 

**Farmer to Farmer**

**Volunteer Assignment Scope of Work**

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| **Summary Information** | | |
| **Assignment Code** | |  |
| Country | Sierra Leone | |
| Country Project | Feed the Future Sierra Leone Entrepreneurial Agriculture for Improved Nutrition (EAIN) Project | |
| Host Organization | WARC Group | |
| Assignment Title | **Water Management specialist advisory** | |
| Assignment preferred dates | October 2017 | |
| Objectives of the assignment | The objective is to apply relevant and readily-available irrigation technology and machinery that is:   1. Applicable for both smallholder farms (project beneficiaries) and Satellite Farms (managed by WARC). The use of the verticality principle in water management will be essential in making best use of available resources. 2. Environmentally sustainable – avoiding soil degradation and promoting the sustainable use of water resources. | |
| Desired volunteer skill/expertise | - An academic degree in Water Resources Engineering  - Experience in drilling for establishing irrigation systems  - Experience in trialing pumping  - Experience in controlling the issue of verticality in irrigation water  - Experience in rice and maize crops, and knowledge of the crop cycle | |

1. **BACKGROUND**

WARC Group is a Sierra Leone based company founded in 2011 and is engaged in food production, nutrition improvement and advisory services. WARC Group consists of three entities: WARC Production, WARC Foundation and WARC Consulting. WARC Group is a member of the Clinton Global Initiative, a grantee of the Howard G. Buffett and Tony Blair Foundations, and Best Company in Agriculture in Sierra Leone in 2013. WARC Consulting leverages WARC Production's deep experience with commercial agricultural production in West Africa to provide business advisory services to ethical actors within the agricultural sector in Africa and beyond through services such as:

1. **Value Chain & Market Feasibility Studies**: WARC conducted studies on maize, rice, soybeans and palm oil value chains for clients such as FAO, CRS and GIZ.
2. **Management Consulting**: WARC consultants combine experience in the private and development sectors, with strong background in management, strategy and financial planning. WARC provides technical advisory services for NGOs and donors supporting SMEs in rural areas, with projects delivered in Africa and Latin America.
3. **Implementation**: WARC Consulting is currently providing technical assistance to agriculture and rural-based projects in Kenya and Sierra Leone. In Eastern Sierra Leone WARC is providing IFAD-funded technical assistance and training to 7,000 smallholder oil palm farmers.

WARC’s primary technical contributions to the EAIN project will consist of providing agronomic and functional skills training delivered weekly over the course of one year to participating farmers through WARC’s Farmer Connector field extension team. WARC will focus on supporting participating farm groups with comprehensive on-farm advisory services for rice and maize production which will focus both on GAPs for both crops throughout the cropping calendar - from pre-planting to harvest - as well as functional skill development in group agribusiness management. WARC will leverage the experience and expertise of its network of agronomists, both in Sierra Leone and in Argentina, to adapt and deliver technical support to Tonkolili farmers with the overarching goal of increasing on-farm rice and maize yields.

The USAID Farmer to Farmer Volunteer program is critical in upskilling WARC, the local partner in the consortium. The Volunteer will fill in the existing capacity gap of WARC, and WARC takes full responsibility in managing and hosting. The SOW of this Volunteer is in line with the project strategy, and will enable WARC to achieve set targets and deliverables, in accordance with the approved project Detailed Implementation Plan.

1. **ISSUE DESCRIPTION**

WARC requires the expertise of an irrigation engineer to help optimize water usage in Tonkolili District across rice and maize crops. Water is a critical component in rice and maize cultivation. The aim is to strategically design a water irrigation system that is most optimal for the the District, whilst taking into consideration specific variables (i.e. differing topographies and varying availability of resources, depending whether it is a smallholder or a larger scale farm, such as the EAIN Satellite Farm). Encompassing the above is enhancing the local knowledge and practical application of sustainable use of natural resources, that will continue beyond EAIN.

The scope of work is two-fold:

1. Develop a concept for water management and control that is suitable for smallholder farmers and that is easily applicable with existing resources (i.e. tools)
2. Design a water management system for EAIN Satellite Farms (a Satellite Farm will serve as a training farm for lead farmers under the WARC farmer connector training methodology)

1. **OBJECTIVES OF THE ASSIGNMENT**

The objective is to apply relevant and readily-available irrigation technology and machinery that is:

* Applicable for both smallholder farms (project beneficiaries) and Satellite Farms (managed by WARC). The use of the verticality principle in water management will be essential in making best use of available resources.
* Environmentally sustainable – avoiding soil degradation and promoting the sustainable use of water resources.

1. **HOST CONTRIBUTION**

The host (WARC) will oversee the project throughout the whole duration, and will provide a full-time staff member to support the Volunteer. In addition, WARC will provide technical advice, local context and logistical support, as and when necessary.

1. **ANTICIPATED RESULTS FROM THE ASSIGNMENT**

- A clearly outlined blueprint of an integrated water management system in Tonkolili District - a critical component in rice and maize production - that is relevant to other EAIN consortium partners and stakeholders outside of the project.

- Animproved and well-established water management system in Tonkolili District.

1. **DELIVERABLES**

- An irrigation study that assesses regional topography, river basins and valleys of Tonkolili District.

- A thorough mapping exercise and review of Tonkolili District’s existing water network installations (if any) on both small and large scales.

- A report outlining key activity and resources requires for proper water management in a Satellite Farm.

- A report outlining practical recommendations to smallholder farmers, that will be disseminated to farmer groups through WARC’s training methodology.

The abovementioned deliverables would serve as a valuable asset for other EAIN consortium partners.

1. **SCHEDULE OF VOLUNTEER ACTIVITIES IN SIERRA LEONE**

**Phase 1:**

- Desk-based and field research that assesses regional topography, river basins and valleys of Tonkolili District.

- On-the-ground mapping exercise and review of Tonkolili District’s existing water network installations (if any) on both small and large scales.

**Phase 2:**

- Conceptual design of proper water management systems within Satellite Farms and smallholder farms.

- Validation of recommendations by conducting semi-formal and formal interviews and focus groups with beneficiary farmers, Farmer Connectors and Farm Managers of Satellite Farms.

**Phase 3:**

- Iteration of proposed recommendations.

- Draft report write-up and submission to WARC for review and proof-check.

- Final report submission.

1. **DESIRABLE VOLUNTEERS SKILLS**

- An academic degree in Water Resources Engineering

- Experience in drilling for establishing irrigation systems

- Experience in trialing pumping

- Experience in controlling the issue of verticality in irrigation water

- Experience in rice and maize crops, and knowledge of the crop cycle

1. **ACCOMMODATION AND OTHER IN-COUNTRY LOGISTICS**

WARC takes full responsibility of the Volunteer during their stay in Sierra Leone. WARC will cover in-country logistics and accommodation. WARC will host the volunteer in WARC official residence in Makeni. WARC will provide transport and the required vehicle(s).

1. **RECOMMENDED ASSIGNMENT PREPARATIONS**

- Review material (topography and water availability maps of Tonkolili District) provided by WARC in advance of arrival.

- Any other preparations requested by WARC in advance of the assignment start date.

1. **KEY CONTACTS**

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| **Host Organization:** |  |
| **Emiliano Mroue**  CEO, WARC Group  emiliano.mroue@warcgroup.com  30 Battery Street, Freetown, Sierra Leone  Mobile: [+232 78978269](tel:+232%2078%20978269)  [www.](http://www./)[warcgroup.com](http://warcgroup.com/) | **Maria Olenina**  Head of Projects, WARC Group  [maria.olenina@warcgroup.com](mailto:maria.olenina@warcgroup.com)  30 Battery Street, Freetown, Sierra Leone  Mobile: [+232 79079235](tel:++232+79079235)  [www.](http://www./)[warcgroup.com](http://warcgroup.com/) |