



International Organization for Migration (IOM)
The UN Migration Agency

POST DESCRIPTION

1. POSITION INFORMATION	
Position title	Technical Specialist for Sustainability of Solar-Powered Water Supply Systems in Mozambique
Position grade	SBP Equivalent to P3
Duty station	Pemba with travel across the Cabo Delgado Province
Position number	
Job family	WASH
Organizational unit	IOM Mozambique – WASH Unit
Is this a Regional, HQ, MAC, PAC, Liaison Office or Country Office based position?	Mozambique
Position rated on	
Reports directly to	WASH Programme Manager
Number of Direct Reports	
2. ORGANIZATIONAL CONTEXT AND SCOPE	
Access to sustainable clean water is a critical challenge in Mozambique. Numerous solar-powered water systems (SPWS) have failed prematurely due to a lack of local technical capacity, inaccessibility of spare parts, climate vulnerabilities (cyclones), and weak maintenance structures. IOM Mozambique lacks in-house technical expertise at this level to conduct a comprehensive system assessment, develop standardized technical solutions, and build the capacity of government partners to ensure the long-term functionality and climate resilience of these critical systems. Therefore, Under the overall supervision of the Chief of Mission in Mozambique and the direct supervision of the WASH Programme Manager, the Technical Specialist will support the IOM Mozambique mission to address these gaps in solar powered system by leveraging the technical expertise of the RVO DRSS to strengthen the Solar Powered Water supply system in country, ensuring long-term functionality and community resilience	
3. RESPONSIBILITIES AND ACCOUNTABILITIES	
3.1. Comprehensive System Assessment	
• Conduct a thorough desk review of existing project documents, technical specifications. • Field visits to a representative sample of non-functional, partially functional, and fully functional solar water systems across Cabo Delgado Province to conduct physical and technical audits. • Identify and document common technical failure points (e.g., pump burn-out, controller failure, panel damage, battery degradation, piping issues).	

- Assess the existing institutional, operational, and maintenance frameworks, including the capacity of local government, private sector, and community-based structures.

3.2. Integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation

- Analyze the impact of specific climate hazards (e.g., cyclones, flooding, extreme heat, sandstorms) on system components and functionality.
- Develop a risk assessment matrix for Solar powered water supply system in the Mozambican context.
- Propose technical and operational mitigation measures to enhance climate resilience (e.g., cyclone-proof mounting structures, submersible pump design considerations, flood-proof fencing and control panels).

3.3. Development of Standardized Technical Catalogue and Design Template

Based on the assessment findings, develop a **"Standard Technical Catalogue and Design Template for Solar-Powered Water Systems in Mozambique."**The catalogue should include:

- Standardized technical specifications for robust and context-appropriate components (solar panels, pumps, controllers, tanks).
- Pre-designed templates for different scenarios (e.g., population size, water depth, climate zone).
- A recommended list of spare parts to be kept at local, district, and provincial levels.
- Guidelines for cyclone-resilient and flood-resilient construction and installation.
- Basic troubleshooting guides and a recommended schedule for preventive maintenance.

3.4. Validation and Capacity Building

- Present initial findings and draft documents to IOM and key stakeholders for feedback.
- Conduct a final validation workshop to present the comprehensive assessment report and the draft technical catalogue.
- Facilitate a hands-on technical training session for a core group of national technicians (e.g., from government or partner NGOs) on the operation, maintenance, and repair of Solar Powered system, using the new catalogue as a key resource.

4. Required Qualifications and Experience

EDUCATION

Advanced university degree in Engineering (Civil, Mechanical, Electrical, Renewable Energy, or a related field) from an accredited academic institution with at least five years of relevant professional experience.	
EXPERIENCE	
• Minimum of 5-7 years of proven experience in the design, installation, and maintenance of solar-powered water pumping systems. • Demonstrated experience in conducting technical assessments and developing technical guidelines or standards. • Previous experience working in developing contexts, preferably experience in Mozambique or similar post-cyclone environments is a strong asset. • Strong understanding of integrating DRR and climate change adaptation into infrastructure projects. • Experience with participatory approaches, stakeholder engagement, and capacity building	
SKILLS	
• Excellent analytical, reporting, and presentation skills. • Strong facilitation and training skills, with the ability to convey complex technical concepts to non-experts. • Ability to work independently in difficult conditions and to engage with government officials and communities effectively • Strong understanding of sustainable energy technologies and productive use of energy concepts. • Excellent project design, planning, and M&E skills. • Strong interpersonal and communication skills, with the ability to engage diverse stakeholders.	
5. LANGUAGES	
Required (<i>specify the required knowledge</i>)	Desirable
Fluency in English (oral and written).	Working knowledge of Portuguese is a significant advantage.
6. COMPETENCIES¹	
The incumbent is expected to demonstrate the following values and competencies:	
Values	

¹ Competencies and respective levels should be drawn from the Competency Framework of the Organization.

- Inclusion and respect for diversity: respects and promotes individual and cultural differences; encourages diversity and inclusion wherever possible.
- Integrity and transparency: maintains high ethical standards and acts in a manner consistent with organizational principles/rules and standards of conduct.
- Professionalism: demonstrates ability to work in a composed, competent and committed manner and exercises careful judgment in meeting day-to-day challenges.

Core Competencies – behavioural indicators level 2

- Teamwork: develops and promotes effective collaboration within and across units to achieve shared goals and optimize results.
- Delivering results: produces and delivers quality results in a service-oriented and timely manner; is action oriented and committed to achieving agreed outcomes.
- Managing and sharing knowledge: continuously seeks to learn, share knowledge and innovate.
- Accountability: takes ownership for achieving the Organization's priorities and assumes responsibility for own action and delegated work.
- Communication: encourages and contributes to clear and open communication; explains complex matters in an informative, inspiring and motivational way.
- Managerial Competencies – behavioural indicators level 2
- Leadership: provides a clear sense of direction, leads by example and demonstrates the ability to carry out the organization's vision; assists others to realize and develop their potential.
- Empowering others & building trust: creates an atmosphere of trust and an enabling environment where staff can contribute their best and develop their potential.
- Strategic thinking and vision: works strategically to realize the Organization's goals and communicates a clear strategic direction.

SIGNATURES:

1ST LEVEL SUPERVISOR

DATE

2ND LEVEL SUPERVISOR

DATE