

2014



CLIMATE CHANGE ADAPTATION PLAN

June 28, 2014

Kirk Longstein
Sustainability Programs Manager

James Pimpedly
Chief, Administrative Services
Senior Sustainability Officer

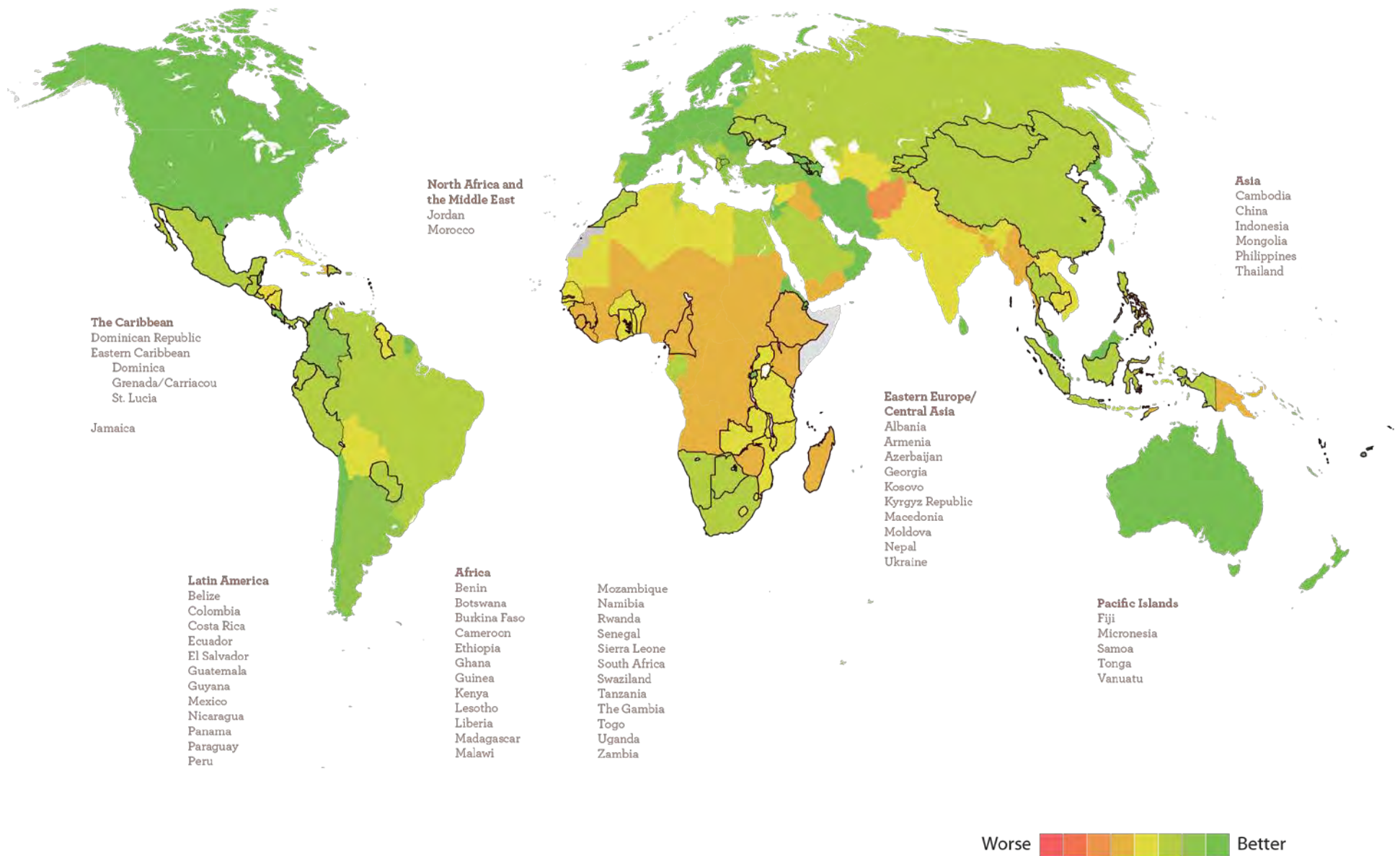


The Peace Corps

Climate Change Adaptation Plan | 2014

Paul D. Coverdell Peace Corps Headquarters
1111 20th Street NW, Washington, DC 20526

This report is available at www.peacecorps.gov/docs.
Send comments or questions to greenteam@peacecorps.gov
or to the Peace Corps mailing address above.



The ND-GAIN Index, a project of the University of Notre Dame Global Adaptation Index (ND-GAIN), summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. It represents one tool available to Peace Corps to better prioritize investments for a more efficient response to the immediate global challenges ahead. Highlighted in the map above are Peace Corps host countries and the associated Global Adaptation Index ([ND-GAIN](#)).

Peace Corps Climate Change Adaptation Plan

- EXECUTIVE SUMMARY 1
- I. PEACE CORPS CLIMATE CHANGE ADAPTATION POLICY FRAMEWORK..... 3
- II. OVERVIEW OF PEACE CORPS MISSION, POLICIES, PROGRAMS, AND OPERATIONS 3
 - A. Mission..... 3
 - B. Policy 4
 - C. Programs 5
 - D. Operations 6
- III. PEACE CORPS VULNERABILITY ASSESSMENT AND CURRENT ADAPTATION ACTIONS 7
 - A. Vulnerability Assessment Framework 7
 - B. Peace Corps Mission Vulnerability Assessment 8
 - C. Peace Corps Operations Vulnerability Assessment 11
 - D. Peace Corps Policy Vulnerability Assessment 13
 - E. Peace Corps Program Vulnerability Assessment 14
 - F. Peace Corps Programs and Strategic Partnerships..... 19
- IV. NEXT STEPS TO ENHANCE PEACE CORPS CLIMATE CHANGE ADAPTATION CAPACITY 21
 - A. Mission, Policy, and Operations 21
 - B. Programs and Strategic Partnerships 22

EXECUTIVE SUMMARY

The White House Office of the Federal Environmental Executive and the Council on Environmental Quality have prioritized climate change engagement with the global community. Through the Global Climate Change Initiative, the United States is integrating climate change considerations into relevant foreign assistance by fostering low-carbon growth, promoting sustainable and resilient societies, and reducing emissions from deforestation and land degradation.

Peace Corps programs, particularly in the agriculture and environment sectors, are devoting more attention to mitigating the impacts of climate change. Climate adaptation and mitigation factors will increasingly factor into programming at the community level, as developing countries will bear a disproportionate share of climate-related disturbance. In doing so, the Peace Corps Office of Programming and Training is currently focusing on how Volunteer activities can both help communities adapt to a changing climate by providing services that help communities become more resilient to changing stresses as well as helping those communities find low-carbon alternatives. The Peace Corps is also determining how an unpredictable climate will affect its operations at present and in the future. For example, the Office of Programming and Training may be unable to operate in certain regions of a country where landslides are increasing and making access unpredictable, or where potable water is becoming scarce due to climate stresses that are reducing water supply. Conversely, the same factors may present opportunities for programs to find new niches that support communities in affected regions.

Peace Corps post operations located in island countries or low-lying coastal areas are particularly vulnerable to changes in the climate. For example, there is strong evidence from the Intergovernmental Panel on Climate Change and the U.S. Global Change Research Program that coastal lifelines, such as water supply and energy infrastructure and evacuation routes, are increasingly vulnerable to rising sea levels and storm surges, inland flooding, erosion, and other climate-related changes. With these anticipated changes, the Peace Corps' continuity of operations is at risk from the incremental changes expected by a changing climate. Furthermore, evidence from the University of Notre Dame Global Adaptation Index (ND-GAIN) summarizes vulnerability to climate change and other global challenges in combination with readiness to improve resilience in countries where the Peace Corps serves. This index indicates that a significant number of Peace Corps host countries are vulnerable to an increased frequency of high-intensity weather-related events.

The Peace Corps 2014 Climate Adaptation Plan intends to expand an organizational understanding of climate change and its impacts on administrative services and Volunteer programs. To evaluate impacts to mission, policies, programs, and operations, the key climate stressors identified for analysis include the following:

- Temperature change—both short and long-term changes
- Precipitation change—variations in the amount, intensity, and seasonality of rainfall, and changes in hydrologic regimes
- Sea level rise and storm surge—changes in frequency, intensity, and duration of storm surges, coastal inundation, saline intrusion, and erosion
- Extreme events—changing trends and patterns of hurricanes, floods, droughts, windstorms, wildfires, and landslides

Considering the climate change stressors listed above, Peace Corps offices across the agency have taken a deep look at mission objectives outlined in the strategic plan, internal policies overseen by the Senior Policy Committee, Volunteer programs, and management of post logistics and services. Through this consultative approach, the Peace Corps has a better understanding of vulnerabilities to climate change and tangible actions to adapt.



I. PEACE CORPS CLIMATE CHANGE ADAPTATION POLICY FRAMEWORK

To address the vulnerabilities and risks of climate change, the Peace Corps intends to adopt the following policy framework:

Policy Purpose

The Peace Corps aims to provide leadership in enhancing programs that build capacity and strengthen resilience among the most vulnerable countries where Volunteers serve. Policies, programs, and operations related to climate change are designed to help preserve the Peace Corps mission, enhance the resilience of climate-sensitive program sectors, reduce risks to the continuity of operations with implications for regional operations, and preserve the health of people and the planet.

Process

Consistent with the framework and principles pursuant of Executive Order 13514 and 13653, the agency will design, implement, monitor, and evaluate programs to prepare for and adapt to the impacts of climate change with meaningful input from offices across the agency. Peace Corps programs will incorporate the best available science and technology, prioritize the most-vulnerable communities and populations, and integrate adaptation into development plans and programs in a way that maximizes benefits, reduces risks, and increases ecosystem resilience. The Peace Corps works in collaboration with host country counterparts and partner organizations to achieve its goals. In the spirit of collaboration, the agency will focus on development and implementation of effective adaptation policies and programs and will promote the integration of adaptation considerations into programs and management initiatives in sectors that will be impacted by climate change, such as agriculture, and environment programs, in addition to safety and security of staff and Volunteers. The Peace Corps will work with other agencies, in particular U.S. Agency for International Development, and will leverage the technical expertise and/or financial resources of other agencies, including the U.S. Environmental Protection Agency and the U.S. Department of State.

The Peace Corps will also integrate adaptation considerations into its operations, including country post logistics and services. The agency will work to leverage existing resources and build systems to measure and monitor the Peace Corps' facilities abroad to conduct long-term planning and minimize operational disruptions caused by climate change. The Peace Corps will establish and maintain a dialogue with interagency partners in order to exchange information on operational challenges and solutions related to managing climate impact. The Peace Corps will also work domestically and abroad with communities of practice to further facilitate and promote exchanges on operational best practices in response to climate change.

II. OVERVIEW OF PEACE CORPS MISSION, POLICIES, PROGRAMS, AND OPERATIONS

A. Mission

The Peace Corps mission is to promote world peace and friendship through community-based development and intercultural exchange. The agency exemplifies the best of the American

spirit by making it possible for Americans to volunteer their time to advance development and build cross-cultural understanding around the world. Through this unique approach to development, the Peace Corps is making a difference in the overseas communities it serves, in the lives of its Volunteers, and back home in the United States. More than 215,000 Volunteers have served in 140 countries since 1961.

In supporting its mission, the Peace Corps Act (1961) articulates three core goals to advance a vision of world peace, sustainable development, and friendship:

1. To help the people of interested countries in meeting their need for trained men and women.
2. To help promote a better understanding of Americans on the part of the peoples served.
3. To help promote a better understanding of other peoples on the part of Americans.

These core goals remain at the heart of the Peace Corps mission, and are reiterated in three strategic goals that serve as the foundation of the Fiscal Year 2014–18 Strategic Plan:

1. Strategic Goal 1: Building Local Capacity
 - Advance local development by strengthening the capacity of local communities and individuals through the service of trained Volunteers
2. Strategic Goal 2: Sharing America with the World
 - Promote a better understanding of Americans through Volunteers who live and work within local communities
3. Strategic Goal 3: Bringing the World Back Home
 - Increase Americans' awareness and knowledge of other cultures and global issues through Volunteers who share their Peace Corps experiences and continue to serve upon their return

This report addresses how changing global climatic conditions could undermine the core mission of the Peace Corps: to catalyze sustainable development that enhances community-based, resilient livelihoods. Thus, Strategic Goal 1, which emphasizes the development goal of the agency, serves as the focus for discussion and planning of interventions within the agency that are needed to enhance the resilience and adaptive capacity of Peace Corps host communities in light of an increasingly precarious climatic future.

B. Policy

The Peace Corps Manual constitutes the authoritative policies governing the operations of the Peace Corps and the responsibilities and conduct of Volunteers and Peace Corps employees, i.e., direct hire employees and personal services contractors. Internal Peace Corps policies and procedures highlighted by the manual are coordinated by a Senior Policy Committee, which is responsible for (i) managing and coordinating the development of Peace Corps policies and procedures; (ii) making recommendations to the Director on new policies and revisions to

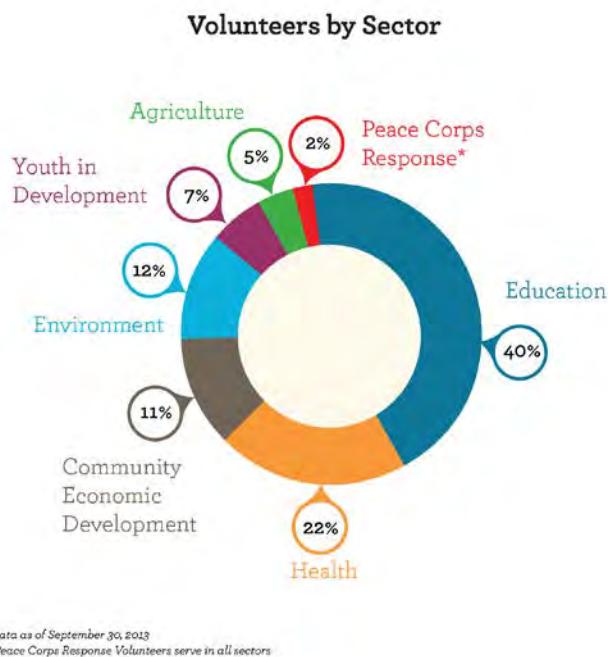
existing policies in the Peace Corps Manual; and (iii) approving the adoption of procedures to implement policies in the Peace Corps Manual.

At an agency level, the Peace Corps manages risks by utilizing the Department of Homeland Security (DHS) risk management model. Using the DHS model, internal manual section policies and procedural guidelines have been created to help the agency's safety and security office respond to threats, including climate-change-related stressors. Plans and strategies to mitigate, prepare, respond, and recover from the consequences of natural hazards are outlined in the agency's Emergency Action Plans, the Occupant Emergency Plans at headquarters and the regional recruitment offices, and the Continuity of Operations Plan. In 2013, the Peace Corps formed the Risk Management Working Group to enhance risk management integration and more effectively communicate risk potentials throughout the agency.

In addition to the Risk Management Working Group organized by the Peace Corps Office of Safety and Security, the acting Director approved revisions in 2013 to Manual Section 124 (Office of Management: Organization, Mission, and Functions) committing the agency to compliance with environmental and energy statutes, regulations, and executive orders.

C. Programs

At the end of fiscal year 2013, more than 7,000 Peace Corps Volunteers are working in 65 host countries in six core program sectors: Education, Health, Community and Economic Development, Environment, Youth in Development, and Agriculture. Volunteers use participatory, community-led approaches to empower host communities to identify, prioritize, and solve local problems. Activities focus on building local technical capacity in the six programmatic areas through a wide range of formal and informal methods of community mobilization, education, and hands-on learning. The goal of local capacity-building is to ensure that development efforts are sustained over time, ultimately contributing to more resilient, prosperous, and self-reliant communities.



Across the six sectors, two have a more direct relationship to the physical environment and the influences of climate than the other four. In 2013, 17 percent of all Volunteers undertook project activities in the Agriculture and Environment sectors, which are more directly dependent upon and vulnerable to the effects of climate change. Conversely, just over one-third of all Volunteers (40 percent) served in the Education sector, the largest sector program, as teachers, mentors, and trainers, carrying out classroom instruction and related educational activities that are less immediately affected by or vulnerable to climatic processes. Nonetheless, some Education Volunteers integrate basic principles of climate science, vocabulary, and

concepts into their lesson plans and educational curricula in working with local educators and administrators, contributing to building a knowledge base and enhancing learning on climate change.

Similar to the Education sector, Volunteers across all sectors carry out activities that support climate change mitigation and adaptation, and contribute to greater resilience of individuals and communities to withstand the increasing variability and unpredictability of climate events. Many of these activities, while not explicitly identified or categorized as climate-related, nonetheless contribute to attenuating the worst effects of climate stress. For example, Community Economic Development Volunteers have mobilized local groups to form community grain storage systems (cereal banks) and village savings and loan associations. These community structures serve as a social safety net, providing grain reserves and cash liquidity that can be drawn upon during periods of stress from an extreme climate event. Health Volunteers help improve communities' potable water supplies by assisting local groups to obtain funds to install wells, boreholes, water pumps, or other related infrastructure to help individuals improve access to clean drinking water, particularly during acute water shortages resulting from severe drought.

Efforts to support local community development are at risk as the increasing variability and uncertainty of climate conditions pose new challenges over time. Volunteers, who often work in very remote rural areas, and their local counterparts are at increasing risk of erratic weather patterns and unpredictable climate events. Changes in climate patterns may be imperceptible over short time spans (slow onset), such as the slow, progressive nature of sea level rise or the warming of earth and sea surface temperatures. Such changes pose less of an immediate danger to Peace Corps programs than rapid onset events, such as typhoons, storm surges, and severe flooding. Despite such immediate dangers, the Peace Corps is addressing both short- and long-term impacts and outcomes of climate change by adopting proactive measures across its programs that build the resilience of local communities now and well into the future. Failure to adopt forward-looking measures now will result in greater investments of capital and human resources in the future, and require more extreme measures to adapt to unforeseen consequences.

In addition to the six core program sectors, the Peace Corps supports special programs and partnership initiatives that also contribute toward building resilience in a climate change context. Among these, the largest are Peace Corps Response, Feed the Future, Energy and Climate Partnership of the Americas (ECPA), and Small Project Assistance (SPA).

D. Operations

The Peace Corps Office of Management Administrative Services handles post logistics support (overseas medical supplies, overseas vehicle fleet management), transportation (travel authorizations, personal property shipments, government travel card program), facility management (domestic building leases and maintenance, overseas building leases, U.S. vehicle fleet management, property management), mail and distribution, energy management, environmental sustainability, parking program, transit subsidy program, voting assistance program, warehouse operations, federal occupational health program, and the Occupational Safety and Health Administration program.

Agency Size and Scope	FY 2013
Total Number of Staff (U.S. Direct Hire and Personal Services Contractors)	2,947
Total Acres of Land Managed	0
Total Number of Buildings Owned	0
Total Number of Buildings Leased (GSA and Non-GSA Lease)	418
Total Building Gross Square Feet	2,018,287
Number of Locations in U.S.	8
Number of Locations Outside of U.S.	75
Total Number of Fleet Vehicles Owned	606
Total Number of Fleet Vehicles Leased	20

III. PEACE CORPS VULNERABILITY ASSESSMENT AND CURRENT ADAPTATION ACTIONS

A. Vulnerability Assessment Framework

Climate change poses unique challenges and risks to all facets of the Peace Corps, from the overall mission to specific policies and procedures, from program activities conducted by Volunteers in host communities to the safety and security of physical operations at headquarters in Washington, D.C., and across country posts worldwide.

This section outlines the vulnerabilities posed by a changing climate to the overall mission of the agency, along with policies, programs, and operations. The review evaluates the incidental and incremental impacts to mission, policies, and programs as they relate to climate stressors. This section further assesses the resources and assets of the agency that are at potential risk in five categories: 1) physical, 2) natural, 3) financial, 4) human, and 5) social.

Physical Assets

The operational infrastructure of the Peace Corps, such as buildings and offices, training sites, vehicle fleet, and sanitation and utilities, constitute a physical asset that is at risk to storm damage, high winds, extreme heat, flooding, and other climate stresses that arise suddenly. However, some climate conditions, such as the slow, progressive rise in global temperatures or sea level rise, may pose some risks at present, as well as into the future, depending on the location of Peace Corps facilities. For example, many small island states in the Pacific are contending with sea level rise today, and implementing policies to protect physical infrastructure as a result.

Other forms of assets apply primarily to Peace Corps field program activities and will be discussed in some detail in this section of the report. Volunteers contribute to building these assets in order to assure more robust livelihood outcomes, resilient ecosystem services and

functions, enhanced food security, improved health and nutritional status, and access to better education.

From a programming perspective, Volunteers in Health and Community Economic Development promote a range of activities and services that improve access to clean drinking water, better sanitation facilities, and improved post-harvest storage of crops. These physical resources are often highly prone to severe damage in rural areas during severe storms, high winds, and rapid flooding.

Natural Assets

Natural assets refer to land, soil, water, biodiversity, genetic resources and ecosystem services that are necessary for individuals to sustain themselves and their livelihood activities. Many Agriculture and Environment Volunteers contribute to building the natural resource base through their work in environmental conservation activities and adopting efficient management of soil and water resources in farming and related agro-ecological livelihoods.

Financial Assets

Financial assets include primary economic activities. Peace Corps Volunteers across most of the program sectors support activities that strengthen the economic status of households and enhance the availability of and access to food. Peace Corps operations also suffer a significant loss of financial assets when physical infrastructure is damaged or destroyed from an extreme climate event, in addition to the loss of livelihood among those employed and dependent on the normal functioning of such operations.

Human Assets

Volunteers in Health and Education are most directly involved in supporting activities that increase local and scientific knowledge through formal or informal methods of learning, as well as transmitted through family or community history. Peace Corps management and operations depends on the administrative support of Volunteer programs from personal services contractors and U.S. direct hire staff, which may become disrupted as a result of climate stressors.

Social Assets

Peace Corps Volunteers across most program sectors support initiatives that strengthen local community mobilization, such as a local farmers' association, a rotating credit group, or improved access to government services and regional or national nongovernmental organizations or similar civil society institutions.

B. Peace Corps Mission Vulnerability Assessment

Among the three core goals of the Peace Corps, goal one, "To help the people of interested countries in meeting their need for trained men and women," is the most directly related to the context of potential adverse effects of climate change. As noted in Section II, the FY 2014–18 Strategic Plan reflects the overall technical development goal of the agency in Strategic Goal 1: Building Local Capacity:

- Advance local development by strengthening the capacity of local communities and individuals through the service of trained Volunteers

Strategic Goal 1 is supported by a series of strategic objectives, several of which could be compromised as a result of climate change. The table below presents the strategic goals and strategic objectives from the FY 2014–18 Strategic Plan.

Relationship between Strategic Goals and Strategic Objectives

Strategic Objectives	Strategic Goal 1: Building Local Capacity	Strategic Goal 2: Sharing America with the World	Strategic Goal 3: Bringing the World Back Home
1. Volunteer Well-Being	X	X	X
2. Service Opportunity of Choice	X	X	X
3. Development Impact	X	X	
4. Cross-Cultural Understanding	X	X	X
5. Continuation of Service			X
6. Diversity and Inclusion	X	X	X
7. Site Development	X	X	
8. Train-Up	X	X	
9. High-Performing Learning Organization	X	X	X
10. Global Connectivity	X	X	X
11. Measurement for Results	X	X	X

Several strategic objectives have a more direct link to climate change, while others have little or very indirect correspondence to climate change effects. Objectives 1, 3, 7, 8, and 11 are most likely to be potentially undermined as a result of climate factors. The risks posed in achieving these strategic objectives follow:

Strategic Objective 1: Volunteer Well-Being

Enhance the safety, security, and health of Volunteers through rigorous prevention and response systems and high-quality medical and mental health services.

Volunteers achieve the overall development mission of the Peace Corps by residing in host communities that are often located in remote, rural areas where exposure to natural hazards such as storms, flooding, extreme heat, and drought conditions is not uncommon. As such events increase in intensity and magnitude under climate change scenarios, the well-being of Volunteers, along with their host communities, in terms of physical safety and security, is at increasing risk.

Several measures are being taken by the Peace Corps to assure the well-being of Volunteers, including the following:

- Periodic evaluation of individual experiences with health care and safety and security support
- Implementation of regionally approved safety and security standards for site selection and monitoring
- Establishment of a data management system to track critical safety and security recommendations by posts and headquarters offices

Thus, proactive measures to ensure the health and well-being of Volunteers are included in the Emergency Evacuation Plan. This plan is managed by country-specific safety and security coordinators and covers current and projected physical threats to individual safety and security that could result from any natural hazards, including those triggered by an extreme climate event such as typhoons, hurricanes, or other natural disasters.

Strategic Objective 3: Development Impact

Advance community-based development by strengthening the capacity of local individuals and communities, focusing on highly effective technical interventions, and leveraging strategic partnerships.

This strategic objective addresses the program activities implemented in local communities by Volunteers across the six program sectors. Current and planned activities that support adaptation to climate change are elaborated in the program sections of this report further below. These include a comprehensive set of actionable items that address project framework development, technical content, and pedagogical delivery of training materials and resources to Volunteers and their local counterparts, as well as new strategic partnerships that leverage additional financial and technical resources to broaden Volunteers' impact in strengthening local community development capacity.

Strategic Objective 7: Site Development

Establish an environment conducive to Volunteer success through an integrated approach to developing effective projects, preparing work sites, and successfully collaborating with local partners.

Appropriate site selection for placing Volunteers in rural communities is a critical element that shapes the potential success and impact that a Volunteer can have in facilitating local development activities. The agency implements post-specific site development criteria, policies, and procedures to assure the safety, security, and medical and mental health needs of a Volunteer. Potential threats resulting from natural disasters are taken into account in the site selection process. The history and frequency of landslides, high storm winds, flooding, and other climate-related disruptions are taken into account in the site selection process to assure that there is minimal risk to Volunteer safety, and that appropriate evacuation and emergency response measures are in place. An amplification of extreme climate events in the future, such as flooding, storm surges, extreme heat, drought, or similar phenomena, could result in the discontinuation of such sites, and reassignment of Volunteers to areas of lower climate risk in a host country.

Strategic Objective 8: Train-Up

Develop a highly effective Volunteer corps through a continuum of learning throughout service.

The Peace Corps is currently undergoing a major transformation of program strategy as a result of an extensive agency-wide assessment conducted as part of the agency's 50th anniversary. Recommendations for a new programmatic strategy and vision, termed Focus In/Train Up, called for a comprehensive overhaul in narrowing the scope of program activities, reducing and strengthening core competency pillars, and standardizing improved technical training materials for a new cadre of generalist Volunteers.

As part of the new programmatic focus on high-quality training materials, the agency is now mainstreaming and integrating a climate lens in the technical training of Volunteers. This is most evident in the agriculture and environment program sectors, and referred to as "climate-smart agriculture." The overall safety and security training of Volunteers increasingly addresses the risks posed by climate change to better prepare Volunteers in terms of safety protocol and preparedness planning for natural disaster events.

Strategic Objective 11: Measurement for Results

Advance the agency's ability to measure progress, improve performance, and demonstrate impact through integrated monitoring, reporting, and evaluation practices.

In response to recent executive orders, the Government Performance and Results Modernization Act of 2010, and directives from the Office of Management and Budget, the Peace Corps has significantly expanded its emphasis on the use of research and evaluation for evidence-based decision making, by instituting new monitoring, reporting, and evaluation (MRE) policies, procedures, and practices throughout all levels of the agency. Thus, new guidelines and systems, including technical training on MRE, are being implemented for all staff and Volunteers. This includes new monitoring indicators on climate change adaptation and mitigation for the Agriculture and Environment program sectors. These improvements in monitoring as they relate to climate change are addressed in more detail in the program sections of the report.

C. Peace Corps Operations Vulnerability Assessment

The impacts of climate change pose a need to address incidental and incremental impacts that Peace Corps' operations and administrative services will likely face in the future. The stressors due to climate change reviewed are temperature change, precipitation change, sea level rise, and extreme events which have potential impacts on country post's efficiency and ability to carry out procedures.

Temperature Change

Climate change has the potential to cause extreme temperature fluctuations. This poses a threat for the Peace Corps' buildings, vehicles, and communications equipment. Peace Corps-leased facilities may be at risk as the foundation shrinks and swells causing faults and cracks. In addition, overheating of vehicles and communications equipment may occur as temperatures reach extremes, resulting in blackouts and an inability to complete supply chain and transportation processes.

Precipitation Change

Climate change may increase or decrease the frequency and volume of precipitation events. These changes can threaten Peace Corps-leased facilities, water resources, supply chain processes, and communications infrastructure. The increased occurrence of heavy precipitation events may contribute to flooding due to oversaturated soils. This poses a threat to Peace Corps-leased facilities by degrading the building envelope quicker from prolonged exposure. Cracking, splitting, and warping of the foundation may take place, disrupting management and operations of Peace Corps programs.

Increased frequency of heavy precipitation events may cause sewer system overflows at Peace Corps posts where combined sewer systems are used. This may pose a threat to potable water sources accessible to Peace Corps staff.

Flooding due to increased occurrences of heavy precipitation may flood roadways, making travel and supply chain processes more demanding. In mountainous regions where the Peace Corps operates, landslides may occur due to oversaturated and denuded soils, due to heavy deforestation and vegetative cover loss. This exposure threatens the safety and security of Peace Corps staff and Volunteers due to increased sediment on roadways that may inhibit transportation and supply chain deliveries.

Wireless communication infrastructure could be subject to slow connections and/or blackouts due to increased precipitation, extreme heat events and humidity that results.

Climate change may also decrease the occurrence of precipitation events contributing to extreme droughts, which will stress water supplies resulting in decreased availability of potable water resources.

Sea Level Rise

Sea level rise from climate change may pose a significant threat to coastal, low-lying Peace Corps posts in terms of availability of drinking water and flooding. Increased sea level may cause salt water intrusion of surface and ground waters, polluting drinking water resources. Peace Corps posts in island states and located in low-lying coastal areas are at a high risk from impacts from sea level rise resulting in the relocation of post operations.

Extreme Events

Climate change might increase the frequency of high-intensity storms which may accompany extreme winds that have the potential to impact communication operations and pose a risk to Peace Corps buildings and staff. The extreme winds may result in fallen cellphone towers and damaged telephone poles obstructing communication operations and data recall which will increase the potential for blackouts. Increased frequency of high-intensity storms may also disrupt air and ground travel inhibiting supply chains.

D. Peace Corps Policy Vulnerability Assessment

Pursuant of EO 13653, the Peace Corps is reviewing existing emergency management policies to ensure they reflect current data, and respond to climate change stressors and their associated impacts. The following Peace Corps policies may be impacted by climate stressors:

- In the event of climate-related impacts to communication procedures, processes are in place to receive communication cables. Internal Manual Section Policy 832, Communications Cables, outlines a contingency plan procedure for communications disruptions.
- An Emergency Action Plan is outlined in Manual Section Policy 270, Volunteer/Trainee Safety and Security, ensuring procedural adherence in the event that an emergency situation impacts Peace Corps personnel and operations. These procedural guidelines are set for incremental hazards associated with climate change.
- Manual Section Policy 450, Volunteer and Trainee Transportation, provides the framework for Volunteer and trainee transportation. Under this policy, an individual who will provide up-to-date information about road conditions and closings can be designated, which is useful as climate change stressors may impact road accessibility and staff safety.
- Manual Section Policy 402, Domestic Continuity of Operations and Occupant Emergency Plan Programs, sets out the policies and general procedures for the Peace Corps domestic Continuity of Operations and Occupant Emergency Plan programs addressing emergency management procedures in the event of immediate hazards as a result of climate stressors.

E. Peace Corps Program Vulnerability Assessment

Regional Analysis of Climate Risk

Climate change has emerged as a global threat to both human and environmental health, exacerbating already-existing environmental problems. Increasing variability in weather and climate patterns pose unique challenges for Peace Corps operations and programs, both domestically and globally across all geographical regions where Volunteers serve.

The map at the beginning of this report has been provided by the Notre Dame Global Adaptation Index (ND-GAIN) and depicts which countries are best prepared to deal with global changes brought about by overcrowding, resource constraints, and climate stressors. Using this map for planning purposes, the Peace Corps can ascertain at-risk countries and vulnerabilities due to climate stressors.

Sector Analysis of Climate Risk

All six sectors of Peace Corps program activity are exposed to varying degrees of climate risk, however some sectors are more directly impacted than others. This section examines in more detail the four categories of climate stressors and risks outlined in the Regional Analysis above, how they affect the different types of host Peace Corps communities' assets, and examples of the kinds of activities that Volunteers are undertaking to bolster local adaptive capacity and resilience to climate change.

Peace Corps Volunteers work in partnership with local organizations, communities, and individuals on projects that support natural resource conservation, sustainable farming practices, coastal management, health education, and disaster preparedness and mitigation. As climate change knowledge grows and climate risks are better understood, the Peace Corps can further define and expand projects that focus on increasing the adaptive capacity of partner organizations and communities.

Peace Corps Volunteer activities increase livelihood and food security, expand environmental awareness, and decrease environmental degradation. While the majority of this work takes place within environment projects, many activities occur across sectors, with Volunteers in the Agriculture, Community Economic Development, Education, Health, and Youth in Development Sectors integrating environmental themes in their work. Although climate change activities cut across all Peace Corps program areas, the following program analysis only reviews Agriculture and Environment. In the future, the Peace Corps plans to have systems in place to better track Volunteer activities as they relate to climate stressors.

Agriculture and Environment

- FY 2013 Investment: \$36,517,904
- Number of Volunteers: 1,208

The Agriculture and Environment program sectors are closely related, as efforts to improve agricultural production involve sound stewardship of natural resources, particularly efficient soil and water conservation measures. Therefore, these program areas are presented jointly, reflecting the integration and overlap of many activities across the two sectors. The overarching objective of Agriculture and Environment Volunteers is to help build resilient communities and maintain sustainable landscapes. Agriculture projects are designed to improve the lives of small farm holders by increasing farm productivity, profitability, and sustainability, as well as household nutrition and overall food security. Peace Corps Volunteers support efforts to improve local livelihoods by disseminating new or improved techniques and “climate smart” practices that intensify and diversify agricultural production, enhance small business development, and strengthen natural resource management, particularly soil and water conservation. Volunteers promote promising farm management practices that help communities adapt to deteriorating environmental conditions precipitated by a changing climate, along with other natural and human-induced factors.

Environment projects are often two-pronged, supporting agricultural activities that preserve the environment and sustain the use of natural resources. Volunteers support environmental education and awareness programs with both youth and adults, assist communities and government agencies in managing forests and protected areas, and promote effective conservation activities such as agroforestry, ecotourism, recycling, reforestation, soil and water conservation, and solid waste management. Agriculture and Environment programs are organized by major project areas, many of which address climate change by building adaptive capacity and more robust, resilient communities. The core project areas for the two sectors and activities listed below are examples of Peace Corps Volunteers supporting resilient communities and livelihoods.

Peace Corps Environment Volunteers

Africa Region

- Benin (EN)
- Burkina Faso (EN)
- Cameroon (EN)
- Ethiopia (EN)
- Ghana (AG)
- Guinea (EN)
- Madagascar (EN)
- Malawi (EN)
- Senegal (AG)
- Tanzania (EN)
- The Gambia (EN)
- Togo (EN)
- Zambia (AG/EN)

Europe, Mediterranean and Asia Region

- Nepal (Food Security)
- Philippines (EN)

Inter-America and Pacific Region

- Ecuador (EN)
- Guatemala (EN)
- Jamaica (EN)
- Mexico (EN)
- Nicaragua (AG/EN)
- Panama (AG/EN)
- Paraguay (AG/EN)
- Peru (EN)

Project Area	Activity Description
Agricultural Production and Improved Cultivation Practices	<ul style="list-style-type: none"> ▪ Support/training in the use of intensive farming practices to boost crop productivity ▪ Use of farming methods that reduce soil erosion, enhance soil fertility, use water more efficiently, and optimize the use of agricultural inputs ▪ Training in nonformal educational methodology such as the Farmer Field School (promoted by U.N. Food and Agriculture Organization) and the “Master Farmer” model promoted in Senegal by USAID
Productivity	<ul style="list-style-type: none"> ▪ Support of farmers to boost crop and small livestock productivity using climate smart intensification methods that include <ul style="list-style-type: none"> - Agroforestry - Integrated pest management (IPM) - Mixed cropping methods - Bio-intensive gardens (permaculture) - Improved techniques in small animal husbandry and beekeeping
Markets	<ul style="list-style-type: none"> ▪ Support of farming as business and improved access to markets ▪ Training in basic business practices and organizational skills development ▪ Improved post-harvest technology and storage
Resilience and Stability	<ul style="list-style-type: none"> ▪ Enhancement of health status, resilience, and stability of the most vulnerable (often women and children), through programs in nutritional education and access to clean drinking water, sanitation, and improved hygiene
Environmental Education	<ul style="list-style-type: none"> ▪ Support/training of students, youth, and adults in environmental sustainability ▪ Development of curricula, instructional materials, and innovative teaching methods and strategies ▪ Creation of ecology-focused camps, clubs, and excursions
Community Engagement in Environmental Issues	<ul style="list-style-type: none"> ▪ Mobilization of local organizations and government officials to help identify significant environmental problems affecting their communities ▪ Implementation of projects such as demonstration gardens, community woodlots, composting efforts, solid waste management programs, reforestation and soil conservation projects, and citizen environmental awareness campaigns
Natural Resource Management	<ul style="list-style-type: none"> ▪ Promotion of sustainable, profitable management of natural resources ▪ Introduction of tree nurseries, stabilization of soil and watersheds, and improved management of protected areas ▪ Use of biodigesters and fuel-efficient cookstoves to support improved health, energy efficiency, and climate change mitigation
Sustainable Income Generation	<ul style="list-style-type: none"> ▪ Support of small enterprises in environmentally friendly income generating activities such as ecotourism

New technical training packages are now being designed across the eight project areas listed above to improve the technical knowledge and skills of Peace Corps trainers, managers, and Volunteers. Several of these training packages specifically contribute to helping farm communities employ climate smart agricultural practices that are well adapted to the unique micro-climatic conditions of a given geographical area. These technical training areas include agricultural farm extension, staple crop production, soil and water conservation management, household and community gardening, agroforestry, small animal husbandry, post-harvest management, and on-farm income-generating activities.

To lessen the negative effects of climate change, the Peace Corps has adopted three core objectives of climate smart agriculture:

- Dissemination of techniques and practices that increase agricultural productivity (i.e., *intensification*)
- Dissemination of techniques and practices that strengthen resilience to climate change (i.e., *adaptation*)
- Dissemination of techniques and practices that reduce greenhouse gas emissions (i.e., *mitigation*)

Below is a list of some of the key activities Agriculture and Environment Volunteers employ to support the three objectives of climate smart agriculture.

Illustrative Activities of Agriculture/Environment Volunteers	
Intensification	Minimal tillage
	Intercropping legumes and staple crops
	Crop rotation
	Strip/alley cropping
	Integrating leguminous trees into agricultural plots
	Introduction of higher yielding crop/seed varieties that are more drought tolerant
	Integrated Pest Management (IPM) focusing on organic/biological controls
	Water harvesting and distribution (e.g., drip irrigation, pot holing, zai holes)
Adaptation	Improved soil management practices/technologies (e.g., stone bunds, terracing)
	Improved crop management (e.g., locally adapted varieties, improved seeds/varieties, tree nurseries, seed banks)
	Improved water management p/t (e.g., roof collection systems, use of manual/treadle pumps)
	Improved plant management p/t (e.g., companion planting, use of organic pesticides)
	Improved institutional management p/t (e.g., savings and lending groups, seed banks)
	Improved knowledge management p/t (e.g., use of smart phones)
Mitigation	Improved carbon storage of forest biomass (e.g., community woodlots, tree planting/tree nurseries)
	Improved carbon storage of soil (e.g., mulching, organic fertilizers/compost)
	Improved efficiency of biomass and renewable energy use (e.g., improved cookstoves, biogas digesters)

Peace Corps Response

Peace Corps Response provides returned Peace Corps Volunteers and qualified Americans the opportunity to serve in short-term assignments in developing countries. To date, approximately 2,300 Peace Corps Response Volunteers have served in over 40 countries in the Americas, Africa, the Pacific, Asia, and Eastern Europe and, following Hurricane Katrina, 272 Peace Corps Response Volunteers to assist the Federal Emergency Management Agency's (FEMA) relief operation in the gulf coast region. Assignments include enhancing existing agency programs, responding to natural disasters, initiating first-time programs in new Peace Corps countries, or returning to a country where there has not been a Peace Corps presence for some time.

In FY 2013, Peace Corps Response allocated \$173,984 for environmental programs, filling 40 positions that implemented activities in the area of intensification, adaptation, and mitigation. The first climate change specific position was advertised, filled, and posted in 2011 to the Co-operative Republic of Guyana. More recently, in 2013, Peace Corps Response filled a request for a climate change volunteer in the Republic of Fiji. In addition to the programs highlighted below, Peace Corps Response anticipates additional host country requests that specifically outline the knowledge and skills of Peace Corps Response climate change Volunteers.

Environment Advisor (FIJI)

The Environment Advisor was tasked with assisting the Provincial Services Director and Central Conservation Officer in hiring and training other Provincial Conservation Officers. In addition, the Environment Advisor worked with the Provincial Services Director to develop and implement policy related to climate change and other environmental issues affecting indigenous Fijians.

Climate Change Planning Advisor (FIJI)

A Climate Change Planning Volunteer promoted the integration of climate change issues into existing processes for the Fijian Government. The Volunteer advised the Climate Change Unit (CCU) in the integration of appropriate climate change impact response strategies into all aspects of national, divisional and local development planning processes. The Volunteer also assisted the CCU in the development of resources and training that will raise civil servant and public awareness around the topic of climate change vulnerabilities and the need for mitigation and adaptation actions. In addition, the Climate Change Planning Advisor assisted the Senior CCU staff in the formulation of strategies, frameworks, and in the institution of sound donor coordination mechanisms which will allow Fiji to access climate change funding in a well thought out and strategic manner.

Basic Sanitation and Climate Change Specialist (PERU)

The Basic Sanitation and Climate Change Specialist supported a regional health department on safe and healthy housing issues, such as improvements in Andean rural housing for protection against cold, construction of improved cook-stoves for firewood savings and reduction of smoke, installation of photovoltaic lighting systems, and construction of ecological dry toilets. The goals of this project were to not only assess most at need areas and develop and

implement community level social projects addressing these sanitation and climate change issues in such areas, but also provide support to local, district level municipalities, to increase their own capacity to carry out such projects in the communities within the district.

Information Technology Marketing Consultant (JAMAICA)

Working with the Ministry of Water Land Environment and Climate Change, a Peace Corps Response Volunteer collaborated with counterparts in the Jamaican Government to utilize a variety of methods including the Ministry's website, as well as social networks such as Facebook and Twitter to disseminate information to the public about its portfolio areas and in particular, climate change related projects, activities and developments. The Peace Corps Response Volunteer helped this Ministry by creating an interactive website, with Facebook and Twitter functionality that supports social marketing along with electronic marketing for local and international customers.

Environment/Conservation Training Advisor (FIJI)

Working in collaborating with host country counterparts located in the Fijian Ministry, the Peace Corps Response Volunteer worked as an Environment Desk Officer carrying out activities to train individuals and develop strategic plans around climate change and the environment.

F. Peace Corps Programs and Strategic Partnerships

Feed the Future

USAID/Peace Corps Global Food Security Agreement

In July 2011, the Peace Corps and USAID/Bureau for Food Security (USAID/BFS) signed a global agreement to implement activities related to food security and nutrition. The overarching goal of the agreement is to sustainably reduce global hunger and

In **Africa** and the **Americas**, Volunteers are training individuals and community groups, mostly women, in improved cookstove construction. The stoves reduce firewood use and the time and distance required to gather it. There is also a reduction of indoor smoke, helping to reduce carbon emissions through the more efficient burning of firewood.

poverty by tackling the root causes and employing proven strategies to achieve large-scale, sustainable impact. USAID, through its offices, bureaus, and missions, has committed funding to the Peace Corps over five years to enhance the Peace Corps' food security programming, which includes climate change adaptation. The Peace Corps' food security work crosses various sectors, with Volunteers in the Agriculture, Community Economic Development, Environment, and Health sectors implementing food security activities. All Agriculture Volunteers and most Environment Volunteers working on agriculture/natural resources management activities are engaging beneficiaries in activities that address at least one of the three objectives of climate smart agriculture: intensification, adaptation, and mitigation.

Energy and Climate Partnership of the Americas

State Department/Peace Corps Agreement

The State Department/Peace Corps agreement advances the goals of the Energy and Climate Partnership of the Americas (ECPA), a regional partnership that jointly addresses these common challenges with our neighbors. Since the beginning of the agreement, the Peace

In **Paraguay**, Volunteers trained local farmers in organic gardening. Topics included organic garden and compost planning and preparation, choosing climate-adapted vegetable and fruit varieties, and daily care and maintenance of garden beds and harvesting.

Corps has trained over 9,500 people in renewable energy technologies and over 8,700 in climate change mitigation and adaptation strategies. ECPA complements other projects supported by the Department of State by bringing ECPA to the grassroots level, so that local organizations, businesses, families, and individuals can take part in the hemisphere wide partnership. Under the State Department/Peace Corps agreement, the Peace Corps engages in local communities (in Costa Rica, the Dominican Republic, El Salvador, Guatemala, Nicaragua, Peru, Panama, and Paraguay) to address energy poverty throughout the Americas by increasing access to and use of environmentally friendly energy technologies, educating communities on climate change, energy conservation, climate mitigation and adaptation, and implementing renewable energy projects. To achieve the objectives of ECPA, the Peace Corps convenes training workshops on regional, national, and community levels; supports local and international experts to design energy and climate projects and training modules; develops or acquires materials to educate Volunteers and their community partners on clean energy, climate change, and energy conservation; and supports small, community-initiated grants to enable access to appropriate technologies and provide grassroots capacity-building.

Small Project Assistance

USAID/Peace Corps Small Project Assistance (SPA)

This longstanding partnership supports climate change adaptation efforts by funding small grants and training activities under USAID program element 4.8.2, Clean Productive Environment. Peace Corps posts design grants and trainings in this program element to engage and train community members on the risks of climate change and the benefits of a clean indoor air environment. Additional post-specific objectives include training in natural resource management, biodiversity conservation, innovative agricultural practices, and climate change adaptation techniques. In FY 2013, \$437,000 of SPA funding was obligated to Dominican Republic, Eastern Caribbean, Ethiopia, Guatemala, Jamaica, Mexico, Peru, and Vanuatu for these activities. In FY 2013, 51 grants and 11 training activities supported these objectives. Volunteers and their community counterparts designed and implemented various small grant projects, including environmental education and awareness efforts, installation of improved cookstoves, promotion of waste management, and increasing water-storage capacity in drought-prone areas.

In **Ethiopia**, a team of Volunteers started an environmental summer camp for high school boys and girls. “Renewing our world” (Camp Glow) educational programming was designed around a theme of “discovering the circle of life” and included lessons on ecological concepts, microorganism form and function, tree planting, permagardening, nature appreciation, wildlife biology and human impacts. Campers loved relating each real-life lesson to their own lives and created environmental action plans to implement back in their home communities.

IV. NEXT STEPS TO ENHANCE PEACE CORPS CLIMATE CHANGE ADAPTATION CAPACITY

Although the Peace Corps is creating initiatives and enhancing measures to adapt to and mitigate climate change impacts domestically and internationally, the agency’s capacity to establish effective solutions can be improved. The following policy, program, and operations planned action items will build the agency’s ability to develop sustainable climate change mitigation and adaptation strategies.

A. Mission, Policy, and Operations

- Increase Staff Capacity

To enhance the Peace Corps’ capacity to manage greenhouse gas emission and mitigate the agency’s contributions to climate change an energy manager and climate change Working Group will be designated in the Facilities Management Division.

- The energy manager will collect and monitor energy data from posts, regional recruitment offices, and headquarters. Additionally, the energy manager will analyze collected energy data and recommend how to reduce energy consumption and costs. Reducing energy consumption will build the Peace Corps’ capacity to mitigate climate change effects.
- A management working group will be tasked with integrating climate change risk assessment into agency programs, operations, and overall mission objectives and submit the agency adaptation plan to the White House Council on Environmental Quality and the Office of Management and Budget for review.
- LEED Certification
 - After conducting an analysis of current building systems and internal procedures, the agency will pursue LEED certification for Existing Buildings: Operations and Maintenance for the Peace Corps headquarters and overseas buildings to reduce energy and the associated greenhouse gas emissions.
- Tracking the cost of climate change adaptation
 - Through the Office of the Chief Financial Officer, a tracking mechanism will be created to better understand the cost of climate change on Peace Corps operations.

B. Programs and Strategic Partnerships

- Guidance and Training
 - To ensure Volunteers understand the effect of climate change on their host communities, brief cross-sectorial climate change trainings will be included in Pre-Service Training. Currently, many Volunteers work on projects that are relevant to climate change. However, they may not be aware of those connections. The Office of Programming and Training intends to include a climate change overview so Volunteers have a better grasp of the ways climate change will impact their communities, and opportunities to incorporate climate change education and initiatives in their respective communities.
- Project Monitoring and Evaluation
 - To easily gather data for project monitoring and evaluation, a more strategic approach to climate change needs to be integrated. The Office of Programming and Trainings has started addressing monitoring and evaluation by adding questions associated with intensification, adaptation, and mitigation will be added to the Volunteer Reporting Tool. Given the cross-sectorial overview of climate change in Pre-Service Training, Volunteers will be able identify if their project dealt with the impacts of climate change in their community. This data will also provide headquarters with the metrics to evaluate how Volunteer projects directly or indirectly address the impacts of climate change around the world. Monitoring these climate change projects will also enable the Peace Corps to learn best practices to share among posts on climate change mitigation and adaptation strategies.
- Peace Corps Volunteer-Led climate change Committees
 - Specific project or sector-related committees are common at many posts, such as English Teaching Committees or Gender Equality Committees. By facilitating climate change information exchange among Volunteers, those with knowledge about and passion for climate change adaptation and mitigation can create committees in which they discuss best practices and new ideas for climate change projects. Volunteer collaboration and innovation is a very effective way to share knowledge and perpetuate change at a community level.

In addition to programs, the Peace Corps is committed to strategic partnerships as outlined in the agency's FY 2014–18 Strategic Plan. The Peace Corps anticipates the following climate-change related partnerships for FY 2014–18:

- The USAID/Peace Corps Global Food Security Agreement will continue until September 30, 2017.
- The ECPA partnership will continue until December 2014.
- The USAID/Peace Corps SPA program will continue funding small grants and trainings in support of climate change adaption under program element 4.8.2, Clean Productive Environment. FY 2014 funding for this program element has been obligated for Cambodia, Fiji, Guatemala, Jamaica, Mexico, Peru, Philippines, and Vanuatu, for a total of \$520,539.40.