**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**

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| **Summary Information** |
| **Assignment code** | **ET214** |
| Country | Ethiopia |
| Country Project | Crops |
| Host Organization  | Livestock country Project |
| Assignment Title | Climate Modeling |
| Assignment preferred dates | November, 2021 |
| Assignment objectives | * Provide training to university instructors and students on Climate Modeling
* Demonstration on Climate modeling
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| Desired volunteer skill/expertise | * Advanced knowledge and experience on climate modeling and simulation
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| Type of Volunteer Assistance | Technology Transfer (T) |
| Type of Value Chain Activity | On Farm production (F) |
| PERSUAP Classification[[1]](#footnote-1) | Type II  |

1. **BACKGROUND**

CRS Farmer-to-Farmer program (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 and 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 assistances to farmers and farmer groups (associations and cooperatives), private agribusinesses and agricultural education institutions to address key technical and institutional problems identified by the hosts in selected agricultural value chains. F2F volunteers are pooled from a broad range of US agricultural expertise including private farmers, University professors, bankers/certified accountants, animal health and nutrition specialists, soil scientists and agronomists who can provide technical assistances to the local host organizations. The program introduces new innovations and skills to develop local organizations’ capacity for more productive, profitable, sustainable, and equitable agricultural systems while providing an opportunity for people-to-people exchange within the agricultural sector.

Weather and climate have a profound influence on life on Earth because they are part of the daily experience of human beings and thus a crucial factor in agricultural food production. Scientists often use models to represent and test ideas and processes. Climate models used to accurately represent the current climate and the interactions between Earth’s land, water and atmospheric systems and to understand what might happen with future climates.

Models are fundamental tools for studying the potential impacts of climate change, including changes in temperature, precipitation, and sea level. The climate models project possible future climate shifts under the conditions of the specific scenarios. These models are run multiple times using various scenarios of future conditions, such as population levels and anticipated emissions of carbon dioxide (CO2) or other greenhouse gases.

Climate change is a natural phenomenon affecting agriculture, natural resources, and food security. It is the main determinant of agricultural productivity; influencing crop and livestock production, hydrologic balances, input supplies, natural resources and other components of agricultural systems; with severe impacts in developing countries as a result of low adaptive capacity. It affects crop growth and yield, water availability, and productivity, soil-water balance either directly or indirectly. Climate change is a major challenge, particularly for Ethiopia’s rural populations who depend on rainfall for subsistence farming and are therefore more vulnerable to climate-related risks.

Fitche is situated in highland with latitude and longitude of 9°48′N 38°44′E and an elevation between 2,738 and 2,782 metres above sea level. Due to this elevation, the climate tends to be more temperate. SlU is situated in the town of Fitche which is located about 114KM from the capital Addis Ababa in the north (Addis Ababa to Bahir Dar road). The university is a new and started its operation in 2017 by the Ethiopian government. It has 5 colleges with 30 undergraduate programs. One of the largest colleges in the university is the College of Agriculture and Natural Resource. This college has seven programs or departments; Horticulture, Plant science, Animal science, Agricultural Economics, Natural resource management, Water resource and irrigation management and Rural development and agricultural extension.

1. **ISSUE DESCRIPTION**

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has been widely applied and been recognized as effective and

powerful tool in detecting land cover and land use change [1].

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health of crop, extent of infestation, potential yield and soil

conditions. It applied to explore agricultural applications such as

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soil moisture estimation, yield estimation, agriculture water

management, agro meteorological etc

Ethiopia is heavily dependent on rain-fed agriculture, and its geographical location and topography in combination with low adaptive capacity entail a high vulnerability to adverse impacts of climate change. Regional projections of climate models do not only predict a substantial rise in mean temperatures over the twenty-first century but also an increase in rainfall variability with a rising frequency of both extreme flooding and droughts due to global warming. It is important to highlight the major environmental problems in relation to climate change in Ethiopia. Degradation of the natural resource base is one of the most serious problems in the country, and climate change is expected to exacerbate the problem which will have profound impact on crop yields and on the livelihoods of rural communities.

Climate research information in Ethiopia is limited, and in most cases lacking at local level. Studies on climate change are required to estimate impacts and vulnerabilities at local level, to identify adaptation options, and to inform national and sub-national climate policies and strategies. Understanding and predicting how the climate of Ethiopia will change over the next century is an issue of increasing importance. Climate models can be used to simply study the dynamics of the climate, they are also used to make projections. In fact, scientists are using climate models to predict global temperature increases in the next few decades due to greenhouse gases.

Though Salale University had initiated several trainings courses on climate modeling to equip young professionals, it was not enough since the University is new and most of the staffs are in experienced and have skill/knowledge gap on climate modeling. Because of this Salale University requested CRS through F2F program volunteer expert’s assistance for its academic staff and students.

1. **OBJECTIVES OF THE ASSIGNMENT**

The main objective of this assignment is to give climate modeling training to instructors and students of the College of Agriculture and Natural Resource. In addition, to government experts from zonal and G/Jarso district office. In collaboration with the Salale University, college of Agriculture and natural resource, the volunteer will provide technical assistance through the training of the trainer (TtT) approach. The major topics going to be covered include:

* Introduction to atmospheric radiation
* Basic concept of Climate Modeling
* Climate change modeling
* How to model the impact of climate change on different sectors like Agriculture, natural ecosystem/ Natural Resource and etc.
* How to design adaptation and Mitigation strategies for different sectors.

In addition, to these suggested topics, the F2F volunteer specialist will be given an opportunity to initially assess the knowledge and skill gaps of the Salale University and comprehensively develop training topics for fruitful intervention. This will be done during the early stages of the assignment. The target beneficiaries or audience of this training and technical assistance will be 30 people.

1. **HOST CONTRIBUTION**

The host, Salale University will select staff, instructors and students to attend trainings. The host will also avail key personnel to work closely with the volunteer in assisting her/him during training and practical demonstration sessions. CRS will cover lodging and other related costs of the volunteer against receipts. In coordination with the host and the volunteer, CRS will also arrange and pay for transport services for daily use to and from the office.

1. **ANTICIPATED RESULTS FROM THE ASSIGNMENT**

It is anticipated that this volunteer’s technical assistance will contribute to improved knowledge and skills of the host (Salale University), resulting in meeting its goal of technically assisting the instructors of the University to further understand the basic concepts and techniques of Climate modeling. The volunteer will contribute to the following

* Staffs and instructors with improved knowledge and skill on Climate modeling.
* Future use of models as aid to research, understanding, simulation and prediction as well as integration between disciplines
* Curriculum/training materials for future crop modeling reference
* Understand the processes of atmosphere–soil–plant system using mathematical tools
1. **DELIVERABLES**

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

* 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, radio, TV, group presentation, social etc.)
1. **SCHEDULE OF VOLUNTEER ACTIVITIES IN ETHIOPIA**

| **Day** | **Activity** |
| --- | --- |
| Day 1 | * Receive security and general orientation
* Travel to the host Fiche with CRS staff and meet the host staffs
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| 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)
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| Day 3 | * Conduct further assessment on the assignment
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| Day 4-14 | * Carry out the assignment and provide orientation to the host staff
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| Day 15 | * Briefing / exit meeting with the host in the presence of CRS staff
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| 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
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1. **DESIRABLE VOLUNTEERS SKILLS**

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

* Advanced and extensive practical knowledge and experience on climate modeling.
* Experience in crop modeling curriculum development and developing training materials.
* Experience in adult training and technical assistance
* Good interpersonal and communication skills including analytical skills
* Respect the cultural and religious norms of the rural people.
1. **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.
1. **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
1. **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](https://f2flibrary.crs.org/Presto/home/home.aspx?_ga=2.141716784.32617302.1616765386-2022794543.1567520784), 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.

1. **KEY CONTACTS**

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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. [↑](#footnote-ref-1)