

- 1. As a trainer, ask yourself: "What is the knowledge and competences I want to transmit in X time?"
 - a. Define **time of session and objectives**

 For example: "the goal of session 1 is to make the audience understand what the difference is between gender and sex in 2 hours"
 - 1. What should be the **content**? (= **knowledge** that participants need to have)
 - What is the most appropriate pedagogical technique to reach this? (= know-how)
 - 3. What is needed in terms of **material**? It is more efficient to define material while defining the pedagogical techniques that will be used

2. Recommended structure of a training session:

- a. **Discussion**: to involve the audience from the beginning and give them time to reflect
- b. **Theory**: to give them the content (= knowledge)
- c. **Practical exercise**: to put the theory in practice (know-how)

 it is important to have ready-to-use exercises: a detailed description on how to prepare, use and facilitate the exercise, time allowed for the exercise and material needed

To be reminded: adults learn the best when they are involved and have space enough to reflect about the topic. Therefore, the use of **interactive and iterative approaches** is crucial as it will allow more information retention

2.2.2 Implementation of ToT gender

The implementation phase consisted of:

- A pedagogical training (divided in two groups) to equip the GFPs with pedagogical competencies
- Design and implementation of GFPs' individual training action plans

2.2.2.1 Pedagogical training

The pedagogical training was divided in two groups in order to allow for effective interactions and create a more comfortable learning environment. The objective was to equip the GFPs with pedagogical techniques so that they could organize and facilitate their own training sessions, using the ToT manual gender. The content of this training was based on module 1 of the ToT manual and was identical for both training sessions.

Overview	Overview of pedagogical trainings:	
Who?	1 trainer: Esra Nurja	
	23 trainees (divided in two groups): GFPs of MIREME, ARENE, FUNAE, INIR, Ministry of Gender (at national and provincial level - Maputo and Gaza) and SPIs from southern and central region	
What?	Training on pedagogical aspects of training (example: posture, facilitation techniques, dealing with unforeseen situations, etc.)	
Where?	Ponta de Ouro	
When?	Training of group 1: 20 th - 24 th June 2022	
	Training of group 2: 8 th - 12 th August 2022	
Why?	To equip the GFPs with pedagogical competencies	
Results?	23 GFPs were trained in organizing and facilitating their own training sessions around gender and	
	renewable energy. They all received a certification of participation and elaborated an individual	
	training action plan (which was monitored afterwards)	

Lessons learned for trainer:

- Importance of not going too quickly over content and using the right vocabulary try to simplify technical vocabulary as much as possible
- Importance of constructive feedback make sure to give detailed and structured feedback to trainees, and share feedback with them directly after the training
- Importance of energizers prepare a list of energizers that can be used at any time of the training
- Ask open questions during training as they provide more relevant information than close questions (= yes/no question):
 - Example of open questions: "What are your doubts/questions?" or "Which content would you still like to address?" (this can be done through post-its)
 - Example of close questions: "Are there any questions/doubts?" or "Is there any content you would like to address which we didn't?" (allow only for yes/no answer)

2.2.2.2 Training action plans of GFPs

During the pedagogical training, the GFPs developed an individual training action plan (see template of action plan below), in which they defined their training planning for the following 6 months. It contained elements such as: target group, topic of training, duration, training format (e.g. learning objectives, pedagogical techniques, evaluation, etc.), location, budget, etc. The implementation of the action plan could be done in pairs if wished.

Modelo de plano de açção

6 1	
Grupo-alvo:	
Térino	
Tópico:	
Duração:	
Duração.	
Formato de formação*:	Objectivos de aprendizagem
	Técnicas pedagógicas
	• Techicas pedagogicas
	Avaliação
	•
Onde:	
Orçamento:	
-	
Apoio*:	
Autorização*:	

^{*}Formato da formação: Como a formação é organizada? Quais são os conteúdos, as técnicas pedagógicas, os tipos de avaliação, etc.?

Image 2. Template of training action plan

The following is an overview of the training sessions that have been implemented within the defined timeframe (September - December 2022):

Overview of implemented training sessions:

- ✓ 14th 16th November 2022: 3-days training on pedagogical techniques, by Armindo Culeco (Rural engineer at INIR). There were 10 participants from different departments of the institution. The objective was to equip his colleagues with pedagogical competencies in order to enable better information sharing within the institution and with the provinces
- ✓ 30th November 2022: half-day training on gender mainstreaming in the energy sector and gender planning and budgeting, by Sonia Manhique (GFP of SPI Gaza). 50 technicians and staff members of SPI participated in the training. The objective was to equip participants with knowledge of gender mainstreaming in the energy sector and gender planning and budgeting
- ✓ 16th December 2022: half-day training on gender concepts and how to support GFPs in their gender activities, by Alfredo Amisse (GFP of DNE) and Olinda Manjate (GFP of

^{*}Apoio: Que tipo de apoio (técnico, administrativo, etc.) precisa de receber dentro e fora da sua instituição?

^{*}Autorização: Quem deve dar a autorização para poder fazer as formações?

the Department of Planning and Cooperation (DPC) of MIREME). There were 30 participants from both DNE and DPC. The objective was to increase colleagues' knowledge on gender concepts and discuss how to support GFPs in their gender activities

To be noted that other training sessions were planned for Q4 2022, but had to be postponed because of institutional and time constraints, such as the restructuring of the Board of Directors (in FUNAE) and the closing of the end of year activities (see lessons learned below).

Each training was supervised and evaluated by the JE. At the end, each trainer was asked to fill in a self-assessment form (see annex 1) and a feedback session was planned directly after the training.

In general, the self-assessment forms have shown the following results:

- Trainers were satisfied with their training session
- They were able to put in practice some of the pedagogical techniques learned during the pedagogical training, such as: starting with ice-breaker, using active learning techniques (e.g. plenary discussions, group work, etc.) and energizers, etc.
- The interaction between the trainers and trainees was good
- The most challenges were related to the development of a realistic program (matching content with time available) and the administrative part, such as: getting the required authorization, ensuring the presence of all participants, going through the procurement process for purchases, etc.
- The evaluation of the trainees at the end of the training session was also seen as a challenge and was missing in most of the trainings organized
- Trainers realised that preparation and simulation well in advance are crucial to ensure a successful training session

To give the opportunity to trainees to come together and reflect on how to overcome the challenges encountered during the implementation of their respective training sessions, as well as to exchange good practices, a **lessons learned workshop** was organized at the end of 2022. To limit costs, the GFPs of the central provinces were asked to contribute through a short video summarizing their experience, but no return was received. The results of this workshop were documented in a PPT format (see image below) and shared with all after the workshop.

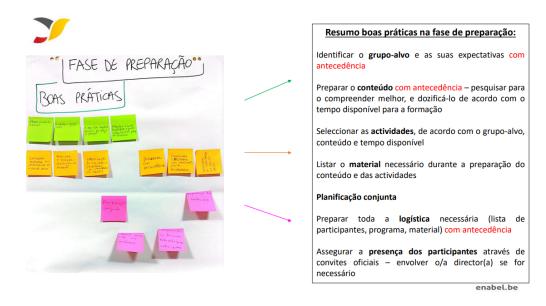


Image 3. Example of results summary of lessons learned workshop

Lessons learned during implementation of action plans:

- Regular follow-up is needed to ensure the implementation of action plans. Therefore, it is very challenging (or nearly impossible) to follow-up at provincial level (proximity is needed)
- The following factors play an important role in the implementation of action plans: motivation of trainers, administrative/logistics challenges (e.g. asking authorization, asking three quotations for any purchase, etc.)
- Assistance is needed for preparation and simulation of training
- Important to foresee a feedback session short after the training session

2.3 Conclusion

In conclusion, some recommendations are shared to ensure the continuity of the work done around this ToT on gender.

The idea would be to further disseminate it through:

- The trained GFPs, by ensuring sufficient resource allocation and supervision for organizing training sessions, but also by looking at the impact of this ToT manual in terms of the integration of gender mainstreaming approaches within the institutions (for example: is gender data being collected?, are policies more gender-sensitive?, etc.)
- The sharing of the digital version of the ToT manual with other relevant actors, such as: public actors, academia, CSOs/associations, etc. in Mozambique
- The sharing of the digital English version of the ToT manual with other Enabel projects and HQ

3 ToT: Energy data collection and management

3.1 Context: Energy transition in Mozambique

Around the world, we are currently speaking of energy transition. Mozambique is one of the countries that finds itself between two pathways: continue in fossil fuels (example of natural gas exploitation) or continue to expand the use of greener energy resources, such as water or solar. Both energy pathways, known respectively as carbon intensive and low carbon, will have an impact on the future of GHG emissions in the atmosphere, energy consumption patterns, as well as the country's energy poverty incidence patterns. Therefore, the energy transition in Mozambique must ensure a balance between energy access for all and environmental sustainability (CDD, 2022). According to a study of MRC Group on "the status of energy data collection and management, and energy planning in Mozambique" (Consultoria para a elaboração de um Manual de Planeamento, Monitorização e Avaliação para o Minsitério dos Recuros Minerais e Energia em Moçambique -MOZ 10004), there are several gaps and limitations in terms of energy data collection and management within the Ministry, which makes energy planning more challenging. Therefore, one of the study's recommendations was to train MIREME staff on energy data collection and management, as it will provide a better understanding of the country's energy trends, but also a better forecast of the future, which plays an important role in energy transition. Therefore, the second priority area we identified within our CBMIREME/ARENE project, is energy data collection and management. The objective was to equip MIREME and ARENE staff working around energy data and statistics with knowledge of approaches to energy data collection and management, as well as basic concepts of energy planning, while also equipping them with pedagogical skills to stimulate further information dissemination within and outside of MIREME and ARENE.

3.2 Development process of ToT energy data

As with the ToT on gender, the development process of this ToT consists of two parts: content development and implementation. Unfortunately, the implementation phase could not be done because of institutional constraints (see section 3.2.2. for more details).

3.2.1 Content development of ToT energy data

The content development phase consists of developing the content of the ToT manual. Therefore, the following actions were undertaken: creation of a working group, organization of working sessions and collaboration with experts in the field. Each action is explained separately below.

To be noted that during the development phase of this ToT, a manual on planning, monitoring and evaluation for MIREME was being developed by MRC Group, funded by CB MIREME/ARENE (MOZ 10004). Therefore, to ensure alignment of both manuals (MRC manual and this ToT), frequent contact was maintained with MRC Group consultants. This ToT manual can be seen as a response to

one of the recommendations of MRC Group, referring to training MIREME staff in data collection and management approaches, as well as basic concepts of energy balance.

3.2.1.1 Creation of a working group

The working group was composed of staff of MIREME, ARENE and FUNAE working around energy data and statistics. Its composition was suggested by MIREME. The objective of this working group was to better understand the needs and expectations of MIREME regarding this ToT, and to serve as a focal point throughout the whole content development phase to receive input and feedback, but also to have access to relevant sector documents, such as legislations and strategies, as well as contacts.

The role of the national Junior Experts (NJE) has been important during the development of this ToT. Five national Junior Experts were contracted by Enabel to work in DPC on the upgrading of Mozambique's official country's energy data and energy balance . Since part of their job was to be able to disseminate information within the institution, they worked closely with the International JE (IJE) to develop this ToT manual.

3.2.1.2 Organization of working sessions

Only one working session was held during the development phase of this training manual. The rest of the exchanges were done through frequent short online meetings and e-mail exchanges.

Working session 1: presentation of first draft of ToT energy data collection and management (13th December 2021):

This working session was organized together with the working group and the consultant contracted for the content development of this ToT manual (see section 3.2.1.3. for more details). The objective was to present the first draft of the ToT manual and collect feedback from the working group.

The structure looked as follows:

- Módulo 1: Sector de Energia em Moçambique
- Módulo 2: Gestão de dados de energia
- Módulo 3: Balanço energético (BE)
- Módulo 4: Planeamento energético (PE)

After the working session, the comments of the working group were incorporated and a final draft version was sent to all. A frequent contact was maintained with the working group, especially the national JEs, during the finalization of the content.

3.2.1.3 Collaboration with field experts

<u>Collaboration with consultant, Gilberto Mahumane, Professor in Energy Studies at Eduardo Mondlane University in Maputo</u> (August 2021-March 2022):

This collaboration was initially planned for 10 days, but had to be extended to 20 days to be able to finalize the manual. There were some delays due to changing expectations and unclear communication from MIREME, but a final draft of the ToT manual was completed (see lessons learned below).

Lessons learned - collaboration with external consultants:

- Make sure you understand the partner's expectations before you begin the consultancy, so that you can clearly explain to the consultant what the objective is and what is expected from him or her. If expectations change, be sure to communicate this clearly to the consultant and review the work schedule together

3.2.1.4 Final products

The ToT manual could not be completely finalized due to institutional constraints (see section 3.2.2. for more details), but a final draft version was completed (see cover page on image below).

MANUAL DE FORMAÇÃO DE FORMADORES

GESTÃO DE DADOS E PLANEAMENTO FNFRGÉTICO







The ToT manual is complemented by a **facilitator's toolkit**, developed by the IJE, to address important concepts that contribute in ensuring an efficient training process and help trainers improve their training skills. The decision to develop a facilitator's toolkit was made to avoid duplication of pedagogical information and reduce the size of the manuals. Therefore, it can be seen as a pedagogical guide that can be used for any type of content. Different resources were used for the development of this facilitator's toolkit, such as: La boîte à outils du formateur from Dunod (2022), teach like a champion from Lemov (2010), Facilitator's Toolkit: ARC resource pack from UNHCR (2009), and others.

The IJE also contacted other IJEs of Enabel working around ToT to share their knowledge and ask for advice. She also participated in a ToT organized by Electricity of France (EDF) for Electricity of Mozambique (EDM), with Thomas Grué as trainer. These exchanges contributed greatly to the development of the facilitator's toolkit.

The facilitator's toolkit (see cover page on the image below) includes the following 5 modules:

- Módulo 1: Introdução
- Módulo 2: Processo de formação
- Módulo 3: Facilitação de formação
- Módulo 4: Lidar com o estresse e imprevistos
- Módulo 5: Aspectos práticos de uma formação



Maputo, Dezembro de 2022





Image 5 . Cover page of facilitator's toolkit

150 copies of the facilitator's toolkit were printed and distributed to the GFPs of the different government institutions, as follows:

- ✓ MIREME: 55, from which 25 at central level and 30 to SPIs (southern and central region)
- ✓ ARENE: 10
- ✓ FUNAE: 20, from which 5 at central level and 15 to FUNAE's delegations in provinces
- ✓ INIR: 15
- ✓ Ministry of Gender (MGCAS): 15, from which 5 at central level and 10 to delegations in Maputo
- ✓ Enabel: 5

There are still 20 facilitator's toolkits available for distribution.

3.2.2 Implementation of ToT energy data

As mentioned in the section above, the implementation of this ToT could not take place because of institutional constraints. First, the manual of MRC Group was not fully approved due to a lack of alignment and quality, which compromised the approval of this ToT manual, as it refers to the MRC Group manual. As a consequence, MIREME could not provide clear information about who within the Ministry should write the foreword of the manual. Finally, some delays were caused by difficulties in receiving official data and feedback from MIREME.

3.3 Conclusion

In conclusion, some recommendations are shared to ensure the continuity of the work done around this ToT on energy data and management.

First, what remains to be finalized in the ToT manual are only the foreword and layout, and the approval by the right person. Once finalized and approved, the dissemination can start through the national JEs. This ToT manual can also be used as literature to develop basic knowledge on energy data collection and management approaches and energy planning within the Ministry.

4 ToT: Renewable energy technologies

4.1 Context: Renewable energy sector in Mozambique

Mozambique possesses several energy resources, with proven potential in renewable energy (RE), namely solar, hydroelectric, wind, biomass and geothermal resources. These sustainable energy resources propose alternative solutions for energy production and access to energy (including in areas not connected to the national grid). Although some guiding instruments already exist to promote the use of these kinds of resources, such as the New and Renewable Energy Development Strategy (EDENR) (2011-2025), further development of the sector is needed. This is especially relevant in Mozambique, which is one of the most vulnerable countries in terms of climate change in Africa. It faces a number of natural disasters, the most prominent of which are floods, droughts and cyclones.

Knowing that renewable energy and energy efficiency measures can potentially achieve 90% of the required carbon reductions², and thus contribute to a low-carbon energy growth path, it Is recommended for Mozambique to prioritize the use of renewable energy. This also contributes to the achievement of the Sustainable Development Goals (SDGs), such as SDG 7 which focuses on "clean, modern, sustainable and affordable energy", but also SDG 5 on "gender equality", as both themes are linked (see section 1 on ToT on gender).

For all these reasons, the theme of renewable energy technology has also been identified as a priority in our CBMIREME/ARENE project. The main objective of this ToT manual was to equip MIREME and ARENE staff with technical content on renewable energy technologies, as well as pedagogical approaches to further disseminate this information and promote the use of renewable energy within the Ministry and throughout the country. The manual contains general information about:

- The most relevant renewable energy technologies for the country, in terms of production, capacity, investment cost, advantages and disadvantages, and potential
- What is currently available in the provinces, in terms of training, technical schools and local suppliers working in the field of renewable energy

4.2 Development process of ToT RE technologies

As with the two previous ToTs, the development process of this ToT consists of two parts: content development and implementation. Unfortunately, the implementation phase could not be achieved because of time constraints (see section 4.2.2. for more details).

21

² IRENA (https://www.irena.org/Energy-Transition/Outlook)

4.2.1 Content development of ToT renewable energy technologies

The content development phase consists of developing the technical content of the ToT manual. Therefore, the following actions were undertaken: creation of a working group, organization of working sessions and collaboration with experts in the field. Each action is explained separately below.

No additional field experts were contracted for the development of this manual, as most of the information had already been made available during the development of the ToT on gender, under module 5 on renewable energies.

4.2.1.1 Creation of a working group

The working group was composed of staff of MIREME, ARENE and FUNAE working around renewable energy. Its composition was suggested by the renewable energy department of the National Energy Directorate (DNE), who formed the core team for leading the development of this ToT.

4.2.1.2 Organization of working sessions

The following working sessions were organized throughout the content development phase:

- Working session 1 (4th April 2022): identification of needs and expectations regarding ToT technologies of RE
- 2. Working session 2 (9th February 2023): presentation of first draft of ToT manual

Working session 1: identification of needs and expectations regarding ToT technologies of RE (4th April 2022):

This working session was organized together with the working group, with the aim of better understanding the specific needs and expectations regarding the ToT. A first draft of the ToT structure and content was proposed.

The structure looked as follows:

- Módulo 1: Papel de energia no desenvolvimento sustentável
- Módulo 2: Energia solar
- Módulo 3: Energie hídrica
- Módulo 4: Energia de biomassa
- Módulo 5: Energia eólica
- Módulo 6: Uso produtivo e eficiente de energia

Working session 2: presentation of draft of ToT manual (9th February 2023)

A second working session with the working group was held to present the draft ToT manual. The objective was to gather feedback from the working group and to ask for specific input on certain parts of the manual.

4.2.1.3 Final product

The ToT manual could not be completely finalized due to time constraints (see section 4.2.2. for more details), but a draft version was completed (see cover page on the image below).

MANUAL DE FORMAÇÃO DE FORMADORES

PROMOÇÃO DE TECNOLOGIAS DE ENERGIA RENOVÁVEL





Image 6. Cover page of training of trainers manual on technologies of RE

As already mentioned, the content of the manual is divided into 6 modules. The first module is an introduction to some energy concepts and describes the importance of (renewable) energy for sustainable development. The next 4 modules (modules 2 to 5) focus on a particular renewable energy source, such as solar, water, etc. Each module begins with a general description of the renewable energy in question, followed by a description of the current situation and potential of this renewable energy in Mozambique. Module 6 focuses on the productive and efficient use of energy, which plays an important role in the fight against climate change. Most of the content has

already been developed, only some details in terms of structure and data on Mozambique, such as technical schools on renewable energies present, local suppliers per province, etc. are missing.

4.2.2 Implementation of ToT RE technologies

As mentioned in the section above, the implementation of this ToT could not take place because of time constraints due to time needed for the monitoring of the ToT on gender.

4.3 Conclusion

In conclusion, some recommendations are shared to ensure the continuity of the work done around this ToT on technologies of renewable energies.

First, the ToT manual should be finalized, with DNE as a leading team. What remains to be done is to review the structure of modules 2 to 5 regarding information on training, institutes, technical schools, local suppliers of each renewable energy available in Mozambique. It might be better to gather this information in a sub-heading instead of separating it per module. It would also be necessary to complete this information, as at the moment this information is limited.

Once finalized and approved, the dissemination can take place in two parts, as follows:

- 1. Within the Ministry through training sessions, facilitated by the working group. Two members of the working group participated in the pedagogical training (given for the ToT gender), so they could use their developed competences to disseminate this manual
- 2. Outreach to communities through companies/ associations/ organizations/ TVET schools. An effective way of doing this would be to organize a workshop with relevant actors to promote the ToT manual. This workshop will also help to better evaluate the potential of this manual

It is recommended to use the renewable energy promotion material, which was developed under the CBMIREME/ARENE project, to support the promotion of this ToT manual. Examples of material include videos, pamphlets, brochures, bags, hats, etc. This type of visualization speaks more to people and has a greater impact, especially in the provinces. The Department of Communication and Imaging of MIREME should be contacted to have more information and access to this material.

5 Lessons learned from ToT

This section summarizes the lessons learned from this project in introducing a ToT approach, and thus contributes to the improvement of future ToTs. It comprises one section, which discusses findings and recommendations.

5.1 Findings and recommendations

5.1.1 Finding and recommendation 1: Definition of a proper <u>baseline</u> for each target group is important

Finding 1: Importance of a proper baseline definition

The first finding refers to the importance of a proper baseline definition of ToT, which was lacking in this project. This was noted in the following two examples:

- During the implementation phase, it was discovered that some parts of the manual were too difficult to understand with the current level of knowledge of some GFPs, especially at provincial level
- 2. During GreenLight Africa's training, which was intended to test the ToT manual in terms of pedagogical guide, it was observed that this goal could not be achieved due to the low level of gender knowledge from some of the GFPs. Therefore, the training turned into a more technical training, and we had to plan another pedagogical training afterwards

Both of these situations could have been avoided if a baseline had been established prior to training or at the beginning of the project, but defining a proper baseline is complex, time consuming and costly.

Based on our first finding, we make the following recommendation:

Recommendation 1: Define a proper baseline for each target group

Defining a proper baseline can be done through a **questionnaire** or **interviews with target group(s)**. Another way is to create a working group in charge of collecting this information. This would reduce costs as well. If the provinces are part of the target group, it is important to include a representative of each province as knowledge, competences, language, context, needs and expectations may differ.

5.1.2 Finding and recommendation 2: Creation of a <u>working group</u> is important to facilitate ownership and receive frequent input

Finding 2: Importance of creating a working group

The second finding concerns the creation of a working group. Throughout the development of all three ToTs, it has proven to be effective for different reasons. First, it creates a relationship of trust with partners and facilitates ownership. Second, it allows frequent input and access to relevant documentation and/or contacts. Finally, it contributes to embed a new methodology, in this case, the ToT approach, within partners. To be highlighted that frequent contact is needed for a proper exchange. It is not sufficient to just create a working group, frequent collaboration is needed.

Based on our second finding, we make the following recommendation:

Recommendation 2: Create a working group for each project

When creating a working group, it is important to choose the **right people**, able to provide frequent and relevant information. Therefore, it is better to define the working group together with partners. Be careful not to create too large a group, as this will make interaction and quick responses more difficult. To ensure frequent contacts with this working group, plan every week or two-week meetings, depending on needs.

5.1.3 Finding and recommendation 3: Collaboration with <u>national Junior Experts</u> (NJEs) fosters youth exchange

Finding 3: Importance of collaborating with NJEs

Collaborating with NJEs has proven to be effective in terms of youth exchange and having access to relevant insights and new ideas. It also provides work opportunities for national young professionals in an environment where it is difficult to find decent jobs. However, it should not be overlooked that the level of responsibility of these national JEs should be clearly defined in advance and compensated accordingly (e.g. salary, other benefits, training, etc.). Within our project, this has proven to be challenging, which has consequences on the workload and motivation of these NJEs.

Based on this finding, we make the following recommendation:

Recommendation 3: Collaborate with national junior experts

Collaborate with NJEs to encourage youth exchange and provide work opportunities to national young professionals. Ensure to provide a **clear description of responsibilities and compensation** accordingly.

5.1.4 Finding and recommendation 4: Being able to appoint <u>trainers</u> increases effectiveness of training

Finding 4: Importance of appointing right trainers

The third finding refers to the importance of being able to appoint trainers, based on certain criteria, such as motivation, level of subject's understanding, prior experience, etc. In our case, this was not possible as the trainers were already assigned. The following example illustrates it:

 The target group of our ToT on gender being the GFPs of the Ministry, we were not able to appoint the trainers ourselves as they were already nominated within the Ministry. It was noted that working with people who are not necessarily interested in being trainers makes implementation more challenging

Based on this finding, we make the following recommendation:

Recommendation 4: If possible, appoint the right people to become trainers. If not possible, think of alternative solutions, such as pairing trainers

If you are able to appoint trainers, make sure to select those who are motivated and meet certain predefined criteria. This can be determined by a simple questionnaire or interview. If you are not able to appoint trainers, ensure that the assigned trainers were selected based on **certain level of competence or organizational position**. Also, try alternative solutions to motivate them intrinsically, such as: **pairing** them with other trainers, explaining what's in for them (e.g. certification, article on their work, able to travel to provinces to give training). If you choose to pair trainers, make sure it is done strategically. For example: motivated with a less motivated trainer, comfortable with a stressed trainer, etc.

5.1.5 Finding and recommendation 5: Having mixed target groups

Finding 5: Importance of having mixed target groups

This finding is about the importance of having **mixed target groups**, as relying on only one target group makes project implementation and continuity more risky. The following example illustrates it:

• The target group of our ToT on gender being only the GFPs of government institutions, there is a risk that they will not sustain the project due to lack of resources, for example. If we had also trained community leaders, for example, this risk would have been reduced because information can be disseminated through different channels

Therefore, having mixed target groups, such as GFPs, community leaders, etc., reduces the risk of information loss because information can be disseminated through different channels. Information can also reach end-users more directly, for example, communities through community leaders. It should be noted that this makes content development more challenging because the needs, in terms of level of knowledge, language, etc. are different. Therefore, in order to be able to meet the different needs, it is ideal to establish a baseline for each target group.

Based on this finding, we make the following recommendation:

Recommendation 5: Identify mixed target groups to ensure proper project implementation and continuity

Depending on the needs, identify various target groups. For example, GFPs can be seen as a target group for information dissemination within the Ministry and community leaders for the communities. This will help ensure that information reaches more directly end-users (e.g. Ministry staff, communities). However, it is important to define a **baseline** for **each target group to ensure that their respective needs**, in terms of knowledge, language, etc. are met. A way to respond to the different needs is by including different types of exercises within the ToT manual, according to different levels of knowledge, such as: level 1 (no knowledge), level 2 (some knowledge) and level 3 (good knowledge).

5.1.6 Finding and recommendation 6: Allocate sufficient <u>financial and operational</u> <u>resources</u>

Finding 6: Importance of sufficient resource allocation

This finding concerns the allocation of sufficient resources. Not only financial resources, but also operational, such as supervision and coaching, try-outs, feedback sessions, etc. This facilitates a proper implementation and adaptation on the longer-term. It also has an impact on the motivation of the trainers. If trainers know that the resources allocated are not sufficient to implement their training action plans, they will not take it seriously and this will impact the effectiveness of the project. Therefore, it is important to clearly communicate what type of resources are available to ensure a proper implementation.

Based on this finding, we make the following recommendation:

Recommendation 6: Allocate sufficient financial and operational resources

Determine the type of resources needed to ensure successful project implementation and foresee sufficient **financial and operational** (e.g. supervision and coaching, try-outs, feedback sessions, etc.) **resources**. For ToTs in particular, the following resources should be included: financial support for training sessions and travels, supervision and coaching, and monitoring and evaluation.

5.1.7 Finding and recommendation 7: Foster collaboration allows for greater results

Finding 7: Importance of collaboration between different institutions and projects

This finding refers to the importance of more collaboration in general, between institutions, but also between different Enabel projects to stimulate sharing of knowledge and good practices. Our project included different institutions, such as: Ministry of Mineral Resources and Energy (MIREME), Energy Regulatory Authority (ARENE), Energy Fund (FUNAE), Ministry of Gender (MGCAS), National Institute of Irrigation (INIR), Provincial and Infrastructure Services, etc. from different interventions (CBMIREME/ARENE and RERD2+). This collaboration has shown positive results, as illustrated with the following example:

 During our ToT on gender, INIR and FUNAE institutions, part of the RERD2+ project, have benefited from our ToT project, by participating in the training sessions, developing and implementing their own training action plan within their institutions, under the supervision of the JE. As a result of this collaboration, they have gained technical knowledge on gender and developed pedagogical skills

Therefore, inter-institutional collaboration can have a greater impact on project results, contribute to the exchange of good practices and avoid duplication of efforts.

This is also the case of collaboration between Enabel projects globally. During our project, an attempt was made to disseminate the ToT manual on gender in other Enabel projects. Contacts were therefore made with the Education team at Enabel headquarters and the Enabel team in DRC, which also works on gender inclusion. To ensure proper dissemination, we translated the manual

from Portuguese to English. Another idea was to promote the ToT manual on gender during the Education Days 2023, but unfortunately, due to financial and institutional constraints, our participation was not possible.

Based on this finding, we make the following recommendation:

Recommendation 7: Fostering collaboration between institutions and Enabel projects can lead to greater results

It is recommended to look at what already exists in other institutions, interventions, sectors, countries, projects, etc. to **avoid duplication**. Get in touch with the right persons to find out what has already been done and tried out, what have been the lessons learned, etc. to avoid starting from scratch if unnecessary. To facilitate exchange and access to information, Enabel should provide a platform with an updated list of interventions, projects, contacts, etc.

6 Summary of outstanding activities

Although already mentioned at the conclusion of each ToT section (sections 2,3 and 4), this section provides an overview of outstanding activities and recommendations on how to follow-up on them.

1. Outstanding activities of ToT on gender mainstreaming in the energy sector:

- a. Follow-up of training action plans of GFPs, through monitoring and evaluation. Supervision is needed to ensure a proper implementation of the action plans. This can done through the NJEs or a gender consultant
- b. Follow-up on gender-related activities as a response to the ToT manual, such as collection of gender data

2. Outstanding activities of ToT on energy data collection and management:

- a. Finalization and approval of ToT manual, supervised by the Department of Planning and Statistics of MIREME
- b. Dissemination of ToT manual through the NJEs

3. Outstanding activities of ToT on renewable energy technologies:

- a. Finalization and approval of ToT manual, supervised by DNE team
- b. Dissemination of ToT manual within the Ministry through DNE team
- Organization of a workshop with identified companies/ associations/ organization/ TVET institutions to promote the ToT manual in order for them to further promote it in communities
- d. Use of renewable energy promotion material to support the dissemination of this ToT manual, supported by the department of communication and image of MIRFMF

Annex 1 - Self-evaluation form

Auto-avaliação do/a formador(a)

Data:

Nome e apelido do/a formador(a):

Sujeito da formação:

1.	Preparei a sala de formação com antecedência	Fraco – Razoável – Bom – Excelente
Com	nentários:	
	Lancei bem a formação (em termos de recepção dos formandos, apresentação dos objectivos de formação, etc.)	Fraco – Razoável – Bom – Excelente
Com	nentários:	
	Fiz as apresentações dos formandos, usando uma técnica inclusiva para todos	Fraco – Razoável – Bom – Excelente
Com	nentários:	
	Identifiquei os objectivos/expectativas dos formandos	Fraco – Razoável – Bom – Excelente
Com	nentários:	
	Estabeleci as normas da formação em conjunto com os formandos e garanti que estas fossem respeitadas ao longo da formação	Fraco – Razoável – Bom – Excelente
Com	nentários:	
	Fiz alguma leitura adicional para o meu conforto pessoal na compreensão do tema	Fraco – Razoável – Bom – Excelente
Com	nentários:	
	Minha capacidade e clareza na transmissão de conhecimentos (exemplos: dar exemplos, saber responder às perguntas dos formandos, etc.)	Fraco – Razoável – Bom – Excelente
Com	nentários:	
	Consideração do nível de energia dos formandos para estruturar o conteúdo da formação (exemplos: uso de dinâmicas após o intervalo, etc.)	Fraco – Razoável – Bom – Excelente
Com	nentários:	
Ц		

9. Usei uma metodologia activa (exemplos: exercícios práticos, discussões em plenária, simulações de papéis, etc.)	Fraco – Razoável – Bom – Excelente
Comentários:	
10. Tinha uma boa postura (em termos de voz, gestos, uso de espaço, etc.)	Fraco – Razoável – Bom – Excelente
Comentários:	
11. Minha interacção com os formandos (em termos de gestão de grupo, escuta, feedback, etc.)	Fraco – Razoável – Bom – Excelente
Comentários:	
12. Gestão de situações imprevistas (tais como: não ser capaz de responder a uma pergunta)	Fraco – Razoável – Bom – Excelente
Comentários:	
13. Encerrei bem a sessão de formação (em termos de resumo dos pontos-chave, etc.)	Fraco – Razoável – Bom – Excelente
Comentários:	
14. Fiz uma avaliação antes e após a formação	Fraco – Razoável – Bom – Excelente
Comentários:	
15. Gestão adequada do tempo	Fraco – Razoável – Bom – Excelente
Comentários:	
16. Boa preparação dos aspectos práticos da formação (tais como: lista de participantes, programa de formação, material, etc.)	Fraco – Razoável – Bom – Excelente
Comentários:	
Meus pontos fortes:	
Minhas fraquezas:	

N	Mudanças que pretendo fazer como resultado da formação: