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CLIMATE CHANGE RESILIENT DEVELOPMENT

ANNUAL REPORT

AUGUST 2011 – SEPTEMBER 2012

October 10, 2012

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ACRONYMS

| | |
|-------------|---|
| ABMS | Association Béninoise de Marketing Social et la communication pour la santé |
| ALM | Adaptation Learning Mechanism (website) |
| AREFS | Asia Regional Environmental Field Support Task Order |
| CCAFA | Climate Change, Agriculture and Food Security |
| CCRD | Climate Change Resilient Development Task Order |
| CGIAR | Consultative Group on International Agricultural Research |
| CIMPACT-DST | Climate Impacts Decision Support Tool |
| COMESA | Common Market for Eastern and Southern Africa |
| COP | Chief of Party |
| CoP | Community of Practice |
| CSP | Climate Services Partnership |
| DCTT | Developing Country Task Team |
| DL | Data Library |
| E3 | USAID Bureau for Economics, Education and the Environment (formerly EGAT) |
| EGAT | USAID Bureau for Economic Growth, Agriculture and Trade |
| E.O | Executive Order |
| ELI | Environmental Law Institute |
| FCCM | Forest Carbon, Markets, and Communities Task Order |
| FY | Fiscal Year |
| GCC | Global Climate Change |
| GFCS | Global Framework for Climate Services |
| GLOF | Glacial lake outburst flood |
| GPR | Ground penetrating radar studies |
| GUC | Grants Under Contract |
| HMGWP | High Mountain Glacial Watershed Program |
| HQ | Headquarters |
| ICCS 2 | (Second) International Conference on Climate Services |
| ICIMOD | International Centre for Integrated Mountain Development |

| | |
|--------------|--|
| ICRISAT | International Crops Research Institute for the Semi-Arid Tropics |
| IRG | International Resources Group |
| IRI | International Research Institute for Climate and Society |
| ISET | Institute for Social and Environmental Transition |
| IQC | Indefinite Quantities Contract |
| IUCN | International Union for Conservation of Nature |
| KACC | Khumbu Alpine Conservation Council |
| KM | Knowledge management |
| LIDAR | Light detection and ranging optical remote sensing |
| M&E | Monitoring and evaluation |
| NEPAD | The New Partnership for Africa's Development |
| NGO | Non-governmental organization |
| NGS | National Geographic Society |
| NOAA | National Oceanic and Atmospheric Administration |
| PMP | Performance Management Plan |
| RTI | Research Triangle Institute |
| SIWW | Singapore International Water Week |
| TMI | The Mountain Institute |
| UNDP | United Nations Development Program |
| UNFCCC | United Nations Framework Convention on Climate Change |
| USG | US Government |
| UT | University of Texas |
| V&A | Vulnerability and Adaptation |
| WASH | Water, sanitation, and hygiene |
| Water II IQC | Integrated Water and Coastal Resources Management Indefinite Quantities Contract |
| WG | Working group |
| WIO | Western Indian Ocean |
| WIOMSA | Western Indian Ocean Marine Science Association |
| WMO | World Meteorological Organization |

A. INTRODUCTION

This report summarizes the activities undertaken by the consortium led by International Resources Group (IRG)/Engility during the annual reporting period, August 2011 – September 2012 under the Integrated Water and Coastal Resources Management Indefinite Quantities Contract (Water II IQC) Climate Change Resilient Development (CCRD) task order. The report covers implementation activities undertaken and/or completed during the reporting period. The CCRD annual financial report is provided as a separate submission. The report is supplemented by a CD-ROM, which provides all the reports and documents prepared for this task order during the reporting period. The remaining sections are divided into four sections: Project Management, planning, and evaluation; Objective 1 activities; Objective 2 activities; and Objective 3 activities. For a list of all tasks under each activity please refer to Annex I.

Project Management, Planning, and Evaluation:

Develop & Disseminate CCRD Knowledge Management (KM) Products
Implement Grants Under Contracts (GUC)

Objective 1: Support for USAID Missions and Bureaus

Activity 1.1 Guidance

Activity 1.2 Information, Tools, Science and Technology

Activity 1.3 Technical Assistance and Capacity Building Support

Objective 2: Coordinate with Other USG Agencies to Support Mainstreaming

Activity 2.1 Adaptation Partnership Workshops

Objective 3: Identify and Respond to Immerging Issues and Fill Gaps

Activity 3.1 Jamaica Workshop

Activity 3.2 High Mountain Glacial Watershed Program (HMGWP)

Activity 3.3 Climate Services Partnership

B. PROJECT MANAGEMENT, PLANNING, AND EVALUATION

In the beginning of Year One, CCRD organized and convened a three-day mobilization workshop at IRG/Engility. All CCRD partners (subcontractors and resource groups) plus Water II IQC consortium member Research Triangle Institute (RTI), were invited to make presentations of their climate adaptation capabilities and to discuss the preliminary scope of activities and additional activities that might be included in the Year One Work Plan. USAID also provided their vision of CCRD priorities and opportunities.

Project management activities during Year One focused on project start-up, including mobilization of the team, preparation of the Year One Work Plan and Performance Management Plan (PMP), strategic discussions on the CCRD vision and opportunities, preparation of a draft Communications Plan, development of reporting templates, and preparation of the Grants Under Contract Manual. To facilitate new activities, CCRD employed a rolling work plan: the Year One Work Plan was updated several times to respond to USAID Bureau and Mission requests and add the new High Mountain Glacial Watershed and Climate Services Programs. For each update, the PMP, budget, and level of effort chart were aligned with the revised work plan.

CCRD KNOWLEDGE MANAGEMENT PRODUCTS

In its first year, CCRD created a Communication Plan that provides mechanisms for USAID and CCRD to effectively and efficiently communicate and share information with one another and present the project in a consistent and unified manner. It also provides a framework for disseminating project products and results, leveraging and supporting knowledge-sharing activities and Communities of Practice (CoPs), using knowledge management to enhance and implement capacity building, and developing methods and processes for capturing and responding to stakeholder feedback, changing needs, and innovations.

Consistent with project KM efforts, USAID engaged CCRD in developing and managing three websites:

1. Adaptation Learning Mechanism (ALM) – USAID proposed to partner with the United Nations Development Program (UNDP) to maintain, update, and facilitate information-sharing for the ALM website (www.adaptationlearning.net). The ALM serves as a database that houses climate projects and research. CCRD contributed significant content to the ALM site and participated in discussions on changes to ALM's design and functionality that will be made to the site by CCRD in Year Two.
2. Adaptation Partnership website – USAID and the US Department of State requested that CCRD assume responsibility for the management of the Adaptation Partnership website (www.adaptationpartnership.org). CCRD upgraded the design and functionality of the site, manages the uploading of content, and supports CoPs in response to interest among participants at Adaptation Partnership workshops. CCRD continues to upgrade and add content to the Adaptation Partnership

website, using the site as a tool to make available workshop resources, grant solicitations and award notifications, and updates to community members.

3. Climate Services Partnership (CSP) website – The CSP website was launched in September in advance of the Second International Conference on Climate Services (ICCS 2). The site (www.climate-services.org) presents introductory information, including a description of climate services, and basic information on the CSP Secretariat and coordinating group. The site provides updates on CSP activities, collaborations, international conferences and working groups, and features a document library with resources including case studies, evaluations, guidance documents, and an interactive map.

CCRD SMALL GRANTS PROGRAM

CCRD conducted two small grants solicitations in accordance with the process described in the Grants Under Contract Manual covering small grants announcements, review, selection, award, supervision, monitoring, and reporting. In support of the High Mountain Glacial Watershed Program, CCRD conducted the Climber-Scientist Small Grants solicitation. Thirty-four proposals were received and reviewed. The technical review panel selected six individual proposals and five institutional proposals for Climber-Scientist Small Grants awards. The value of the Climber-Scientist Small Grants is approximately \$650,000. Small grants involve research, capacity building, and planning in Peru, Nepal, India, Tibet, Pakistan, and the Altai Mountains in East-Central Asia and focus on climate adaptation issues in high mountain communities and ecosystems.

In response to recommendations of participants in an Adaptation Partnership workshop convened in Costa Rica in March 2012 (see Activity 2.1), CCRD conducted a small grants solicitation entitled Central American Climate Resilient Agriculture, focused on increased knowledge and capacity building among farmers and ranchers of options for addressing climate change and variability. Seven proposals were received from Central American organizations and three awards were made to support activities in Guatemala, Honduras, El Salvador, Nicaragua, and Costa Rica. The value of the Central American Climate Resilient Agriculture grants is approximately \$456,000.

C.OBJECTIVE I: SUPPORT FOR USAID MISSIONS AND BUREAUS

During Year One , CCRD began work on the climate mainstreaming guidance and supporting annexes, developed decision and tool typologies to facilitate understanding of USAID demand for adaptation tools, conducted a desktop study on climate vulnerability and adaptation for the USAID Mission in Peru, finished the first draft of a lessons learned paper on infrastructure, drafted the Water, Sanitation, and Hygiene (WASH) case study in Iloilo in the Philippines, and developed the USAID Climate Change Adaptation Plan for extensive review.

ACTIVITY I.1 GUIDANCE

Vulnerability and Adaptation (V&A) Guidance

CCRD collaborated with the Global Climate Change (GCC) Office to draft new vulnerability and adaptation guidance focused on integrating or mainstreaming climate concerns into development, sector, and spatial strategies and plans. The draft guidance and an appendix on vulnerability assessments were submitted to and reviewed by USAID. These documents will be finalized early in Year Two.

CCRD staff presented the concept of the mainstreaming guidance in two venues. In February, CCRD Chief of Party (COP) Glen Anderson made a presentation at the National Center for Atmospheric Research in Boulder, Colorado on USAID's adaptation program and the new Programming Guidance for Climate Resilient Development. In May, the GCC Office's Jennifer Frankel-Reed, Peter Schultz, and Glen Anderson organized a session at the Adaptation Futures Workshop at the University of Arizona in Tucson, Arizona. The three presentations focused on USAID's prior and current work on the vulnerability and adaptation guidance and lessons learned in developing and implementing the V&A.

Climate Briefs

USAID's GCC Office has collaborated with the Global Health Bureau and the Water Team in the Bureau for Economics, Education and the Environmental (E3), formerly the Bureau for Economic Growth, Agriculture, and trade (EGAT) to draft climate briefs on health and adaptation and WASH and adaptation, respectively. CCRD formatted the briefs for production and the International Research Institute for Climate and Society (IRI) completed their review of the briefs and added short sections in each brief on the potential role of climate services.

Water Annex

CCRD staff drafted the Water Annex to supplement the V&A guidance. This annex provides an in-depth discussion of climate impacts related to different uses of water resources and includes a set of 10 adaptation actions focused on issues of augmenting water supplies through storage, reducing water loss, and creating

new sources of water; managing demand for water; addressing water quality issues, protecting floodplains and freshwater ecosystems; and the use of integrated approaches to manage water and energy. The Annex and actions have undergone several reviews and revisions and will be incorporated into the final production version in Year Two.

Coastal and Marine Annex

CCRD staff and consultants have completed first and second drafts of the Coastal and Marine Annex and supporting adaptation actions. Adaptation actions describe options for protecting ecosystems and shorelines, restoring and protecting key habitats, protecting coastal communities and the built environment, and strengthening livelihoods based on coastal and marine resources. The Annex and actions have undergone several reviews and revisions and will be incorporated into the final production version in Year Two.

Infrastructure Fact Sheets

CCRD developed a set of 12 four-page factsheets that provide basic information on climate impacts for different types of infrastructure and options available to address them. The fact sheet package includes an overview and has been vetted with USAID Bureaus and Missions. Feedback was received and the fact sheets will be done in November 2012.

Water Security case study: Iloilo, Philippines

A CCRD team, including members of Environmental Law Institute (ELI), Stratus Consulting, and IRG/Engility, joined USAID staff to conduct interviews and fieldwork for the water security case study in Iloilo in July 2012. The team met with USAID Mission staff and interviewed Philippine national government officials and academics in Manila. In Iloilo the team conducted a field visit of two watersheds, visited waterworks, and interviewed provincial and municipal officials as well as representatives from the business and non-governmental organization (NGO) community. A first draft of the case study has been completed and will be reviewed and finalized in November 2012.

ACTIVITY 1.2 INFORMATION, TOOLS, SCIENCE AND TECHNOLOGY

The CCRD team finalized the consultation process used to collect information about decision-support needs within USAID Headquarters (HQ), with the core GCC adaptation team. This process focused on understanding (1) the diverse set of decisions and/or activities undertaken by USAID HQ staff, (2) the information that is needed for these decisions/activities, and (3) the tools that are used to support these decisions/activities. The process has helped to identify any gaps in process, activities, information, and/or tools related to adaptation decision-making.

Upon completion of these consultations, CCRD finalized and submitted a summary report of activities related to decision support. The report provides a brief overview of the development of the decision and tool typologies and tables containing the typologies; provides an overview of the purpose and approach for the initial round of consultations; and describes initial findings from the consultations, providing an overview of the needs and programmatic insights from interviewees.

Climate IMPACTS Decision Support Tool (CIMPACT-DST) Pilot Project in Hue City, Vietnam

Cascadia Consulting Group, under the guidance of CCRD, developed a pilot project in Hue, Vietnam to demonstrate their Climate Impacts Decision Support Tool, designed to assist local government planners and

staff in identifying key factors to be considered in the design and implementation of climate resilient urban plans. During the visit to Hue, key members of the Cascadia team met with city officials and Institute for Social and Environmental Transition (ISET) staff participating in the city's Vulnerability Assessment under the USAID/RDMA-funded M-BRACE project to explore approaches for gathering information to configure the CIMPACT-DST for Hue.

Cascadia briefed staff at the Institute for Architecture and Urban-Rural Planning and University of Agriculture & Forestry in Hanoi on the Hue pilot and also described Cascadia's earlier application of CIMPACT-DST in Seattle, Washington. As a result of the meetings in Hanoi, discussions have been initiated for Cascadia to transfer the tool to the Institute for piloting and integration into urban planning in Vietnam's 700 cities.

ACTIVITY I.3 TECHNICAL ASSISTANCE AND CAPACITY BUILDING SUPPORT

Peru Climate Change V&A Desktop Study

IRG/Engility completed the *Peru Climate Change Vulnerability and Adaptation Desktop Study* in December 2011. The study is the first component of an assessment being undertaken by USAID/Peru with support from the GCC Office. IRG/Engility assessed the key economic sectors and ecosystems in Peru to understand their importance to the country and their vulnerability to climate change. The study included a summary of adaptation activities supported by the Government of Peru, international NGOs, and bilateral and multilateral donors. The report highlights important gaps in adaptation activities and makes recommendations for future activities that USAID might undertake either on their own or in collaboration with other donors.

The report is intended to inform the in-country assessment process for possible future USAID/Peru-funded adaptation activities addressing climate change challenges. The report may also serve as a model for other USAID Missions that are beginning similar processes, by demonstrating what kinds of knowledge sources to review and what level of detail is appropriate and useful for project planning and design.

Benin Site Visit and Pilot

From June 17 - 29, The GCC Office and a member of ICF International conducted a site visit to Benin in West Africa to further detail the project description, tasks, and activities to be conducted under a "Climate Change Integration Pilot Project" that was awarded to the USAID Mission in Benin on climate change and education. The site visit consisted of extensive meetings with USAID Mission personnel and potential partners in the integration pilot including World Education, Caritas, ABMS (Association Béninoise de Marketing Social et la communication pour la santé, a subsidiary of Population Services International), and UNICEF.

A key feature of the site visit was the inspections of potentially affected areas in the north of Benin (Malanville and Karimama) and interviews with villagers regarding the incidence and intensity of flooding events. Five villages were visited, including Tourah, Goungounberi, Maligoungoun, Buisia, and Gorou-Djinde. Villagers provided important details on the nature, timing, and incidence of flooding, its impact on village life and schooling, as well as the potential for avoiding impacts.

Development of USAID's Federal Agency Plan

To support the preparation of USAID's Federal Agency Climate Change Adaptation Plan, under Executive Order (E.O.) 13514, Federal Leadership in Environmental, Energy, and Economic Performance, the CCRD team developed a number of deliverables contributing to the Agency Adaptation Plan. The deliverables included:

- High-level desk reviews of climate vulnerabilities for 25 of USAID's country and regional Missions. These 25 profiles were refined based on USAID comments.
- A technical memorandum summarizing the state of the practice within USAID on vulnerability assessment and adaptation, focused on (1) home office activities through the Global Climate Change Office, and through climate change coordinators in other regional and functional Bureaus and Offices, and (2) on-the-ground adaptation activities being executed by country and regional Missions.
- An outline and technical memorandum for the operations-related sections of the Agency Adaptation Plan, including an operations vulnerability assessment and adaptation-related actions supporting USAID operations.
- A technical memorandum identifying near- and longer-term vulnerability assessment and adaptation actions to be included in the Agency Adaptation Plan.
- A revised outline for the Agency Adaptation Plan.
- A PowerPoint presentation summarizing the Adaptation Plan for use by the GCC Office for internal briefings.

D.OBJECTIVE 2: COORDINATE WITH OTHER US GOVERNMENT (USG) AGENCIES TO SUPPORT MAINSTREAMING

Objective 2 activities during Year One focused on support for the Adaptation Partnership, established by the governments of the United States, Costa Rica, and Spain with the goal of fostering discussions on key adaptation issues. The primary focus of the Adaptation Partnership is a series of workshops and follow-up activities recommended by workshop participants. CCRD supported the convening of six Adaptation Partnership workshops in Nepal, New York, South Africa, Costa Rica, Bonn, and Bangkok, planning for one additional workshop in Washington, DC this fall on security and climate change, and follow-up work related to three Communities of Practice.

ACTIVITY 2.1 ADAPTATION PARTNERSHIP WORKSHOPS

With support from the State Department, CCRD played an integral role in convening Adaptation Partnership workshops in Nepal, New York, South Africa, Costa Rica, Bonn, and Bangkok. For detailed information and reports on these workshops please visit the Adaptation Partnership site at <http://www.adaptationpartnership.org/>.

Nepal

The Adaptation Partnership workshop in Nepal from September 3 - 28, 2011 was organized by a consortium of donors and NGOs under the leadership of The Mountain Institute (TMI) and included three components:

1. Field expedition to Imja Lake in the Mt. Everest (Khumbu) Region (September 4 - 24) to assess risks of glacial lake outburst floods (GLOFs) involved 35 physical and social scientists from 13 countries. This mobile workshop featured meetings with stakeholders in local communities, nightly presentations by expedition participants, and a three-day field assessment of Imja Lake, which has increased significantly in size in recent years as three glaciers that feed the lake with melt water recede and expose the lake to hanging ice that could cause tsunami-like waves and flood downstream villages, agricultural land, and tourism infrastructure.
2. Andean-Asian Mountains Global Knowledge Exchange On Glaciers, Glacial Lakes, Water, and Hazard Management, a two-day workshop (September 25 - 26) in Kathmandu, hosted by the International Centre for Integrated Mountain Development (ICIMOD). The knowledge exchange included presentations covering ongoing work and lessons learned in South America, Central Asia,

and the Himalayas and small group discussions covering gaps in research and policy on glaciers and climate change.

3. The Writers' Workshop was convened in Kathmandu (September 27 - 28) and was designed to capture the experiences, lessons learned, and recommendations that emerged from both the Imja Lake field expedition and follow-up Kathmandu workshop.

New York

The International Research Institute for Climate and Society at Columbia University hosted the first International Conference on Climate Services, a 2-½ day meeting that attracted 88 participants from more than 25 countries (October 17 - 19, 2011). The ICCS served as a platform for sharing experiences in delivering climate services, discussing current activities, including the World Meteorological Organization (WMO)-led Global Framework for Climate Services (GFCS), and launching the Climate Services Partnership.

The Adaptation Partnership funded a follow-on one-day meeting of the CSP Developing Countries Task Team (DCTT) on October 20, 2011 at the Lamont-Doherty Earth Observatory in Palisades, NY. The DCTT was formed to promote and organize actions in developing countries. It was designed to stimulate discussion regarding appropriate actions and to devise methods to identify and fund priority actions, primarily including knowledge capture. During the course of the meeting, methods of improving climate services through knowledge capture were discussed. This included both detailed evaluations and case studies.

Western Indian Ocean Workshop for Coastal and Marine Protected Areas (South Africa)

The Western Indian Ocean Workshop for Coastal and Marine Protected Areas Adaptation Partnership workshop was held in Cape Town, South Africa February 8 - 10, 2012. Thirty-nine participants from eight Western Indian Ocean (WIO) countries and the United States gathered in Cape Town to identify climate change capacity building needs for coastal and marine protected areas in the WIO region. The workshop was organized by USAID, United States Department of State, and the National Oceanic and Atmospheric Administration (NOAA) on behalf of the Adaptation Partnership, with regional assistance provided by the Western Indian Ocean Marine Science Association (WIOMSA). NOAA provided technical leadership, tailoring their International Marine Protected Area Capacity Building Program to fit the needs of WIO participants and the Adaptation Partnership's objectives.

Assessing Vulnerability and Building Resilience in Key Agricultural Sectors to Promote Economic Development and Food Security (Costa Rica)

The Government of Costa Rica, one of the founders of the Adaptation Partnership, with support from USAID and The State Department, hosted an Adaptation Partnership Workshop: Assessing Climate Change Vulnerability and Building Resilience in the Agricultural Sector to Promote Economic Development and Food Security, March 27 - 29, 2012 in San Jose, Costa Rica. The workshop drew 78 participants from the private and public sectors in the six Central American countries plus the Dominican Republic and Belize. The workshop involved two days of presentations and small group discussions, followed by a one-day field trip to EARTH University to observe adaptation measures to cope with increasing temperatures.

Adaptation and Monitoring & Evaluation (Bonn)

The International Workshop: Tracking Successful Adaptation – Smart Monitoring for Good Results took place May 7 - 8, 2012 in Bonn, Germany. Peter Schultz, CCRD Deputy Chief of Party, presented on the “Status Quo of M&E Adaptation,” including the results from a survey on monitoring and evaluation (M&E) on adaptation projects and programs. CCRD provided travel assistance to six participants, including

representatives from government ministries in the Philippines, Colombia, Ghana, Egypt, and Bangladesh. The final report for the workshop is still being finalized, with input from USAID and CCRD.

Building Urban Climate Change Resilience in Asia (Bangkok)

The Building Urban Climate Change Resilience in Asia workshop took place in Bangkok, Thailand July 31 – August 2, 2012. The objectives of the workshop were to: 1) increase capacity to understand best thinking in the field and explore available models and practices that address planning for climate change resilience; 2) create a Community of Practice around cutting-edge approaches to resilience planning; and 3) generate practical follow-up steps for the CoP. Seventy-four people attended the workshop, including regional and global actors in resilient urban climate change adaptation, key stakeholders and champions from national level and mid-sized cities in the region, and members of the donor community.

ACTIVITY 2.2 COMMUNITIES OF PRACTICE

Communities of Practice for the High Mountain Glacial Watershed Program, Climate Services Partnership, and Central American Climate Resilient Agriculture were created during Year One. These CoPs have brought together groups of people that share an interest in one or more of the above topic areas. CCRD launched the Adaptation Partnership website as a platform for all three CoPs to facilitate learning and collaboration between members. Unique resources developed through the Partnership site include a daily blog from the first HMGWP Nepal trek and a quarterly newsletter that was disseminated to all CoP members to keep them engaged and informed. As for the Central America CoP, solicitations for small grants were issued to the community, which attracted a large number of new members to the CoP. Members of USAID also use the Central America CoP as a means to disseminate new information on the region and other resources that are of interest to members. The CSP CoP launched a website during the ICCS 2 conference in Brussels that serves as a repository for information related to climate adaptation. Members can access this information and collaborate on how to expand the community. In its first year, the three CoPs have a total of 80 diverse members and have attracted 7,687 unique visitors to their associated pages.

E. OBJECTIVE 3: IDENTIFY AND RESPOND TO EMERGING ISSUES AND FILL GAPS

Activities in support of Objective 3 are designed to promote climate resilient development on a global scale. Ideally, they include tasks that add value to USAID programs but also respond to new opportunities or emerging issues in international practice of adaptation. In Year One, CCRD conducted work in support of three activities. Under Activity 3.1, CCRD supported the GCC Office in piloting a national-scale approach for mainstreaming climate concerns into development planning (Jamaica Workshop). Two programs were developed under CCRD in response to recommendations of participants at Adaptation Partnership workshops and concept papers: Activity 3.2 – the High Mountain Glacial Watershed Program (HMGWP) and Activity 3.3 – the Climate Services Program.

ACTIVITY 3.1 JAMAICA WORKSHOP

USAID and the Government of Jamaica, with support from CCRD, organized a workshop in July in Kingston to inform the process of integrating climate considerations into Jamaica’s national development strategy – Vision 2030. USAID and CCRD staff facilitated a two-day stakeholder workshop. The workshop was attended by over 150 participants from several government Ministries, Agencies, and other entities within the Government of Jamaica; relevant NGOs; academia; the private sector; and international development partners.

A number of high-level speakers opened the event, including: Dr. Conrad Douglas, Chairman of the Climate Change Advisory Committee; Honorable Robert Pickersgill, Minister of Water, Land, Environment and Climate Change; Dr. Honorable Peter Phillips, Minister of Finance and Planning; and Ms. Denise Herbol, Mission Director of USAID/Jamaica. The final plenary discussion session focused on identifying important themes that emerged from the workshop and on providing suggestions for next steps in advancing the policy framework. It was noted that although the adaptation plan will be developed under the Ministry of Water, Land, Environment and Climate Change, it will be important for the plan to be integrated and incorporate inputs from diverse stakeholders.

ACTIVITY 3.2 HIGH MOUNTAIN GLACIAL WATERSHED PROGRAM

The High Mountain Glacial Watershed Program was developed in partnership between The Mountain Institute and the University of Texas (UT) at Austin. The HMGWP targets activities such as establishing a Community of Practice, knowledge management, research and pilots, guidance, and capacity building, along

with outreach and awareness. Work thus far has focused on engaging Communities through consultations and applied research, in an effort to inform stakeholders and reduce risks from glacial lakes. One-page brochures were developed for the HMGWP, the Climber-Scientist Competitive Solicitation under the CCRD Small Grants Program, and the HMGWP CoP.

High Mountain Glacial Watershed Program's Community of Practice

The CoP has thus far focused on reporting on HMGWP activities through distributing newsletters, reporting information online, and engaging high mountain practitioners. The CoP website was developed and launched in May 2012. Content on the webpage includes introductory one-pager documents that outline the HMGWP and CoP, a blog and supplemental multimedia (photos and videos) from the May 2012 fieldwork in the Hinku and Khumbu Valleys, and the solicitation for the Climber-Scientist Small Grants. The CoP currently has a mailing list of 97 persons interested in the program with 56 active CoP members.

In addition to maintaining the website, the CoP also publishes a quarterly newsletter that was initiated in June/July 2012. The first newsletter featured an overview of the HMGWP, stories from the spring 2012 fieldwork in Nepal, and brief notices about upcoming events. The Summer Newsletter, released in September 2012, featured an interview with Jesus Gomez, a core partner in Peru, stories from the field from the summer 2012 fieldwork in Peru, a summary of the adaptation planning in Nepal, and the announcement of the Climber-Scientist Small Grant recipients.

The HMGWP also presented at a number of industry conferences, including Singapore International Water Week (SIWW), the International Union for Conservation of Nature (IUCN), the National Geographic Society (NGS) Explorers Symposium, and the Tribhuvan University/Hokkaido University Mountain Conference.

Nepal

HMGWP activities in Nepal have a multi-functional purpose. The work in Nepal is largely based on supporting the UNDP's Imja Lake risk reduction program, whereas the HMGWP is supporting the work through technical data reconnaissance and community consultations in the Khumbu Valley.

Vulnerability & Adaptation Activities

In September 2011, it was determined that Khumbu Valley communities had a desire to learn more about the climate vulnerabilities and what measures they may be able to take towards adaptation. This resulted in an assessment trip by IRG/Engility's Ms. Meghan Hartman to the Khumbu Valley in May 2012. The team worked together during the trek to develop the most strategic and high impact V&A training component possible – the “community consultation” component of the UNDP Imja Glacial Lake Control Project. Meetings with the Khumbu Alpine Conservation Council were also held to discuss the future V&A program, while also conducting interviews with community members.

Based on the outcomes of the May 2012 trip and the implementation options evaluated, TMI Nepal was identified as the local partner to conduct the September community consultations. A modified Vulnerability and Adaptation training (as related to community consultations) was conducted in July 2012 in Kathmandu in order to prepare TMI Nepal for facilitating the consultations in September.

The September 2012 consultations were designed to provide communities with tools for planning adaptation, but also to gather feedback on ongoing climate change-related issues. In addition, the HMGWP is partnering with an ongoing UNDP project targeted towards reducing the risk of Imja Lake due to glacial lake outburst

flood. The input from these consultations would also inform the planned UNDP project and give the communities a voice in the UNDP project design.

The community consultation material was roughly based on USAID's V&A two-day training program. For September, the material was tailored towards a more participatory approach that also incorporated local context. One of the critical pieces of feedback gained from the July 2012 training in Kathmandu was that the material would be more relevant in Nepali and if more local examples were provided. During the entire month of August, TMI Nepal, along with IRG/Engility and USAID, worked to develop consultation material that was specifically targeted towards the Khumbu audience. In delivering the consultations, poster-sized printouts were used (instead of relying on PowerPoint) along with a complementary participant binder with presentation and activity materials. A package of material used for the two-day consultations is provided as an attachment to this report.

Technical Support

The HMGWP has also conducted technical data collection in order to better understand glacial lakes, along with having the results feed into the community consultation work. In May 2012, the first ground penetrating radar studies (GPR) for the Dudh Pokhari and Tama Pokhari in the Hinku and Hongu Valleys, both potentially dangerous glacial lakes, were conducted by UT with the assistance of TMI staff and volunteers. Following the data collection in the Hinku and Hongu, the team moved to the Khumbu Valley to conduct GPR studies of the Imja glacial lake terminal moraine.

In September 2012, technical work was focused on the Khumbu Valley where bathymetric surveys and additional GPR studies were conducted at Imja Lake. The data collected from May and September was presented at a UNDP partners workshop held on October 8 in Kathmandu; where all participating institutions reported out on their various activities within the engineering and social components of the project.

Capacity Building

In addition to the community consultations and technical activities, a number of cross-cutting activities have taken place in order to build capacity of in-country partner organizations. In May 2012, The National Geographic Society conducted detailed alternative energy development and social media/awareness building analyses of the Hinku valley, where tourism is growing rapidly because of its proximity to one of Nepal's most popular "trekking peaks" and as an alternative to the sometimes overcrowded Everest National Park. This was continued in September 2012 when Chris Ranier from NGS conducted a photographic, video, and web design workshop for Kathmandu NGOs and Khumbu communities.

In addition, the HMGWP provided informational panels to the Khumbu Alpine Conservation Council (KACC) that detailed information about the region in a range of topics from environment, culture, mountains, and climate. An additional panel was provided in September 2012 that summarized the GPR data gathered from Imja Lake.

Peru

The following activities and deliverables were completed during Year One:

- **Glacial Lake Handbook:** Ing. Cesar Portocarrero completed a handbook describing examples of Peru's successful control of potentially dangerous glacial lakes since the 1950s, following devastating floods in the 1940s that killed over 10,000 people in the Cordillera Blanca region. The handbook is intended to be a catalogue of engineering control methods, from the simplest of drainage canals (e.g.,

Laguna Cohup) to the engineering wonder at Laguna Paron, where a tunnel was drilled through 1,000 m of solid rock and fitted with lake level control valves. Approximately 18 case studies are included. TMI is working with IRG/Engility to complete any necessary editing, formatting, and for the final publication and distribution of the handbook.

- **Risk Perception Study:** Dr. Jorge Recharte and Ing. Gabriela Lopez completed this activity in the rural and urban areas historically impacted by a Palcacocha Lake GLOF in the 1940s, and which continues to represent a major threat today. Interviews with key informants in three communities located below Palcacocha Lake (Unchus, Llupa y Marian) were analyzed, including mapping of institutional stakeholders in the city of Huaraz, and review of secondary literature. Results yielded information risk perceptions posed by Palcacocha Lake. The final report was completed and submitted to Engility in August 2012.
- **High Mountain Glacial Watershed Issues Paper:** Dr. Jack Ives provided a detailed outline for an HMGW Issues Paper that covers high mountain geography, physical and social attributes and characteristics, contemporary problems, research gaps, and resource bibliography. The outline was completed on July 11, 2012 and submitted to IRG/Engility and USAID. Dr. Don Alford has been recruited to write the full paper using the Ives conceptual piece as a general guideline. He will be assisted by Alton Byers, Jack Ives, Martin Price, Dirk Hoffman, Jorge Recharte, Andrew Taber, and Daene McKinney.
- **Ground Penetrating Radar surveys:** GPR surveys were conducted at Pastaruri glacier in collaboration with the Huascarán National Park and the Municipality of Catac in order to map the thickness of glacial ice in the quickly retreating glacier. The results will be used in an exhibition of the impact of climate change on the region's glaciers and the impact on tourism economy in July 2013. Additional GPR surveys were conducted at Arteson glacier in collaboration with the Glaciology Unit of Peru in order to map the thickness of glacial ice in the quickly retreating Arteson glacier. The results will be used to determine the future evolution of a potentially dangerous glacial lake forming at the base of the glacier and upstream of Artesoncocha Lake and the critically important Lake Paron. A GPR survey was also conducted at the site of the 1942 breach in the moraine of Lake Palcacocha to determine the remaining depth of moraine material at that dangerous glacial lake.
- **International Workshop, July 2013:** Planning began for the next International Workshop to be held in Peru in July 2013 in the Cordillera Blanca, since the region is a "living laboratory" of high mountain projects and research in both the social and physical sciences. Invitees will include existing CoP members, a contingent of Central Asians and Mongolians, Climber-Scientist grant awardees, various 2011 Andean-Asian Glacial Lake Expedition participants, prominent high mountain social and physical scientists, and selected government and NGO representatives.

ACTIVITY 3.3 CLIMATE SERVICES PARTNERSHIP

Second International Conference on Climate Services

The ICCS 2, convened in Brussels, Belgium, September 5 - 7, 2012, represented the second of what is expected to be the annual flagship conference of the Climate Services Partnership. This year's focus included a review of the first year of CSP collaborative activities in knowledge capture and dissemination, the working group on economic evaluation, program linkages (to Global Framework for Climate Services, United Nations

Framework Convention on Climate Change (UNFCCC) and other platforms); and a more in-depth look at climate services in several key sectors (financial services, water, agriculture/food security, energy) including public-private institution roles and interactions. The three-day ICCS 2 attracted approximately 200 participants from 40 countries.

The ICCS 2 was preceded by Development Day, a one-day event that attracted 40 participants from developing countries, donors, and climate services organizations. Development Day focused on current progress, prospects, and needs for investment in development-focused climate services.

IRI staff represented the CSP at the annual meeting of the European Meteorological Society, in Lodz, Poland, where a special one-day conference on climate services was organized. Cathy Vaughan presented results from the analysis of CSP case studies undertaken over the past six months; Steve Zebiak presented the CSP in a segment on the coordination of climate services. This venue provided the opportunity to expose CSP to a broader meteorological community in Europe, and to initiate several bilateral discussions with interested groups/institutions.

Case Studies and Assessments of Climate Services

As a follow on to the West Africa Regional Adaptation Workshop: Climate Services for Development held in Dakar, Senegal in June/July 2011, three assessments were conducted to better understand the Mali Meteorological Service's (Meteo Mali) Agrometeorological Program (field assessment), the information needs of the program (science assessment), and an institutional assessment of organizations in Mali and the West Africa region (institutional assessment not conducted by CCRD staff).

Field Assessment – A team from USAID and CCRD traveled to Mali to coordinate the launch of an assessment of the Mali Meteorological Service's (Meteo Mali) Agrometeorological Program. This first phase of the assessment took place from January 25 – February 6, 2012 and was carried out with colleagues from the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), the Consultative Group on International Agricultural Research's (CGIAR) Research Program on Climate Change, Agriculture and Food Security (CCAFS), and Mali's Institut d'Economie Rurale. The field assessment tool was tested and then used to collect data in 36 villages in southern Mali. The fieldwork was completed and Stratus Consulting has assisted with data entry and coding. The data will be analyzed at the beginning of Year Two.

Science Assessment – IRI has completed the first phase of the science assessment. Once the field assessment is completed, they will finalize the science assessment and determine if Meteo Mali is: a) currently providing information that could meet those needs, and whether or not they are using the best information in the most appropriate manner; and b) if they are not providing needed information, what are the appropriate sources of that information and the capacity needs Meteo Mali would need to address in order to use that information.

Climate Services Case Studies – The CSP Secretariat, with support from CCRD, worked closely with the GFCS project office and several partner groups in designing a case study template to capture information of greatest interest at the appropriate level of detail. At least five interns traveled to various regions this summer to support and build upon efforts in those locations. Twenty-eight case studies are currently available on the CSP website with another seven expected to be completed and added to the site in the near-term. An initial analysis of the case studies was presented at the second International Conference on Climate Services, and at the annual meeting of the European Meteorological Society.

Literature Survey and Synthesis Paper on Valuing Climate Services

A team from Stratus Consulting completed a review of journal articles and reports on the economic valuation of climate services. More than 180 documents were reviewed and summarized in a matrix. In addition, the CCRD team prepared a draft paper entitled “The Value of Climate Services for Economic and Public Sectors: A Review of Relevant Literature.”

Meeting at WMO in Geneva, September 3, 2012

Glen Anderson, co-chair of the Working Group (WG) on the Economic Valuation of Climate Services, participated in three meetings at the World Meteorological Organization on September 3 in Geneva, Switzerland focused on opportunities for WG collaboration with WMO and the World Bank. The main idea that emerged from these discussions was a workshop to bring together practitioners to discuss methodological issues and develop a primer or guidance related to the design of valuation studies and the communication of the results to decision-makers and users. It was proposed that the WG prepare a concept note for the workshop for review by WMO, The World Bank, and USAID.

Pilot National-Level Climate Services Analysis

IRI coordinated several efforts to equip African countries with analytical tools to help them access climate information and conduct analysis in support of climate information products. A regional training on variability and predictability of agrohydroclimatic characteristics of the West-African rainy season was conducted in Niamey, Niger from May 7 - 12, 2012. Participants were provided with instructions on the use of software to calculate the onset of the rainy season and mentored in preparing rainy season forecasts for 2012.

The IRI Data Library (DL) software was installed at the Tanzania Meteorology Agency in Dar Es Salaam, Tanzania from July 4 - 14, 2012 and at AGRHYMET in Niamey, Niger from August 18 - 27, 2012. IRI staff provided training to both organizations on DL setup and maintenance of the server, updating and adding datasets to the DL, and using the DL to support the development of climate information and products.

ANNEX I. LIST OF TASKS BY ACTIVITY

Project Management, Planning, and Evaluation:

Task PM-1 Develop Year One Work Plan

Task PM-2 Develop and Implement Performance Management Plan

Task PM-3 Strategic & Implementation Planning

Task PM-4 Conduct Advisory Committee Meetings

Task PM-6 Develop & Disseminate CCRD Knowledge Management

Task PM-7 Implement Grants Under Contract Program

Objective 1: Support for USAID Missions and Bureaus

Task 1.1.1 Revise Vulnerability and Adaptation Manual

Task 1.1.2 Develop Climate Briefs and Annexes

Task 1.1.3 Develop Lessons Learned on Mainstreaming Climate Adaptation

Task 1.1.4 Prepare Case Studies to Demonstrate the Mainstreaming Guidance

Task 1.2.1 Understand USAID Bureau and Mission Needs for Climate Change Adaptation Tools

Task 1.2.3 Operate the United Nations Development Program Adaptation Learning Mechanism Website

Task 1.3.3 Support Development of USAID's Federal Agency Climate Change Adaptation Plan

Objective 2: Coordinate with Other USG Agencies to Support Mainstreaming

Task 2.1.1 Conduct Adaptation Partnership Workshops

Task 2.2.1 Facilitate Adaptation Partnership Communities of Practice

Task 2.2.2 Develop Adaptation Partnership Materials

Objective 3: Identify and Respond to Emerging Issues and Fill Gaps

Task 3.1.1 Support Preparation of National Adaptation Plans

Task 3.2.1 Design a High Mountain Glacial Watershed Program

Task 3.2.2 Develop the High Mountain Glacial Watershed Program's Community of Practice

Task 3.2.3 Design and Conduct the Climber-Scientist Competitive Solicitation

Task 3.3.1 Design an Adaptation and Climate Services Program

Task 3.3.2 Coordinate Activities of the Climate Services Partnership

Task 3.3.3 Compile and Disseminate Current Climate Services Knowledge

Task 3.3.4 Conduct Case Studies and Assessments of Climate Services

Task 3.3.5 Economic Valuation of Climate Services

Task 3.3.6 Climate Information Guide

ANNEX II. CCRD PERFORMANCE INDICATORS AND ACHIEVEMENTS

During Fiscal Year (FY) 2012, implementation activities supported five of the 11 performance indicators specified in the CCRD Performance Management Plan. Below: a summary of CCRD performance indicator achievements is provided, followed by a summary table.

Indicator #1: Number of people with increased capacity to adapt to the impacts of climate variability and change as a result of USG assistance (mandatory for Adaptation funding)

Adaptation Partnership follow-on activities and the Jamaica V&A training contributed to this indicator as follows (57 people, 48 men, 9 women):

- Support to three communities in the Khumbu region of Nepal resulted in increased capacity of local community members, the Sagarmatha National Park, the Khumbu Alpine Conservation Council, and one private lodge owner to prepare an adaptation and disaster risk plan for the Khumbu region (15 people, 13 men, 2 women)
- Staff at AGRYMET developed capacity to provide seasonal forecasts to West African farmer (12 men)
- Staff in the City of Hue, Vietnam and the local university developed capacity to carry out urban adaptation planning tool – assistance provided by Cascadia Consulting Group through CCRD (25 people, 20 men, 5 women)
- Government of Jamaica staff and consultant have increased capacity to integrate climate concerns into the country's national development strategy as a result of the Jamaica V&A workshop and technical assistance provided by CCRD (5 people, 3 men, 2 women)

Indicator #2: Number of people receiving training in climate change supported by USG assistance (Person-hours of training completed in climate change supported by USG assistance)

Support for Indicator #2 (and #5) resulted from three types of activities: 1) Adaptation Partnership Workshops, 2) Adaptation Partnership follow-on training workshops organized under the Climate Services Partnership and High Mountain Glacial Watershed Program, and 3) the Jamaica Workshop on Mainstreaming Climate Change into Development (524 people, 376 men, 148 women; 10,649 hours of training, 7913 hours of training for men, 2736 hours of training for women).

Four Adaptation Partnership Workshops were convened with CCRD support during the fiscal year:

- Western Indian Ocean Workshop for Coastal and Marine Protected Areas in Cape Town, South Africa
- Assessing Vulnerability and Building Resilience in Key Agricultural Sectors to Promote Economic Development and Food Security in San Jose, Costa Rica
- Monitoring and Evaluation workshop in Bonn, Germany

- Building Urban Climate Change Resilience Workshop in Bangkok, Thailand

Under the leadership of the International Research Institute for Climate and Society (IRI), training workshops on the use of IRI's data library and climate services applications were convened, including: 1) Training on Data Library (DL) software in Dar Es Salaam, Tanzania, 2) Training on DL software in Niamey, Niger, and 3) Training on variability and predictability of agrohydroclimatic characteristics of the West-African rainy season in Niamey, Niger. IRI also organized the Climate Services Partnership Development Day in Brussels, Belgium.

IRG staff conducted a training-of-trainers workshop on climate change adaptation for The Mountain Institute (TMI) and other local organizations in Nepal. This workshop was followed by three climate adaptation stakeholder meetings in three communities in the Khumbu region of Nepal (Phakding, Namche and Dingboche), led by TMI staff who had received training from IRG.

Indicator #3: Number of laws, policies, strategies, plans, agreements, or regulations addressing climate change officially proposed, adopted, or implemented as a result of USG assistance

No activities during the fiscal year.

Indicator #4: Amount of investment leveraged in U.S. dollars from private and public sources, for climate change as a result of USG assistance

CCRD benefitted from the financial contributions of numerous public and private organizations for Adaptation Partnership workshops and follow-on activities. Not all organizations providing leverage have been forthcoming in sharing cost information. In those instances, an estimate of the value of leverage is provided based on CCRD's experience in convening similar events such as international conferences and workshops.

Source of leverage related to the Adaptation Partnership are presented below in two groups: Adaptation Partnership workshops and follow-on activities (\$440,000 in total):

Adaptation Partnership workshops (\$350,000):

- Climate-Smart Agriculture Program Design Workshop, Nairobi, Kenya, October 2011 – Co-financing by COMESA (Common Market for Eastern and Southern Africa), the World Bank, and NEPAD (The New Partnership for Africa's Development – a program of the African Union). Estimated value of leverage for four-day workshop is 50,000.
- International Conference on Climate Services, New York, October 2011 – Co-financing provided by NOAA, the Earth Institute's International Research Institute for Climate and Society, the German Climate Services Center, and the UK Meteorological Office. Estimated value of leverage for three-day workshop and one-day meeting on developing countries – \$100,000.
- Adaptation Partnership Workshop on Climate Adaptation, Monitoring and Evaluation, Bonn, Germany, April 2012 – Co-financing by GIZ and Bonn Perspectives (funded by the City of Bonn and the European Union. Estimated value of two-day workshop is \$50,000.
- Second International Conference on Climate Services, Brussels, Belgium, September 2012 – Co-financing provided by the German Climate Services Center, the German Meteorological Service, UK Meteorological Office, GIZ, NOAA, the National Center for Atmospheric Research, IRI,

and the World Bank. Estimated value of leverage for 3-day workshop and one-day meeting on developing countries – \$150,000.

Adaptation Partnership follow-on activities (\$90,000):

- Equipment to support testing of glacial lake outburst flood potential under the High Mountain Glacial Watershed Program, Nepal, May 2012 and September 2012 – University of Texas at Austin. This equipment is owned by the University of Texas and would not otherwise be available for rental for use in foreign country. “Rental” value (assumed to be 1/5 of purchase price) and cost of consumables is estimated to be \$20,000,
- Equipment to support glacial volumetric calculations by Ohio State University under the High Mountain Glacial Watershed Program, Ecuador, June 2012 – UNAVCO (University-governed consortium supporting geoscience research, Boulder, Colorado) provided the equipment and a technician to carry out the measurements and train Ohio State graduate student, Jeff La Frenierre. Estimated rental value (1/5 of purchase price) and labor costs for the UNAVCO technician is \$40,000.
- Preparation of a Guidance Note for Investment in Hydromet and Climate Services – The World Bank. Cost of consultancy to prepare note in support of The Climate Services Partnership (CSP) is \$30,000.

Indicator #5: Number of institutions with improved capacity to address climate change issues as a result of USG assistance

See discussion for Indicator #2.

Indicator #6: Number of days of USG funded technical assistance in climate change provided to counterparts or stakeholders

Technical assistance was provided for Adaptation Partnership follow-on activities related to the High Mountain Glacial Watershed Program, the Climate Services Partnership, in support of the Adaptation Partnership workshop on Building Urban Climate Change Resilience Workshop in Bangkok, Thailand, the Jamaica V&A workshop, and the Benin Integration Pilot, including (171 days):

- Technical assistance to the Government of Nepal and UNDP on the assessment of glacial lake outburst flood risks at Imja Lake in the Khumbu (Everest) region, and lakes in the Hinku and Hongu Valleys – Assistance provided by University of Texas at Austin and The Mountain Institute through CCRD (60 days)
- Technical assistance to AGRYMET on the calculation of the onset of the rainy season in West Africa and preparation of rainy season forecasts for farmers – Assistance provided by IRI (10 days)
- Technical assistance to the City of Hue, Vietnam in the development/tailoring of a urban adaptation planning tool – Assistance provided by Cascadia Consulting Group through CCRD (60 days)
- Technical assistance to the Government of Jamaica on mainstreaming climate change into the nation development strategy, Vision 2030 – Assistance provided by IRG and ICF (36 days)

- CCRD provided technical assistance to the USAID/Benin Mission in support of their GCC Integration Pilot focused on the problem of flooding's disruption of school operations (5 days)

Indicator #7: Number of climate adaptation tools, technologies and methodologies developed, tested, and/or adopted as a result of USG assistance

CCRD supported the testing of four tools and technologies including:

- Urban adaptation planning and the assessment of climate change impacts on glaciers and glacial lake risks. Cascadia Consulting Group conducted a pilot of its climate impacts tool in the coastal city of Hue, Vietnam. This pilot is expected to lead to extensive use of the tool in Vietnam in the next fiscal year.
- Under the High Mountain Glacial Watershed Program, three tools were tested.
 - Ohio State graduate student, Jeff La Frenierre, used terrestrial laser scanning, which applies similar principles as LIDAR (light detection and ranging optical remote sensing), to estimate glacial ice volumes for debris-covered glaciers in Ecuador.
 - In Nepal and Peru, the University of Texas at Austin tested the use of ground penetrating radar to characterize the floors and terminal moraines of glacial lakes. Combined with the bathymetric survey of Imja Lake in Nepal, these tools provide data to help determine how to manage Imja Lake to avoid devastating glacial lake outburst floods.

CCRD also supported the testing of two V&A methodologies:

- Mainstreaming climate into development planning in Jamaica – CCRD assisting Government of Jamaica to develop policy framework to facilitate climate resilient planning for the national development plan, Vision 2030, and sector plans.
- Testing of the V&A approach for water in Iloilo, Philippines – CCRD applied the methodology in the Water Annex to the assessment of climate and non-climate stressors in Iloilo province.

Indicator #8: Number of climate vulnerability assessments conducted

CCRD supported five vulnerability assessments during the fiscal year, including a desktop review of climate vulnerability for the USAID/Peru Mission, assessment for USAID's Federal Agency Climate Change Adaptation Plan, a vulnerability assessment of water security issues in Iloilo, Philippines in support of the USAID/Philippines Mission, a V&A stakeholder process in Jamaica, and V&A stakeholder processes in three communities in the Khumbu region of Nepal.

Indicator #9: Number of people registering to participate in adaptation-related communities of practice

Two of the communities of practice established with support from CCRD – The High Mountain Glacial Watershed Program and Central America agriculture registered members during the fiscal year. The Climate Services Partnership website, which began operations in late August is expected to register members in the next year.

Indicator #10: Number of people logging on to/accessing the adaptation-related websites supported with USG assistance

CCRD monitored visits to the Adaptation Partnership website, including the three communities of practice, and the new Climate Services Partnership website.

Indicator #11: Number of adaptation financing proposals benefitting from USG assistance

No activities during the fiscal year.

CCRD Performance Indicators and Achievements

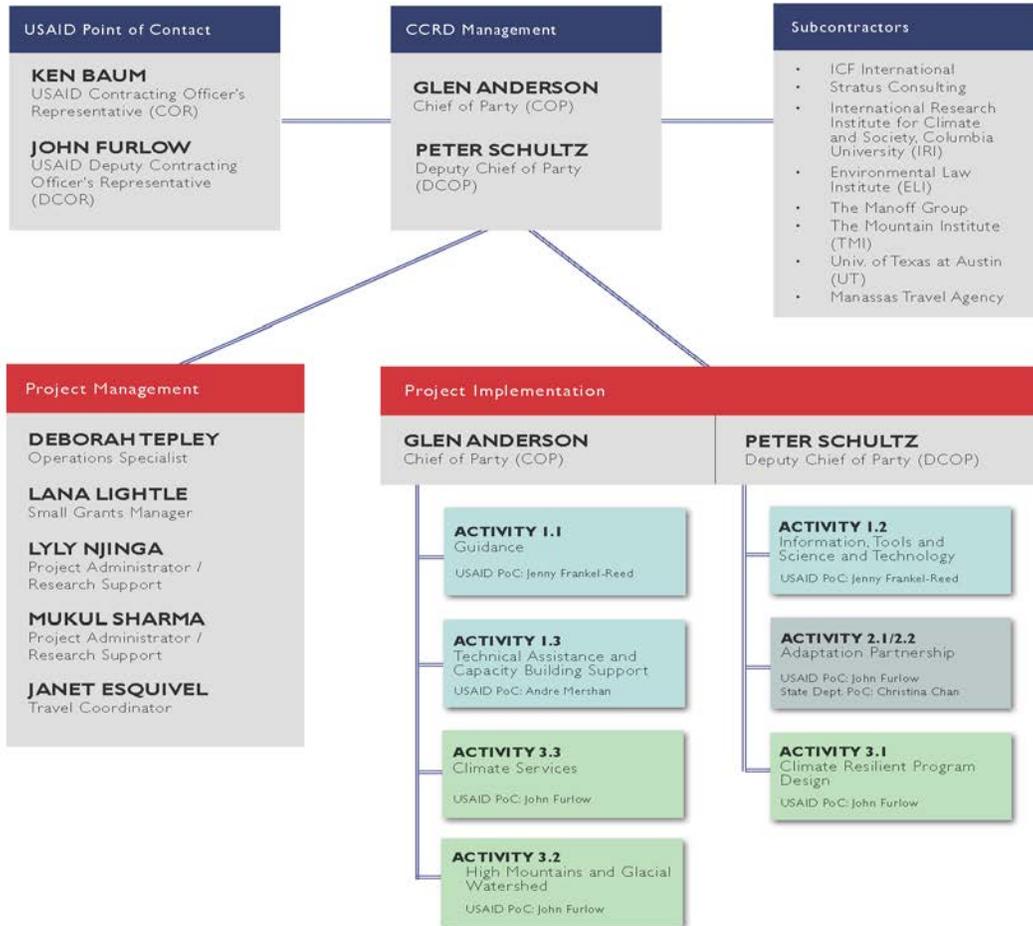
| # | Indicator | Unit | FY 2012 Target | Achievement – FY 2012 | | | | Remarks | Cumulative |
|---|---|------------------|----------------|-----------------------|-------------|-------------|--------------|---|------------|
| | | | | QTR 1 | QTR 2 | QTR 3 | QTR 4 | | |
| 1 | Number of people with increased capacity to adapt to the impacts of climate variability and change as a result of USG assistance (mandatory for Adaptation funding) MEN | number | | | | 32 | 16 | AGRYMET capacity building on climate services (Qtr 3) Hue, Vietnam urban adaptation tool development (Qtr 3) Nepal capacity building on adaptation (Qtr 4) | 48 |
| | Number of people with increased capacity to adapt to the impacts of climate variability and change as a result of USG assistance (mandatory for Adaptation funding) WOMEN | number | | | | 5 | 4 | Jamaica V&A (Qtr 4) | 9 |
| 2 | Number of people receiving training in climate change supported by USG assistance (Person-hours of training completed in climate change supported by USG assistance) MEN | number/ hours | | 20/ 160 | 69/ 1656 | 55/ 1606 | 232/ 4491 | <i>Adaptation Partnership Workshops:</i> New York (Qtr 1), South Africa and Costa Rica (Qtr 2), Germany (Qtr 3), and Thailand (Qtr 4) <i>Community of Practice Workshops/Trainings:</i> | 376/7913 |
| | Number of people receiving training in climate change supported by USG assistance (Person-hours of training completed in climate change supported by USG assistance) WOMEN | number/ hours | | 9/ 72 | 29/ 696 | 6/ 168 | 104/ 1800 | <i>Climate Services – Tools and IRI Data Library Training:</i> US (Qtr 3), Niger (Qtrs 3 and 4), Tanzania (Qtr 4) <i>Climate Services: Development Day at ICCS 2:</i> Belgium (Qtr 4) <i>V&A Training:</i> Jamaica (Qtr 4), Nepal training of trainers and 3 stakeholder meetings (Qtr 4) | 148/2736 |

| # | Indicator | Unit | FY 2012 Target | Achievement – FY 2012 | | | | Remarks | Cumulative |
|---|--|---------|----------------|-----------------------|-------|-------|-------|--|------------|
| | | | | QTR 1 | QTR 2 | QTR 3 | QTR 4 | | |
| 3 | Number of laws, policies, strategies, plans, agreements, or regulations addressing climate change officially proposed, adopted, or implemented as a result of USG assistance | number | | | | | | | |
| 4 | Amount of investment leveraged in U.S. dollars from private and public sources, for climate change as a result of USG assistance | dollars | | 150k | | 100k | 190k | Climate-Smart Agriculture Program Design Workshop (Qtr 1) Adaptation Partnership Workshop, New York (Qtr 1) Adaptation Partnership Workshop, Germany (Qtr 3) Adaptation Partnership Workshop, Thailand (Qtr 4) Piloting of assessment tools in Nepal (Qtr 3 and 4), Ecuador (Qtr 3) and Peru (Qtr 4) WB note on investment and climate services (Qtr 4) | \$440,000 |
| 5 | Number of institutions with improved capacity to address climate change issues as a result of USG assistance | number | | 28 | 81 | 21 | 142 | See Indicator #2 Remarks | 272 |
| 6 | Number of days of USG-funded technical assistance in climate change provided to counterparts or stakeholders | days | | | | 119 | 52 | AGRYMET capacity building on climate services (Qtr 3) Hue, Vietnam urban adaptation tool development (Qtr 3) Nepal glacial lake outburst flood assessment (Qtr 3 and 4) TDY Mission to support Benin | 171 |

| # | Indicator | Unit | FY 2012 Target | Achievement – FY 2012 | | | | Remarks | Cumulative |
|----|--|--------|----------------|-----------------------|-------|-------|-------|--|------------|
| | | | | QTR 1 | QTR 2 | QTR 3 | QTR 4 | | |
| | | | | | | | | Integration Pilot project design (Qtr 3) Jamaica V&A support for policy framework (Qtrs 3 and 4) | |
| 7 | Number of climate adaptation tools, technologies and methodologies developed, tested, and/or adopted as a result of USG assistance | number | | | | 3 | 3 | Tools: Cascadia (Qtr 3); Ohio State (Qtr 3); University of Texas at Austin (Qtrs 3 and 4) Methodologies: Jamaica mainstreaming (Qtr 4); Philippines water V&A (Qtr 4) | 6 |
| 8 | Number of climate vulnerability assessments conducted | number | | 1 | | 1 | 3 | USAID/Peru Desktop Study (Qtr 1); USAID Federal Agency CC Adaptation Plan (Qtr 3); Iloilo, Philippines (Qtr 4); Jamaica (Qtr 4); Khumbu, Nepal (Qtr 4) | 5 |
| 9 | Number of people registering to participate in adaptation-related communities of practice | number | | | | 50 | 30 | High Mountain Glacial Watershed Program (Qtrs 3 and 4) Central America climate resilient agriculture CoP (Qtrs 3 and 4) | 80 |
| 10 | Number of people logging on to/accessing the adaptation-related websites supported with USG assistance | number | | | 2,095 | 3,502 | 2,090 | Qtr 2: Adaptation Partnership Google Diagnostics data Qtr 3: Adaptation Partnership Google Diagnostics data. 1,303 out of the 3,502 visitors were viewers for the HMGWP page. Qtr 4: Adaptation Partnership Google | 7687 |

| # | Indicator | Unit | FY 2012 Target | Achievement – FY 2012 | | | | Remarks | Cumulative |
|----|--|--------|----------------|-----------------------|-------|-------|-------|---|------------|
| | | | | QTR 1 | QTR 2 | QTR 3 | QTR 4 | | |
| | | | | | | | | <p>Diagnostics data for period. 248 out of the 2,090 visitors were viewers for the HMGWP page. 113 out of the 2,090 visitors were viewers for the CSP page. 171 out of the 2,090 visitors were viewers for the Central America COP page</p> | |
| II | Number of adaptation financing proposals benefitting from USG assistance | number | | | | | | | |

ANNEX III. ORGANIZATIONAL CHART



PROJECT MANAGEMENT

GLEN ANDERSON

| | |
|--|---|
| WORK PLAN | G.ANDERSON / KEN BAUM |
| FMP | G.ANDERSON / K. BAUM |
| STRATEGIC PLANNING /SAC | G.ANDERSON / JOHN FURLOW |
| REPORTING | DEBORAH TEPLEY / K. BAUM |
| COMMUNICATIONS, OUTREACH, AND COMMUNITIES OF PRACTICE (CoPs) | ROSAMUND MISCHÉ JOHN / JENNY FRANKEL-REED |
| POC FOR SUBCONTRACTORS/CONSULTANTS | D.TEPLY / K. BAUM |
| SMALL GRANTS | LANA LIGHTLE / K. BAUM |

PROJECT IMPLEMENTATION

GLEN ANDERSON / PETER SCHULTZ

| | | | |
|--|--------------------------------|--|------------|
| ACTIVITY 1.1: GUIDANCE | G.ANDERSON / J.FRANKEL-REED | | |
| 1.1: GUIDANCE, BRIEFS, AND ANNEXES | YOON KIM / J.FRANKEL-REED | 1.1: CASE STUDIES | G.ANDERSON |
| REVISE V&A MANUAL | YKIM / J.FRANKEL-REED | CASE STUDIES TO DEMONSTRATE THE MAINSTREAMING GUIDANCE | G.ANDERSON |
| WATER ANNEX | BOB RAUCHER / J.FRANKEL-REED | WASH CASE STUDY | J.TROELL |
| COASTAL AND MARINE ANNEX | YKIM / JONATHAN COOK | | |
| DIFFERENTIATED VULNERABILITIES ANNEX | D.TEPLY / ANDRE MERSHON | | |
| GOVERNANCE ANNEX | JESSICA TROELL / J.COOK | | |
| DEVELOP LESSONS LEARNED ON MAINSTREAMING CLIMATE ADAPTATION INFRASTRUCTURE LESSONS LEARNED PILOT | MIKE SAVONIS / J.FRANKEL-REED | | |
| YEAR 2 KM / ROLLOUT OF NEW GUIDANCE | M.SAVONIS / K.BAUM | | |
| YEAR 2 V&A 201 TRAINING | A.MERSON | | |
| YEAR 2 DRR CLIMATE GUIDANCE BRIEF | A.MERSON | | |
| YEAR 2 LEDS GUIDANCE BRIEF | NORA FERM | | |
| YEAR 2 SECURITY/CONFLICT GUIDANCE BRIEF | ASHLEY ALLEN | | |
| YEAR 2 URBAN INFRASTRUCTURE GUIDANCE BRIEF | J.FURLOW | | |
| YEAR 2 RISK MANAGEMENT (INCLUDING DRR) GUIDANCE BRIEF | K.BAUM / N.FERM | | |
| YEAR 2 HEALTH GUIDANCE BRIEF | N.FERM | | |
| YEAR 2 PROJECT DESIGN & MANAGEMENT (INCLUDING FINANCING AND M&E) GUIDANCE BRIEF | J.FRANKEL-REED | | |
| | J.COOK | | |
| ACTIVITY 1.2: INFORMATION, TOOLS AND SCI AND TECH | P.SCHULTZ / J.FRANKEL-REED | | |
| UNDERSTAND USAID BUREAU AND MISSION NEEDS FOR CC ADAPTATION TOOLS | P.SCHULTZ / J.FRANKEL-REED | | |
| MAINTAIN GCC OFFICE HELP DESK | A.MERSON | | |
| UNDP ALM WEBSITE | R.MISCHE JOHN / J.FRANKEL-REED | | |
| ACTIVITY 1.3: TECHNICAL ASSISTANCE AND CAPACITY BUILDING SUPPORT | G.ANDERSON | | |
| PROVIDE CAPACITY BUILDING SUPPORT ON MAINSTREAMING V&A | G.ANDERSON / A.MERSON | | |

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| ACTIVITY 2.1/2.2: ADAPTATION PARTNERSHIP | P.SCHULTZ | 2.2: ADAPTATION PARTNERSHIP CoP | R.MISCHE JOHN |
| 2.1: ADAPTATION PARTNERSHIP | R.MISCHE JOHN | FACILITATE ADAPTATION PARTNERSHIP CoP | R.MISCHE JOHN |
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| CLIMATE CHANGE AND SECURITY WORKSHOP | R.MISCHE JOHN | | |

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| SUPPORT PREPARATION OF NATIONAL ADAPTATION PLANS (NAPS) | Y.KIM | | |
| ACTIVITY 3.2: HIGH MOUNTAINS AND GLACIAL WATERSHEDS | P.SCHULTZ | | |
| 3.2: HIGH MOUNTAINS AND GLACIAL WATERSHEDS | MEGHAN HARTMAN | | |
| DEVELOP THE GLOBAL HIGH MOUNTAIN - GLACIAL LAKE PARTNERSHIP CoP | CoP SECRETARIAT - THE MOUNTAIN INSTITUTE / UNIVERSITY OF TEXAS AT AUSTIN | | |
| DESIGN AND CONDUCT THE CLIMBER-SCIENTIST SMALL GRANTS COMPETITION | CoP SECRETARIAT - TMI/UT | | |
| ESTABLISH THE CLIMBER-SCIENTIST SMALL GRANTS COMPETITION | TMI/UT | | |
| IMPLEMENT CoP PILOT PROJECTS AND RESEARCH | TMI/UT | | |
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| COP WORKSHOP PLANNING | TMI/UT | | |
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| ACTIVITY 3.3: CLIMATE SERVICES | G.ANDERSON | | |
| 3.3: CLIMATE SERVICES | FERNANDA ZERMOGLIO | | |
| COORDINATE ACTIVITIES OF THE CLIMATE SERVICES PARTNERSHIP | STEVE ZEBIAK | | |
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| ECONOMIC VALUATION OF CLIMATE SERVICES | G.ANDERSON | | |
| CLIMATE INFORMATION GUIDE BOOK AND TRAINING | IRI STAFF | | |
| PILOT NATIONAL-LEVEL CLIMATE SERVICES ANALYSIS | S.ZEBIAK | | |

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