



Title of Capacity Development Workshop:		Solar powered water supply: Tips and tools for designing and supporting long-lasting service
Contact details		
Name of proposing organization/s		RWSN, Water Mission, International Organization for Migration (IOM), Oxfam
Practical requirements		
Timing		Full day, Monday
Minimum/ Maximum number of participants		Minimum 10, able to accommodate maximum based on room capacity
Facilities preferred:		Café style seating with space for “show and tell” with equipment and for participants to move around freely during group discussion (strongly preferred). An open area of approximately 3m x 1m would be sufficient for displaying equipment. A projector will be needed. Morning and afternoon coffee/tea break is preferred.
Staff details		
Names, qualifications and brief description of experience of staff delivering the workshop.	<p>The delivery and content of the workshop is endorsed by the Rural Water Supply Network (RWSN) and falls within the planned activities of the network’s Sustainable Groundwater Development theme. The workshop will be facilitated by Doug Lawson (Water Mission), Alberto Llario (IOM), and Asenath Ndegwa (Oxfam). Support for programme development will be given by Kerstin Danert (Skat Foundation/RWSN) and Emily Bamford (UNICEF USA).</p> <p>Doug is licensed in the US as a professional engineer with 18 years of civil engineering experience. He has worked with Water Mission since 2013, and is currently the Regional Director for Water Mission Kenya and Malawi programmes. Water Mission has over 11 years of experience with solar pumping systems and has installed over 1,100 solar pumps worldwide.</p> <p>Alberto is a hydrogeologist and public health professional with 17 years of experience in the international development and humanitarian WASH sector, having worked for IOM, UNHCR, Oxfam, and Action Against Hunger.</p> <p>Asenath is a civil engineer with 12 years of experience with solar water pumping systems in private and civil service sectors. Having worked for Davis & Shirliff for more than a decade, she recently moved to Oxfam as the regional solar pumping coordinator for Horn, East, and Central Africa.</p> <p>As co-leaders of the Global Solar and Water Initiative (GSWI) funded by the European Commission Humanitarian Aid Office (ECHO), Alberto and Asenath support and promote the use of solar energy in WASH programmes. In May 2018, the GSWI will be publishing a set of practical tools which will equip WASH practitioners to design and support solar powered water supply systems.</p>	
Course details		

Aims:	The potential for solar power to increase quantity, quality, accessibility, and reliability of water for rural households has been recognised for over 40 years. Most recently, advancements in solar technologies and development of policies promoting high service levels have led to growing global interest. Although evidence of the benefits is increasing, widespread knowledge of best practices, standardized methodologies and tools remains limited. This workshop aims to address this gap by sharing practical tips based on the collective experience of the Rural Water Supply Network’s member organisations and by demonstrating the tools that are available for designing and supporting solar powered water supply systems.
Intended audience:	The workshop will be relevant to practitioners, policy makers and academics who are considering or are already supporting solar powered water supply systems in their programme areas. No level of education or prior knowledge of solar pumping systems will be required for participation. However, some experience with rural water supplies in less-developed countries is recommended for reference.
Intended Learning Outcomes/Objectives:	Participants can expect to gain: <ol style="list-style-type: none"> 1. Knowledge of the common, current uses of solar powered water supply systems within rural water development (focus will be given to current applications in East Africa) 2. Awareness of the common pitfalls in technical design, procurement, operation and maintenance, and governance of solar powered water supply systems, as well as tips on how to avoid them 3. An introductory level of understanding of current available tools used to design and support technical, financial, and institutional aspects of solar powered water supply systems
Format and Content of Workshop	<p>The full-day workshop will utilize an assortment of instruction methods to accommodate a variety of learning styles. The morning and afternoon sessions will be structured as follows:</p> <p><u>AM session (two 90-minute blocks w/ coffee break)</u></p> <ul style="list-style-type: none"> • Presentation: Introduction/overview (15 min) • Interactive presentation: Pitfalls and tips (part 1) (45 min) <ul style="list-style-type: none"> ○ Technical (configurations, sizing, siting, etc.) ○ Procurement (quality equipment, counterfeits, etc.) • Coffee break (30 min) • Interactive presentation: Pitfalls and tips (part 2) (30 min) <ul style="list-style-type: none"> ○ O&M (technical, management, financial) ○ Governance (groundwater regulation, long-term support, etc.) • Presentation/demonstration: GSWI toolkit (part 1) (1 hr) <p><u>PM session (two 90-minute blocks w/ coffee break)</u></p> <ul style="list-style-type: none"> • Presentation/demonstration: GSWI toolkit (part 2) (1 hr) • Facilitated small group discussion: Reflections & key questions (30 min) • Coffee break (30 min) • Open Q&A and discussion synthesis (1 hr) <p>Sample authentic and counterfeit pumps and solar modules will be available for examination and handling.</p>
Materials to be circulated in advance or after the workshop.	An overview of the workshop’s purpose, anticipated outcomes and format, along with an overview of the GSWI toolkit, will be circulated via RWSN DGroups and other relevant channels in advance. Participants will be provided with toolkit files, presentation materials, and a written synthesis of discussion points after the workshop.



<p>Means of assessment and feedback to students:</p>	<p>Participants can expect to be able to:</p> <ol style="list-style-type: none"> 1. Articulate the common scenarios where solar water pumping systems are currently used in a successful, sustainable manner 2. Describe some of the common pitfalls in technical design, procurement, operation and maintenance, and governance of solar powered water supply systems and tips on how to avoid them 3. Access tools that exist for designing and supporting technical, financial, and institutional aspects of solar powered water supply systems and have a base understanding of how to use them
<p>Mechanism and means of course evaluation</p>	<p>Course participants will be asked to complete a brief (~5min) online survey (via SurveyMonkey or similar platform). The survey will be sent via email to all participants after the conclusion of the workshop.</p>