NOTE THIS IS A DRAFT SOW

Remote Paired Volunteer Assignment: Ethiopian or East African volunteer to be paired with virtual supporting American volunteer

To express interest in this assignment, Ethiopian and East African volunteers please email haile.deressa@crs.org or lidia.retta@crs.org. Interested American volunteers for virtual support please email chi.olisemeka@crs.org.

CRS Farmer to Farmer Program
Volunteer Assignment Scope of Work

Summary Information	
Assignment code	**ET265**
Country	Ethiopia
Country Project	Crops
Host Organization	Kombolcah ATVET College
Assignment Title	• Training on applications of Geographic Information System (GIS) & Remote Sensing (RS) in agriculture and natural resource management
Assignment preferred dates	Flexible
Assignment objectives	Provide training on GIS and RS with focus on: • Concepts of GIS and remote sensing tools • Applications of GIS and RS in agriculture and natural resource management
Desired volunteer skill/expertise	• Academic background in Geographic Information System and/ Remote Sensing • Proficiency in applications of GIS and RS in natural resource management/agriculture
Type of Volunteer Assistance	Technology Transfer (T)
Type of Value Chain Activity	Information and Input Support Services (S)
PERSUAP Classification[1]	Type III

[1] USAID precisely classifies PERSUAP in four categories; **PERSUAP Type I** assignments directly related to pesticides recommendations, **Type II** as assignments with indirectly related with pesticides, **Type III** assignments related to curriculum review and designing, business plan development and strategies development and **Type IV** as assignments associated with other USAID projects and collaborators.

A. BACKGROUND

CRS Farmer-to-Farmer (F2F) is a five-year (2019-2023) USAID funded Program implemented with a primary goal of reducing hunger, malnutrition, and poverty across six countries: Benin, East Timor, Ethiopia, Nepal, Rwanda, and Uganda. The program aims at achieving this goal through advancing inclusive and sustainable agriculture-led growth aimed at generating sustainable, broad-based economic growth in the agricultural sector. The program's secondary goal is to increase US public understanding of international development issues and programs and share the knowledge back in the US. To achieve these goals, F2F program provides volunteer technical assistance to farmers and farmer groups (associations and cooperatives), private agribusinesses, agricultural education institutions in developing countries like Ethiopia to address technical needs identified by the host partners in selected agricultural value chains.

Farmer-to-Farmer volunteers are pooled from a broad range of US agricultural expertise, from private farmers with varied experiences, University professors, bankers/certified accountants, animal health and nutrition specialists, soil scientists, agronomists who support local host organizations. F2F program introduces innovations and develops local organizations capacity for more productive, profitable, sustainable, and equitable agricultural systems while providing an opportunity for people-to-people interactions within the agricultural sector. In Ethiopia, F2F program interventions focus on the livestock and crop value chains.

Agricultural production systems in Ethiopia are highly diverse due to variabilities in agroclimatic, topographic and edaphic conditions. The production systems are often vulnerable to environmental risks associated to climate change such as drought, flooding, and pest outbreaks. To support sustainable agriculture and natural resource management, the effects of these factors need to be analyzed and mapped on spatio-temporal basis. As a result, the advanced analytical and mapping techniques which utilize GIS and RS tools are becoming important. These tools have wide range of applications and useful in providing information to tackle challenges related to agriculture and land management. Especially in agriculture, these tools are helpful in monitoring crop growth and stress detection, conducting production census, soil moisture estimation, computation of evapo-transpiration, and application of site and crop specific management practices.

Kombolcha Agricultural Technical and Vocational Education and Training (ATVET) College is located in Kombolcha town of the Amhara regional state. It is one of the 25 ATVET colleges in the country and pursues three interrelated pillars: education/training, research, and community support services. Under the education program, the College trains students in plant sciences, animal sciences, irrigation, cooperative, and natural resource management. The College's curriculum ensures that 70% of class time is devoted to practicum and 30% to theoretical aspect. The College has a farm located at about 12 km from the main campus that is used for production and practical demonstration purposes. The College mostly receives students directly from grade 10 and trains them to be Development Agents (DAs). The College also receives experienced DAs that are upgrading their Diploma to degree level. Graduates from ATVET

colleges are expected to play significant roles in modernizing Ethiopia's agriculture; however, there are capacity and technical skill gaps at the College level that prevent them from providing the expected quality education and services to their students.

B. ISSUE DESCRIPTION

In recent years, GIS and remotely sensed data have been widely used for its application in various natural resource management and agricultural disciplines. Using GIS and RS data are important to understand agricultural production systems and environmental factors affecting production performances. Its application supports decision making and the implementation of key interventions including crop type identification, area and yield estimation, crop growth and health assessment, soil moisture estimation and water management etc.

With the increasing pressure on natural resources (soil, water, and forest) due to the growing human population, use of GIS and RS information can support management of these limited resources and their use in an effective and efficient manner. GIS is useful in analyzing and identifying factors contributing to degradation of natural resources, designing and implementation of management interventions and sustainable utilization. In general, detail understanding of different factors affecting agricultural production and natural resources, their inter-relations, helps to design and implement sound management decisions which can address needs of the current as well as future generations.

Kombolcha ATVET college requires technical support on applications of GIS and RS. Developing the skills of the college instructors on the use of these tools is very important for the college to support its mission of providing quality education, research, and community outreach. In this regard, the major problem the college currently faces is the shortage of technically qualified and experienced academic staff. Thus providing technical support to the college staff is important for building their capacity and introducing them to the new technology and enhancing their problem-solving skills. Such knowledge and skill transfer will be beneficial not only to the college staff but also to the surrounding farmers supported by the College.

C. OBJECTIVES OF THE ASSIGNMENT

The main objective of the assignment is to provide technical support on concepts and applications of GIS and RS tools in agriculture and natural resource management. This should be done in a way that allows trainees to apply the knowledge in practice to teach others and solve problems in the locality.

Specific objectives of the assignment include providing practical training on:

- Concepts of GIS and RS tools
- Georeferencing

- Area mapping
- Geo reference
- Concepts and tools of GIS
- Application of GIS and RS tools in designing and implementing agricultural and to natural resource management interventions

This assignment will directly contribute to capacity development of the college instructors and indirectly to other beneficiaries. The expected number of direct target beneficiaries of this training and technical assistance is 35 staff.

D. HOST CONTRIBUTION

The host has committed to mobilize staff of the college for the volunteer's training. The host will also avail key personnel to work closely with the volunteer in assisting her/him during training and practical sessions. CRS will cover lodging and other related costs of the volunteer against receipts.

E. ANTICIPATED RESULTS FROM THE ASSIGNMENT

It is anticipated that the training will lead to:

- 35 staffs of the college gain knowledge and skills on GIS and RS tools
- Access to GIS reference materials for the host staff created
- Linkage created between the volunteers and host institution
- Practical demonstrations conducted on use of GIS at field /real world/problem solving situation

F. DELIVERABLES

The major deliverables of this assignment include, but not limited to:

- Training lists with people trained and subject areas as per the training reporting formats
- Volunteer end of assignment report with recommendations to the host organization action plan and recommendations to CRS
- Conduct a final debriefing (PowerPoint presentation) with the host organization (plus key stakeholders) and CRS/USAID
- Conduct in country outreach events in Ethiopia using social media (for local volunteers)
- Conduct outreach activities about the assignment in USA (US volunteer) using appropriate medias (print, social etc.)

G. SCHEDULE OF VOLUNTEER ACTIVITIES IN ETHIOPIA

Day	Activity
Day 1	• - Receive security and general orientation • - Travel to assignment place (Kombolcha) with CRS staff and meet the host staff
Day 2	• Discuss and clarify SOW, anticipated outcomes, and work plan • General orientation with the host, first-hand briefing on the main objectives and modality of the assignment and adjustment of the agenda for the coming days (work planning session)
Day 3	• Conduct further assessment of skills and knowledge gaps • Develop 10 days (2 weeks training) curriculum covering key knowledge and skills gaps
Day 4-14	• Carry out the assignment and provide orientation to the host staff
Day 15	• Briefing / exit meeting with the host in the presence of CRS staff
Day 16	• Facilitate in country/virtual debriefing with CRS staff and/or USAID Mission • Finalize reimbursement of expenditures and liquidations (if any) with finance as required • Submit volunteer reports, training attendance sheet, assignment report, PPT presentation and any reference materials to CRS F2F team • Depart for his/her place

H. DESIRABLE VOLUNTEERS SKILLS

The volunteer needs to have the following skills, qualifications, and competencies:

- Academic background in Geographical Information System and / Remote Sensing
- Proficiency in application of GIS and RS in agriculture and natural resource management
- Experience and skills in adult training methodologies
- Strong communication and interpersonal skills
- Willingness and flexibility to train and technically assist the staff whenever required
- Respect for the cultural and religious norms of the local community

I. ACCOMMODATION AND ANOTHER IN-COUNTRY LOGISTICS

- The volunteer will stay in a hotel near to the assignment place booked and confirmed before the volunteer the assignment star date. The hotel will have rooms that include services such as breakfast and wireless internet etc.
- CRS will provide a vehicle and accompany the volunteer to the place of assignment.
- CRS Ethiopia will arrange hotel accommodations and cover the lodging bills against receipts.
- CRS HQ will provide the volunteer with a per-diem advance to cater meals and incidentals.

- CRS Ethiopia will also reimburse the volunteer with laundry costs against receipts.

J. RECOMMENDED ASSIGNMENT PREPARATIONS

- Although CRS F2F has developed such hinting SOW, the volunteer can fine-tune through her/his professional qualifications to successfully carry out this assignment.
- Prior to the assignment, the volunteer is advised to prepare necessary training and demonstration aids and written handouts. Softcopies of the handouts and any other paper materials can be printed for immediate use at the CRS office in Addis Ababa on request by the volunteer.
- If the volunteer requires simple training aids like flip charts, markers, or tape s/he should make the request and collect from the CRS office in Addis Ababa prior to the assignment.
- Translation of handouts to the local language can be done in the locality of the assignment, if required.
- Depending on the meeting places and availability of electric power and LCD projector, the volunteer may use a laptop and projector for power point presentations

K. REMOTE/LOCAL VOLUNTEER ROLES AND RESPONSIBILITIES

Both volunteers participate in a call to discuss objectives and collaboration approach at the start of the assignment. Collaboration platforms vary depending on the assignment and connectivity. The most frequently used platforms are MS Teams and WhatsApp. The volunteers are highly encouraged to visit CRS' F2F Digital Resource Library, and search for resources that they could use or customize for training. Upon completion of your assignment, volunteers are requested to send any resources they would like to contribute to the library (whether created or found) to farmertofarmer@crs.org.

The local volunteer is responsible for assignment design, preparation, training, developing assignment reports, conducting action planning with hosts and outreach in country, and achieving the assignment objectives. The local volunteer works directly with the host with assistance/input from the US volunteer. Assignments usually last up to 2 weeks; Sometimes extending beyond two weeks due to pending follow up visits, emails etc. Local Volunteers are asked to track assignment hours per day, to stay under 112 hours (14 days x 8 hrs).

Virtual support from a paired US volunteer helps provide supplementary training resources, fill in the gaps for technical areas, and share creative ideas and solutions. Two specific responsibilities are to: (i) complete the outreach component of the assignment and (ii) support the in-country volunteer

as needed. US Volunteers typically put in 4-8 hours per week, depending on the nature of the assignment and collaboration.

L. KEY CONTACTS

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