



OFFICE OF INSPECTOR GENERAL

AUDIT OF USAID/HAITI'S WATERSHED INITIATIVE FOR NATIONAL NATURAL ENVIRONMENTAL RESOURCES PROGRAM

AUDIT REPORT NO. 1-521-12-003-P
APRIL 27, 2012

SAN SALVADOR, EL SALVADOR



Office of Inspector General

April 27, 2012

MEMORANDUM

TO: USAID/Haiti Mission Director, Carleene Dei

FROM: Regional Inspector General/San Salvador, Jon Chasson /s/

SUBJECT: Audit of USAID/Haiti's Watershed Initiative for National Natural Environmental Resources Program (Report No. 1-521-12-003-P)

This memorandum transmits our final report on the subject audit. In finalizing the audit report, we considered your comments on the draft report and have included those comments in their entirety in Appendix II of this report.

The final report includes 12 recommendations to help the mission improve various aspects of the Watershed Initiative for National Natural Environmental Resources Program. Based on your written comments in response to the draft report, final action has been taken on Recommendation 9, and management decisions have been reached on Recommendations 1, 2, 3, 5, 6, 7, 8, 10, 11, and 12. Please provide the Audit Performance and Compliance Division of USAID's Office of the Chief Financial Officer with evidence of final action to close the open recommendations.

A management decision was not reached on Recommendation 4. Please provide written notice within 30 days of any action planned or taken to implement this recommendation.

I want to thank you and your staff for the cooperation and courtesies extended to us during this audit.

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Abbreviations

The following abbreviations appear in this report:

ADS	Automated Directives System
CFR	Code of Federal Regulations
COTR	contracting officer's technical representative
EMPR	environmental mitigation plan and report
IEE	initial environmental examination
IQC	indefinite quantity contract
MEO	mission environmental officer
PEA	program environmental assessment
PERSUAP	Pesticide Evaluation Report and Safer Use Action Plan
PPP	public-private partnership
RIG	Regional Inspector General
WINNER	Watershed Initiative for National Natural Environmental Resources

SUMMARY OF RESULTS

Haiti's watersheds have long been in decline. By 1920, unchecked logging had already deforested about 40 percent of Haiti's surface area, and by 1980, the increasing demand for charcoal required by a growing urban population left only about 5 percent of Haiti forested. Today only an estimated 2 percent of Haiti is forested.¹ The absence of vegetation in Haiti's watersheds has left the country extremely vulnerable to the effects of tropical storms and hurricanes. These increasingly frequent storms trigger severe flash floods that originate in eroded watersheds, wash down on local communities, and often result in loss of human life.²

To address the problem of watershed degradation, USAID/Haiti launched the Watershed Initiative for National Natural Environmental Resources (WINNER) program in 2009. The mission designed this program to reduce environmental and economic vulnerability through the rehabilitation and improved management of specific watersheds in Haiti. To implement WINNER, USAID/Haiti signed a cost-plus-fixed-fee completion contract with Chemonics International Inc. (Chemonics) covering the period from June 1, 2009, to May 31, 2014. The program's authorized funding is \$128 million; as of September 28, 2011, obligations and expenditures under the program totaled \$44.6 million and \$35.3 million, respectively.

A year after the devastating earthquake in January 2010, USAID/Haiti, in collaboration with the U.S. Department of State, realigned its country strategy. Instead of conducting activities throughout the country, USAID/Haiti began to concentrate them in the three geographic corridors expected to provide the greatest opportunity for industry, exports, and agricultural production. The mission is focusing on agriculture because Haiti produces less than half the food it consumes.

Consistent with the post-earthquake strategy, USAID/Haiti approved a March 2011 contract modification that shifted the focus of WINNER's activities from watershed rehabilitation and management to sustainable agriculture. The modification also required Chemonics to implement WINNER activities only in the Saint Marc and Cul de Sac development corridors.

The illustration on the following page shows the three corridors now targeted by USAID/Haiti.

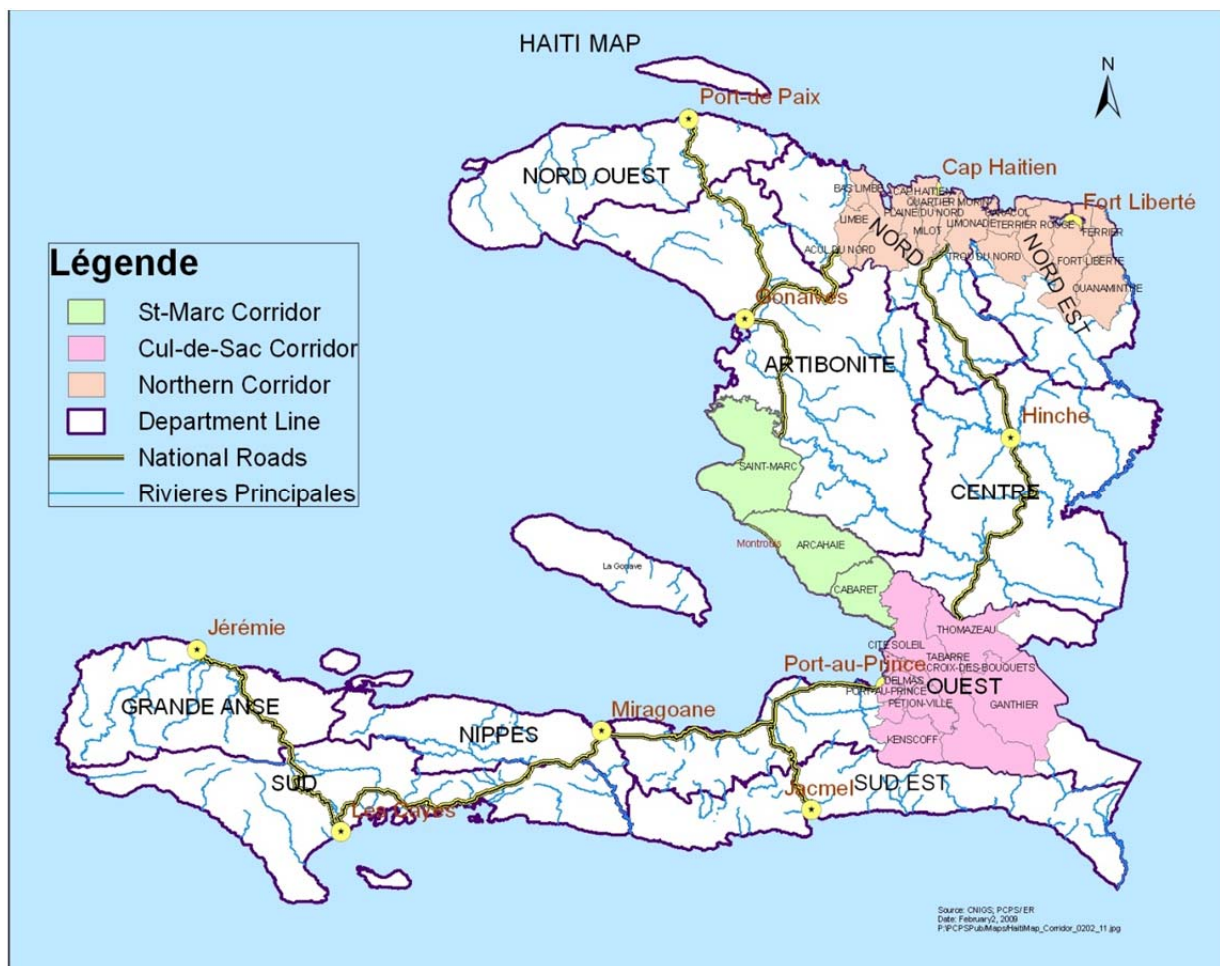
The Regional Inspector General/San Salvador (RIG/San Salvador) conducted this audit to determine whether WINNER was achieving its main goals of reducing economic and environmental vulnerability in Haiti. In addition, the Inspector General Act of 1978 requires auditors to promote economy, efficiency, and effectiveness in the administration of USAID programs and to prevent and detect fraud and abuse in such programs and operations.

The audit found that, during its first 2 years of operation under the original strategy, the program implemented numerous activities that could reduce environmental and economic vulnerability through improved management and rehabilitation of watersheds. Specifically, the program improved watershed management by promoting local watershed governance, fortifying ravines and rivers against flooding, and dredging rivers and canals. On the economic side, the program

¹ United States Institute of Peace, Special Report, "Haiti after the Donor's Conference – A Way Forward," September 2009.

² "Environmental Vulnerability in Haiti – Findings and Recommendations," prepared for USAID by Chemonics International Inc. and the U.S. Forest Service, April 2007.

Map of USAID/Haiti Development Corridors



Source: USAID/Haiti.

promoted alternate sources of income (such as poultry and flower production), trained farmers in modern agricultural techniques, and set up numerous demonstration farms to disseminate improved agricultural practices. The program also supported the installation of effective low-tech flood early warning systems. In all, as of July 2011 WINNER had supported 240 projects³ with expenditures of \$19.1 million (detailed in Appendix III).

Despite these accomplishments, the audit disclosed various problems related to implementation:

- USAID/Haiti's revised country strategy shifted the focus of WINNER activities away from the Gonaïves/La Quinte watershed (page 5). Because of the mission's desire to implement the revised strategy rapidly, USAID/Haiti did not evaluate the impact of the changes on activities under way in the watershed.
- USAID/Haiti's contract with Chemonics did not specify procedures for environmental compliance, and USAID/Haiti did not conduct sufficient environmental oversight for some

³ An additional 57 activities were planned, but either were not yet started (25) or had been dropped (32).

activities (page 6). Without adequate oversight, Chemonics did not prepare required assessments and plans or test water quality, and USAID environmental officials were not aware that work by Chemonics on a drainage canal was taking place in a wetland that is home to bird species classified as “near threatened.” Those deficiencies and the exclusion of the mission environmental officer (MEO) from deliberations on contract modifications may harm human health and the environment.

- A \$2.3 million USAID/Haiti infrastructure project is at risk (page 10). People living near the Grise River, which the program has widened and dredged to minimize the risk of flooding, continue to mine river sediments and dump trash in the river. Mining weakens the retaining walls built by the program on riverbanks, and dumping negates the dredging efforts, but both practices continue because the Government of Haiti has not taken steps to stop them.
- USAID/Haiti did not establish controls to encourage safe handling of pesticides or prevent their improper use and did not promote pesticide alternatives (page 12). During visits to agricultural supply stores, auditors noted opened bags of pesticides (indicating the sale of smaller quantities, packaged without instructions), instructions on pesticides and treated seeds printed in languages other than French and Creole (the languages spoken in Haiti), the absence in some stores of protective equipment, and the presence of pesticides not recommended by the mission’s Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP).
- USAID/Haiti did not meet USAID’s biodiversity code criteria (page 15). Not having objectives explicitly related to the promotion of biodiversity in areas known to be biologically significant, the program fell short of Agency standards.

To help improve the efficiency and effectiveness of WINNER, RIG/San Salvador recommends that USAID/Haiti:⁴

1. Develop a transition plan for the cessation of activities in the Gonaïves/La Quinte watershed, outlining the disposition of assets developed as a result of the program’s activities (page 6).
2. Prepare a modification to the WINNER contract to include language for compliance with environmental requirements in Title 22 of the Code of Federal Regulations, Part 216 (page 10).
3. Consult with the environmental compliance staff and develop a written assessment of what further environmental evaluations may be required for the irrigation rehabilitation of the Grise River, the Boucanbrou drainage canal, and the value chain⁵ for mango exports (page 10).
4. Implement water quality testing and document the results of these tests (page 10).

⁴ The report initially included 5 additional recommendations related to revised program activities not within the IQC scope, contract deliverables not defined and agricultural activities not incorporating food security best practices. These issues were subsequently addressed in a management letter to USAID/Haiti.

⁵ A value chain links all the stages and actors involved in the development of a product or service—in this case mangoes—from input suppliers to end-market buyers.

5. Develop procedures to integrate the regional environmental advisor and the MEO into planning, design, and monitoring of WINNER activities (page 10).
6. Determine and document the necessary actions to ensure that Chemonics provides adequate environmental oversight for WINNER (page 10).
7. Develop a sustainability plan for future program infrastructure works prior to undertaking further construction activities on the Grise River (page 12).
8. Develop a plan for promoting the use of nonchemical fertilizers and pesticides in agricultural supply stores (page 14).
9. Provide integrated pest management courses to all farmers attending WINNER's master farmer training (page 14).
10. Develop formal procedures for periodically monitoring WINNER-supported supply stores (page 15).
11. Obtain training in biodiversity for its staff and consult with biodiversity staff in USAID/Washington on their program adjustments or design (page 16).
12. Issue a mission policy for documenting its application of funds earmarked for biodiversity to ensure that all biodiversity code requirements are met (page 16).

Detailed findings follow. The audit scope and methodology are described in Appendix I. Our evaluation of USAID/Haiti's management comments appears on page 18, and the mission's comments appear in Appendix II.

AUDIT FINDINGS

USAID Did Not Evaluate the Impact of Changed Geographic Focus

USAID/Haiti awarded Chemonics the WINNER contract under an indefinite quantity contract (IQC)⁶ for Integrated Water and Coastal Resources Management. The initial purpose of the contract was for Chemonics to implement sustainable natural resource management activities at the scale and density needed to reduce environmental, infrastructural, and economic vulnerability, primarily in the Cul de Sac, Cabaret, and Gonaïves/La Quinte watersheds.

However, in January 2011, USAID issued its new strategy for Haiti. This new strategy focused on stimulating economic activity and enhancing the delivery of basic services in three designated development corridors. USAID/Haiti revised its approach for assistance to Haiti and modified its contract with Chemonics, redirecting work to two of the three development corridors. Because the Gonaïves/La Quinte watershed fell outside the corridor areas, USAID/Haiti instructed Chemonics to phase out its activities in that watershed.

Consequently, Chemonics cancelled 15 of 57 planned activities in the region. As of July 2011, USAID/Haiti had expended \$5.3 million in the Gonaïves/La Quinte watershed, representing 28 percent of total program funds spent. A Chemonics representative said WINNER had built a foundation in the Gonaïves/La Quinte watershed, but much needed work remained. He further said the weak capacity of the Government of Haiti meant that the flood prevention work done would likely not be maintained.

Some examples of activities affected by the change in geographic focus include:

- **A \$255,000 investment for a drain study and dredging activity.** Chemonics did not complete the masonry work and did not plan to fund follow-up maintenance work.
- **A \$2 million investment to widen the La Quinte River.** This activity, shown on the following page, accounts for about 80 percent of the Chemonics flood protection work in the watershed. Chemonics halted work in the region before establishing a sustainability plan to ensure that needed follow-up dredging will be performed.
- **Ravine treatments.** Chemonics will halt about 60 percent of planned treatments, significantly reducing flood prevention efforts in the region.
- **Studies for ravine treatments.** Chemonics completed at least three studies for ravine treatments in the Gonaïves watershed that it never used.

⁶ An IQC is an umbrella contract that allows USAID missions to expedite procurement by using the services of qualified contractors through a limited competitive bidding process or noncompetitive awards. The awards, called task orders, can be for any value.



Cleanup of the overgrown drainage canal (left) was cancelled after the shift in program focus, and the La Quinte River widening (right) is at risk without maintenance.
(Photos by the Office of Inspector General, July 25, 2011)

Because of the mission's desire to implement the revised strategy rapidly, USAID/Haiti did not evaluate the impact of the halt of activities in the Gonaïves/La Quinte watershed as economic, efficient and effective program management would dictate. To ensure that USAID/Haiti considers the impact of cancelling activities in the Gonaïves/La Quinte watershed, we make the following recommendation.

Recommendation 1. We recommend that USAID/Haiti develop a plan for the cessation of activities in the Gonaïves/La Quinte watershed, outlining the disposition of assets developed by the program.

USAID/Haiti Did Not Conduct Sufficient Environmental Oversight for Some Activities

USAID's Automated Directives System (ADS), Chapter 204, "Environmental Procedures," states that USAID must fully comply with environmental procedures established in the Code of Federal Regulations (22 CFR 216). USAID is required to "integrate environmental issues into its programs, both to meet U.S. Government legal environmental obligations and to optimize economic and social development results." Supplementary guidance to ADS 204⁷ provides recommended language on environmental procedures to include in requests for proposals and award documents. The purpose is to give USAID time to conduct environmental review and incorporate environmental factors and mitigating measures in the design and approval of each program and activity before making an irreversible commitment of resources.

Specific procedures for ensuring compliance with 22 CFR 216 include:

⁷ "Environmental Compliance: Language for Use in Solicitations and Awards—An Additional Help for ADS Chapter 204."

- **Initial environmental examinations (IEEs).** An IEE is the first review of the reasonably foreseeable effects of a proposed action on the environment. The IEE provides the factual basis for a determination as to whether an environmental assessment will be required.
- **Environmental assessments.** An environmental assessment is a detailed study that describes the reasonably foreseeable significant effects, both beneficial and adverse, of a proposed action on the environment of a foreign country or countries.
- **Programmatic environmental assessments (PEAs).** A PEA is an environmental assessment for a sector (such as agriculture) or a larger program (such as road construction) that will eventually contain several projects or subgrants.
- **Environmental mitigation plan and reports (EMPRs).** These documents must be submitted by the contractor to USAID prior to commencing activities that will likely have adverse environmental impact.

The individuals tasked with implementing these procedures and ensuring environmental compliance are shown in the following table, along with the documents that assign responsibilities.

Officials Charged With Environmental Compliance

Official	Responsibilities	Document
MEO - USAID	Assist and advise activity managers or technical representatives of contracting or agreement officers and their implementing partners and contractors in preparing required documents on new activities and in monitoring compliance on ongoing activities.	ADS 204.3.5
Regional Environmental Advisors - USAID	Provide supplementary professional support, training, compliance auditing, compliance evaluations, and regional coordination on matters related to 22 CFR 216 to mission staff in the assigned region, including MEOs.	ADS 204.3.5
Biodiversity Specialist - Contractor	Minimize the potential for adverse environmental impact by ensuring the implementation of mitigation measures outlined in the PEA for all WINNER components.	WINNER PEA

The WINNER IEE determined that actions proposed under the program would have significant effects on the environment, including (1) rehabilitation or construction of irrigation systems that water more than 100 hectares of cropland, (2) drainage of wetlands, and (3) permanent modification of the habitat supporting an endangered species. The IEE determined that environmental assessments should be performed for all such activities. In addition, the WINNER PEA required that value chains be environmentally sound and that Chemonics develop a water quality monitoring and testing plan for potable water projects.

Despite the ADS guidance, the WINNER contract did not contain any of the recommended language regarding contractor compliance with environmental procedures. Furthermore, USAID/Haiti and Chemonics did not conduct sufficient environmental assessment and mitigation

efforts for several activities that were either included in the audit sample or identified during audit work.⁸ Specifically, the audit disclosed:

- **Insufficient environmental assessment and mitigation efforts for the Grise River irrigation system.** Before completing a design study, Chemonics undertook extensive rehabilitation work in early 2010 of this irrigation system constructed in the 1950s. As of July 2011, Chemonics had spent \$804,563 on this activity, which helps irrigate approximately 5,000 hectares.

Chemonics did not complete an environmental assessment for this activity as required by the IEE. Furthermore, USAID/Haiti did not approve the WINNER PEA until March 2011, almost a year after Chemonics initiated work on the Grise River irrigation system. The PEA included a lengthy list of mitigation measures for irrigation system repair projects, including a review by the Chemonics biodiversity specialist, the establishment of limits for allowable irrigation water use, and an analysis of downstream effects. However, none of these mitigation measures were implemented in connection with the Grise River irrigation system.

- **Insufficient environmental assessment and review of Boucanbrou drainage canal rehabilitation.** Haiti's Ministry of Public Works asked Chemonics to complete the clearing of the Boucanbrou drainage channel. As part of this project, much of the overflow from the Trou Caiman pond was to be diverted to the sea in an effort to control flooding.

Chemonics' EMPR described the area as a wetland that was home to 104 species of birds, three of which are endemic to the Caribbean and seven of which are endemic to Haiti. Among these ten species, two are classified as vulnerable by the International Union for Conservation of Nature, and four other species are described as "near threatened." Despite the sensitivity of the areas, the EMPR for Trou Caiman was conducted after the activity had already begun and was never submitted for USAID/Haiti review. Furthermore, given the requirements of the IEE related to wetlands and endangered species, an EMPR was not sufficient for this activity; an environmental assessment should have been completed. Neither USAID/Haiti's MEO nor the regional environmental advisor was aware that this activity was taking place in a sensitive wetland region.

- **Lack of testing of drinking water quality.** To improve access to potable water, the program supports spring-fed potable water projects, including one in the Gonaïves region and one in the Kenscoff region.

The IEE in place when the activity began required the implementer to (1) conduct a water quality assessment to determine whether the water is safe to drink and (2) establish a baseline for detecting future changes in potability. The IEE required that, at a minimum, arsenic and fecal coliform tests be conducted. Neither USAID nor Chemonics ensured that water testing was done for any of the WINNER activities.

The WINNER PEA requires Chemonics to develop a water quality monitoring and testing plan for water intended for drinking (by humans or livestock). The testing plan must follow the Government of Haiti's testing requirements.

Elevated levels of arsenic in water supplies have been detected in some locations in Haiti.

⁸ We reviewed a judgmental sample of 47 out of 240 activities implemented under WINNER.

Because of the carcinogenic nature and other health effects (such as damage to the nervous system and blood vessels, blindness, and reproductive problems) of even low levels of arsenic in drinking water, USAID/Haiti needs to be certain that drinking water supplied by the program meets quality standards. However, Chemonics did not test water quality during the planning phase or after project implementation for these two water systems.

- **No evaluation of environmental impacts of the mango value chain.** The postearthquake U.S. Government strategy for Haiti targets the doubling of exports of Francisque mangoes and cocoa over 5 years. In addition, the Chemonics FY 2012 WINNER implementation plan proposes new mango orchards and the construction of mango collection and processing centers.

According to the program's PEA, the implementer should ensure that for all public-private partnerships, the value chain is environmentally sound. The implementer should complete a value chain study, and the Chemonics biodiversity specialist should review this study before funding any partnership. Despite these requirements, neither USAID/Haiti nor Chemonics completed an environmental evaluation of the mango value chain. The regional environmental advisor said that the mango value chain should have an environmental assessment, especially since it is a large, high-priority, and a highly visible value chain. The Chemonics environmental specialist agreed that biodiversity impact should be considered when selecting the value chains. He stated that Haiti's multiple microclimates support many varieties of mango, and choosing to promote only one could have unintended environmental impacts.

Some program activities did not receive sufficient environmental oversight because both the implementer and the mission lacked the necessary staff. The mission went from April 2010 through February 2011 without a full-time MEO. The WINNER contracting officer's technical representative (COTR)⁹ at the time was new to the organization and was also serving as the MEO for the mission. Prior to the audit, the MEO had not visited any WINNER activities, as required by the IEE and the PEA. Furthermore, the Chemonics environmental specialist reported that he did not have sufficient time to devote to environmental oversight because he was also responsible for conducting the environmental training courses. He requested an assistant, but the request was denied by USAID for budgetary reasons.

Oversight was also insufficient because Chemonics and the COTR did not keep the MEO informed of relevant environmental issues. For example, the IEE states that the implementer's chief of party is to submit the EMPR to the COTR and MEO for their review and final approval. However, only the COTR was approving the EMPRs; the MEO was not included in the process. In addition, the MEO was not consulted regarding contract modifications, although these contained significant changes in the program approach that merited the MEO's attention.

Given the nature of its activities, the program has the potential to affect the environment significantly. Unless the contract contains the ADS-recommended language, environmental compliance requirements may not be fully integrated into project designs, work plans, and budgets. Without providing the proper environmental oversight, USAID/Haiti runs the risk of harming human health as well as Haiti's already fragile environment. Therefore, we make the following recommendations.

⁹ On January 1, 2012, USAID changed the term "COTR" to "COR" (contracting officer's representative) to align with changes in the Federal Acquisition Regulation. Because audit fieldwork occurred before the change, this report uses COTR.

Recommendation 2. We recommend that USAID/Haiti prepare a modification to the Watershed Initiative for National Natural Environmental Resources contract to include language on compliance with environmental requirements in Title 22 of the Code of Federal Regulations, Part 216.

Recommendation 3. We recommend that USAID/Haiti consult with the environmental compliance staff and develop a written assessment of what further environmental evaluations may be required for the rehabilitation of the Grise River irrigation system, the Boucanbrou drainage canal, and the mango export value chain.

Recommendation 4. We recommend that USAID/Haiti implement water quality testing as appropriate according to USAID requirements and the requirements of the program environmental assessment and document the results of these tests.

Recommendation 5. We recommend that USAID/Haiti develop procedures to integrate the regional environmental advisor and the mission environmental officer into the planning, design, and monitoring of Watershed Initiative for National Natural Environmental Resources activities.

Recommendation 6. We recommend that USAID/Haiti determine and document the actions that Chemonics must take to provide adequate environmental oversight for the Watershed Initiative for National Natural Environmental Resources program.

A \$2.3 Million USAID/Haiti Infrastructure Project Is at Risk

ADS 201.3.8, “Program Planning: Assistance Objective,”¹⁰ states that USAID missions and offices should devise foreign assistance programs and activities to have the greatest possible development impact. Furthermore, this impact should be sustainable. USAID defines this concept in its Strategy for Sustainable Development as that which “permanently enhances the capacity of a society to improve its quality of life.”

One of the program objectives is to rebuild and maintain critical infrastructure, including flood protection works. USAID/Haiti’s contract with Chemonics identified the Grise River as one of the factors with greatest potential for causing catastrophic flooding in Port-au-Prince. To help prevent flooding, Chemonics began in the spring of 2010 to dredge, widen, and stabilize the banks of a 12-kilometer stretch of the Grise River. The work was completed by the end of 2010 at a cost of about \$2.3 million.

However, the completed work is being seriously undermined by the local population’s tendency to mine (remove) river sediments, which weakens the riverbank retaining walls known as gabions, and to dump trash in the river. These problems are detailed below.

Removal of River Sediments. Removal of the river sediments has weakened the gabions constructed by the program to protect the riverbanks from erosion. The weakening caused the collapse of some of the gabions (like those shown in the following pictures) during Hurricane

¹⁰ ADS 201.3.8, was revised on January 17, 2012. The citations in this report refer to the previous version of ADS, in effect at the time of the audit.

Tomas in November 2010. Workers told us they could make \$10 per hour—significantly higher than the national minimum wage of \$5 per day—by extracting river sediments, which can be used in making building materials. With an unemployment rate in Haiti of 41 percent¹¹ and the demand for building materials remaining high since the January 2010 earthquake, mining sediment is an economically attractive option.



River sediment mining weakens gabions (left) and eventually results in their collapse (right).
(Photos by the Office of Inspector General, July 29, 2011)

Dumping Trash. Uncontrolled dumping of trash in sites like the one shown below has occurred since the start of the project, even during the dredging operation. According to a local resident, there is no system of trash removal in the community, making the river the most accessible place to dispose of trash. The uncontrolled dumping is refilling the areas where Chemonics has dredged.



Garbage accumulates in a site recently cleared of garbage by the program.
(Photos by the Office of Inspector General, July 29, 2011)

The infrastructure work is at risk because Chemonics was slow to identify and take action to mitigate these problems and because the Government of Haiti has not fulfilled its commitments

¹¹ *CIA Fact Book*, 2010 estimate.

to stop the activities that undermine the gabions and disrupt the riverbanks. In November 2010, 8 months after the start of the project, Chemonics officials met with Government of Haiti officials, who agreed to issue a communiqué to stop certain detrimental practices. However, as of July 2011, no communiqué had been issued, and the mining and dumping continue unabated. Although riverbed mining and trash dumping were identified in the project's 2009 EMPR and continued throughout project implementation, Chemonics did not develop a plan to mitigate these activities or mention these problems in quarterly reports until the first quarter of FY 2011 (the end of 2010).

According to Chemonics officials, unless the local population stops mining sediments adjacent to the gabions and dumping trash, the river will again pose a high flood risk, possibly in as little as 3 years. Furthermore, since Chemonics' proposed FY 2012 work plan includes a \$650,000 project to build more gabions in the same location, this additional work, along with the original \$2.3 million investment, would be at risk if effective regulations are not established. Therefore, we make the following recommendation.

***Recommendation 7.** We recommend that USAID/Haiti, in coordination with the appropriate Government of Haiti officials, develop a sustainability plan that establishes which entities are responsible for maintaining infrastructure before undertaking further construction activities on the Grise River.*

USAID/Haiti Did Not Encourage Safe Handling of Pesticides or Promote Pesticide Alternatives

As part of WINNER, Chemonics provides pesticides to agricultural input supply stores—commercial outlets where items such as seeds and fertilizer are available for sale. As of December 2010, Chemonics reported that it was assisting 37 such stores. While the support for the stores is relatively small, totaling \$2.7 million as of July 2011, a large number of Haiti's farmers can purchase the products offered at these stores. For this reason, improper handling of the pesticides by the input stores, and by the farmers who purchase them, is a significant environmental concern.

According to 22 CFR 216, all proposed projects involving assistance for the procurement or use, or both, of pesticides shall include an evaluation of factors such as the proposed method or methods of application, including:

- The availability of appropriate application and safety equipment.
- The availability and effectiveness of other pesticides or nonchemical control methods.
- The requesting country's ability to regulate or control the distribution, storage, use, and disposal of the requested pesticide.
- The provisions made for training of users and applicators.

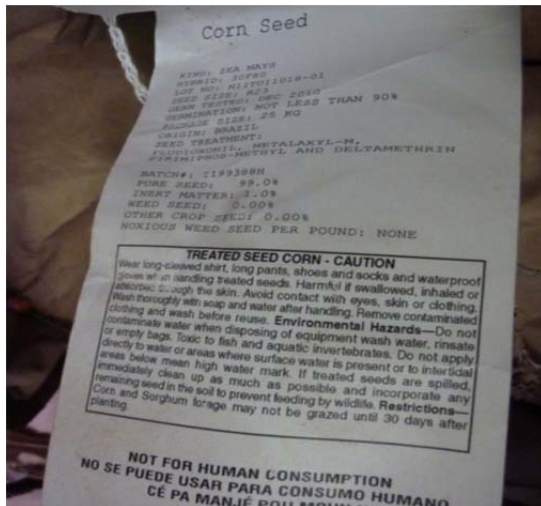
According to 22 CFR 216, when a project includes assistance for procurement or use of pesticides, or both, provisions should be included for monitoring the use and effectiveness of the pesticide. In addition, ADS 204 requires the MEO to assist the COTR in monitoring compliance on ongoing activities.

Furthermore, the USAID/Haiti missionwide PERSUAP noted that the ways in which farmers use pesticides in Haiti are quite dangerous to health and the environment. According to the PERSUAP, the majority of farmers using agrochemicals reported unsafe practices in all stages of use: mixing, dosage, application, storage, and disposal. The PERSUAP notes that farmers, although generally aware of the dangers, often lack the technical knowledge, resources, and information to take the proper precautions. The PERSUAP also states that training in the proper use of pesticides can mitigate the dangers posed by improperly handling them.

The PERSUAP further notes that WINNER will promote responsible integrated pest management strategies that emphasize pesticides as a control method of last resort and provide ample nonchemical control options to minimize risk to users, community members, and the environment. USAID guidelines¹² also promote integrated pest management; core elements of this approach include minimizing pesticide use and minimizing health and environmental risk when pesticides are used.

Despite the guidance, Chemonics promotes the use of chemical fertilizers and pesticides by providing these products to the agricultural supply stores that support WINNER's agricultural campaigns. Chemonics has not included organic options in its provisioning of the agricultural supply stores, missing a chance to provide important alternatives for farmers.

Furthermore, despite the importance of safe pesticide use and storage, auditors observed numerous problems (shown in the following photos) with pesticide handling during site visits to six WINNER-assisted stores. Some of the conditions noted included opened bags of pesticides (indicating the sale of smaller quantities, packaged without instructions), instructions on pesticides and treated seeds generally not in French or Creole (languages spoken in Haiti), absence in some stores of protective equipment, and the presence of pesticides not recommended by the PERSUAP.



Label on chemically treated Monsanto seed warns of environmental hazards (left); open bags (right) near the kindergarten-based store. (Photos by the Office of Inspector General, July 28 and August 5, 2011)

¹² USAID Bureau for Latin America and the Caribbean, "Environmental Issues and Best Practices for Agriculture and Watershed Management."



Sign indicates the agrosupply store located in a kindergarten (left) while construction proceeds on a new store adjacent to the kindergarten.
(Photos by the Office of Inspector General, August 5, 2011)

In several stores, auditors observed opened bags of WINNER-provided chemically treated Monsanto corn seed (shown on the previous page). This corn is treated with, among other things, deltamethrin, which is a restricted-use pesticide¹³ with a Class I¹⁴ toxicity level. Instructions for application are attached to the bag but are in English. One such store was located in the kindergarten shown above,¹⁵ and the treated corn seed was found on the ground inside and outside the store shown above. In addition, the store located in the kindergarten did not stock any protective equipment such as gloves or masks. As reported in the PERSUAP, unsafe handling of pesticides is dangerous to health and the environment.

These problems occurred because training was not comprehensive and oversight of supply stores was inadequate. The basic courses in Chemonics' farmer training program do not include training in proper pesticide use or integrated pest management. Instead, this training is included in only one specialty course, which is not offered to all farmers. Pesticide packaging and storage problems persist at the supply stores because USAID/Haiti and Chemonics environmental staff did not monitor them; neither the regional environmental advisor nor the MEO had visited any of the supply stores at the time of the audit.¹⁶

In light of this information, we make the following recommendations.

Recommendation 8. We recommend that USAID/Haiti develop a plan for promoting the use of nonchemical fertilizers and pesticides in agricultural supply stores.

Recommendation 9. We recommend that USAID/Haiti develop and provide to all farmers in the master farmer training program an integrated pest management training course that covers, at a minimum, safe pesticide use, essential protective equipment, and nonchemical control options.

¹³ WINNER obtained waivers from USAID/Haiti for certain restricted-use pesticides.

¹⁴ According to the U.S. Environmental Protection Agency, Class I pesticides are the most toxic and must bear the warning "Danger-Poison" (http://www.pesticidebook.com/pdfs/chapter21_pages240-244.pdf).

¹⁵ The supply store was temporarily located in one of the kindergarten's classrooms while the farmer's association was building a new store as an add-on to the kindergarten.

¹⁶ Subsequently the MEO visited three agrosupply stores, noting problems particularly with one of the three with the dispensation of the pesticides.

Recommendation 10. We recommend that USAID/Haiti’s mission environmental officer, in conjunction with Chemonics, develop formal procedures for periodically monitoring program-supported supply stores.

USAID/Haiti Did Not Meet Biodiversity Code Criteria

USAID’s biodiversity code (<http://www.usaid.gov/ourwork/environment/biodiversity/code.html>) includes four criteria, all of which must be met for activities and funds to be attributed to the biodiversity earmark.¹⁷ Specifically:

- “The activity must have an explicit biodiversity objective; *it isn’t enough to have biodiversity conservation result as a positive externality from another program;*
- Activities must be identified based on an analysis of threats to biodiversity;
- The program must monitor associated indicators for biodiversity conservation;
- Site-based programs must have the intent to positively impact biodiversity in biologically significant areas.”

In FY 2010, USAID/Haiti received earmarked funding totaling \$2 million for biodiversity projects. Although the mission subsequently received a partial reprieve from meeting the earmark requirements (requiring only \$200,000 of the \$2 million to be attributable to the earmark), the mission nevertheless tried to program the full \$2 million, with \$1.35 million attributed to WINNER and the remainder to another USAID/Haiti watershed management project. Of the \$1.35 million, the majority (\$1.2 million) was used for agroforestry efforts. As illustrated below, had USAID/Haiti not received a reprieve, it would not have met the earmark requirements for FY 2010 because the mission did not meet the four criteria of the biodiversity code.

- **WINNER lacked explicit biodiversity objectives.** The original WINNER contract states the purpose of the program is to reduce environmental, structural, and economic vulnerability in select watersheds in Haiti. The March 2011 contract modification states that the new purpose is to boost agricultural production in select productive plains. Neither program contained an explicit objective to conserve biodiversity.
- **Almost none of WINNER’s activities were based on analyses of threats to biodiversity.** According to the biodiversity code, primary threats to biologically significant ecosystems/areas should be identified, and program interventions should be designed to address them. The 2006 biodiversity assessment for Haiti identified mangroves and coastal wetlands as some of the most vulnerable areas in Haiti. While WINNER included one activity related to this identified threat—an inventory of significant biological sites including mangroves and forested areas—this activity was never started. The biodiversity assessment also states: “Careful attention must be paid to the possible effects of increased agricultural production.” However, WINNER’s goal to increase agricultural production could increase the threat to the environment from chemical fertilizer and pesticide use.

¹⁷ An earmark is a provision in legislation allocating a specified amount of money for a particular project, program, or organization.

- **Chemonics does not monitor associated indicators for biodiversity conservation.** The performance management plan includes six of USAID’s standard natural resources and biodiversity indicators, but Chemonics monitored only three of the six indicators consistently; it did not report any results for three of the indicators in quarterly reports covering July 2009 through December 2010. In separate information provided to the audit team, Chemonics subsequently reported environmental awareness activities around Parc la Visite (one of Haiti’s few protected areas) as contributing to one of these indicators—*Number of hectares in areas of biological significance under improved management as a result of U.S. Government assistance*. However, only 10 hectares were reported for this indicator, whereas the cumulative project goal is 10,000 hectares.

With regard to the three biodiversity indicators for which WINNER reported results, Chemonics claimed that its agroforestry efforts were restoring biodiversity. However, WINNER’s agroforestry efforts have had limited success, and only income-generating trees—fruit and harvestable timber—are grown and distributed for planting. Even if these efforts had been more successful, they would not constitute improved biodiversity because they are not “positively impacting biodiversity in biologically significant areas.” The rehabilitation of potable water and irrigation systems, stone wall installations in ravines, and soil stabilization efforts are being counted toward these indicators as well. These efforts are not clearly linked to biodiversity conservation.

- **Most WINNER activities do not “have the intent to positively impact biodiversity in biologically significant areas.”** Other than Parc la Visite, the program has not demonstrated the biological significance of the areas of operation where activities are being counted toward the biodiversity indicators. To the contrary, one WINNER-supported canal-clearing activity near a sensitive bird habitat may have harmed biodiversity conservation.

USAID/Haiti’s use of biodiversity funds did not accord with the biodiversity code because, as of July 2011, the mission lacked staff with biodiversity expertise and a clear understanding of the biodiversity code requirements. In addition, the program’s COTR stated that USAID/Haiti does not usually tell implementers that they need to comply with this earmark because the scope of work usually includes details regarding specific expectations to support the purpose of the earmark. However, even though the Chemonics scope of work stated that the program would address biologically sensitive areas, neither the scope of work nor the subsequent contract specified efforts to meet the biodiversity code criteria.

Earmarks are established to ensure that money is spent on specific U.S. Government goals. By attributing activities to the earmark that do not comply with the biodiversity code, the mission and the Agency are overestimating the biodiversity impact of the program. USAID/Haiti received \$1 million in earmarked biodiversity funding for FY 2011. If activities that do not meet the biodiversity criteria are once again attributed to the earmark, USAID/Haiti will continue to fall short of the biodiversity code standards.

Recommendation 11. *We recommend that USAID/Haiti’s staff members obtain training in biodiversity and consult with biodiversity officials in USAID/Washington on their current program adjustments or new program design.*

Recommendation 12. *We recommend that USAID/Haiti institute a mission policy for documenting its use of biodiversity earmarked funds for areas that biodiversity assessments have determined are biologically significant and verify that the policy meets all four biodiversity code requirements for earmarked funds.*

EVALUATION OF MANAGEMENT COMMENTS

In its response to the draft audit report, USAID/Haiti agreed with the 12 recommendations. Summarized below are the comments and the audit team's evaluation.

Recommendation 1. The mission agreed to develop a transition plan for the cessation of activities in the Gonaives/La Quinte watershed, outlining the dispositions of assets developed as a result of program activities. The mission approved a transition plan on October 31, 2011, although the auditors have seen only an undated and unsigned version of it. An agreement is being negotiated with the community in Gonaives to transfer the Centre Rural de Développement Durable (an agricultural development center) to the not-for-profit organization Foundation Eben Ezer to pursue the development objectives set by USAID/Haiti. The mission further indicated that WINNER prepared only the baseline study, which will be filed in the USAID Development Experience Clearinghouse along with technical documents needed for their infrastructure work. Based on the mission's described actions, a management decision has been reached.

Recommendation 2. The mission agreed to prepare a modification to the WINNER contract to include language for compliance with environmental requirements according to 22 CFR 216. The mission planned to issue a modification in early April 2012. Based on this proposed action, a management decision has been reached.

Recommendation 3. The mission agreed to consult with the environmental compliance staff and develop a written assessment of what further environmental evaluations may be required for the irrigation rehabilitation of the Grise River, the Boucanbrou drainage canal, and the mango export value chain. The mission planned to implement an umbrella environmental mitigation and monitoring plan by mid-April 2012. Based on the mission's proposed action, a management decision has been reached.

Recommendation 4. In response to this recommendation, to implement water quality testing as appropriate according to USAID and PEA requirements and document the results of these tests, the mission agreed and indicated that it plans to test drinking water provided in Gonaives. We disagree with the response because it limits testing to water projects in Gonaives. The spirit of the recommendation as stated, "implement water quality testing as appropriate," is to address all WINNER-supported spring-fed potable water projects. For this reason, a management decision has not been reached.

Recommendation 5. The mission agreed to develop procedures to integrate the regional environmental advisor and the MEO into the planning, design, and monitoring of WINNER activities. The mission has hired a new staff member in the Economic Growth and Agricultural Development Office who is responsible for helping the COTR oversee compliance of Regulation 216. This employee works in close collaboration with the MEO. The MEO organized a field visit with the technical team in early September 2011, and joint field visits will now happen at least twice a year. Based on these actions, a management decision has been reached.

Recommendation 6. The mission agreed to determine and document the necessary actions to ensure that Chemonics provides adequate environmental oversight for WINNER. The mission stated that WINNER would recruit a new professional to assist the environmental specialist by August 2012. In addition, a new Foreign Service environmental officer, who arrived in the Dominican Republic in February 2012, has duties including making regular trips to Haiti. Based on the mission's proposed action and the hiring of the new environmental officer, a management decision reached.

Recommendation 7. The mission agreed to develop, in coordination with the appropriate Government of Haiti officials, a sustainability plan that establishes what entities are responsible for maintaining infrastructure prior to undertaking further construction activities on the Grise River. Based on the mission's proposed action, a management decision has been reached.

Recommendation 8. The mission agreed to develop a plan for promoting the use of nonchemical fertilizers and pesticides in agricultural supply stores. It has hired Sun Mountain to work on the issues. In addition, the mission indicated in follow-up correspondence that it is discussing a plan with the University of Florida to reduce the use of pesticide in WINNER's intervention areas. Therefore, we consider that a management decision has been reached.

Recommendation 9. The mission agreed to develop an integrated pest management training course for all farmers in the master farmer training program that will include, at a minimum, safe pesticide use, essential protective equipment, and nonchemical control options. The mission provided documentation showing that it had hired the environmental firm Sun Mountain to work with WINNER on the course. In view of the action taken, this recommendation is closed on issuance of this report.

Recommendation 10. The mission agreed to have its MEO, in conjunction with Chemonics, develop formal procedures for periodically monitoring WINNER-supported agricultural supply stores. The mission indicated that formal procedures would be developed and input stores would be visited by the MEO or others every 2 months starting on March 15, 2012. Based on the mission's proposed actions, a management decision has been reached.

Recommendation 11. The mission agreed that its staff should obtain training in biodiversity, and consult with biodiversity staff in USAID/Washington on how to adjust current or design future mission programs. The mission indicated that on November 17, 2011, USAID's senior natural resource management officer attended biodiversity training, and at least one other employee will be trained in the next 12 months. USAID/Haiti planned for staff in Washington to help incorporate biodiversity activities into the Feed the Future initiative in Haiti in late March 2012. Based on the actions proposed and taken, a management decision has been reached.

Recommendation 12. The mission agreed to institute a mission policy for documenting its application of biodiversity earmarked funds towards biologically significant areas as determined by Haiti biodiversity assessments and ensure that it meets all four biodiversity code requirements with earmarked funds. The mission planned to implement the recommendation by May 30, 2012, with support from Washington biodiversity staff. Based on this proposed action, a management decision has been reached.

SCOPE AND METHODOLOGY

Scope

RIG/San Salvador conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions in accordance with our audit objectives. We believe that the evidence obtained provides that reasonable basis.

The purpose of the audit was to determine whether USAID/Haiti's WINNER program was achieving its main goals of reducing economic and environmental vulnerability in Haiti. In addition, the Inspector General Act of 1978 requires auditors to promote economy, efficiency, and effectiveness in the administration of USAID programs and to prevent and detect fraud and abuse in such programs and operations.

To implement the program, USAID/Haiti signed a \$127 million cost-plus-fixed-fee completion task order contract with Chemonics that was subsequently modified to increase the authorized funding level to \$128 million. RIG/San Salvador conducted audit fieldwork at USAID/Haiti in Port-au-Prince and various locations in the Gonaïves/La Quinte, Cabaret, and Cul de Sac watersheds from July 19 to August 17, 2011. As of September 28, 2011, obligations and expenditures under the program totaled \$44.6 million and \$35.3 million, respectively.

The audit covered the period June 1, 2009, to August 17, 2011. The audit reviewed the program's compliance with laws, regulations, and best practices. The audit also included site visits and review of supporting documentation for a sample of completed and ongoing activities in three of four watersheds where the program operates: the Gonaïves/La Quinte, Cabaret, and Cul de Sac. Because of time constraints, we did not review activities in the Mirebalais watershed.

In planning and performing this audit, we included in the audit scope a review of management activities and controls established by USAID/Haiti and its contractor. Management controls assessed included those related to the agreement process, program planning, data quality management, reporting procedures, monitoring procedures, and portfolio reviews. Additionally, the auditors examined the mission's FY 2010 annual self-assessment of management controls, which the mission is required to perform to comply with the Federal Managers' Financial Integrity Act of 1982 to check whether the assessment cited any relevant weaknesses.

Methodology

To answer the audit objective and to determine whether USAID/Haiti appropriately managed program activities, we met with key USAID/Haiti personnel and contractor officials to document their roles and responsibilities in implementing WINNER activities in Haiti.

Specifically, the auditors interviewed USAID/Haiti staff members including the COTR for WINNER, the contracting officer, the program officer, the monitoring and evaluation specialist, the WINNER environmental specialist, the MEO, and the regional environmental advisor. In

addition, we interviewed the biodiversity team leader in USAID's Bureau for Economic Growth, Agriculture and Trade.

We interviewed the contractor's staff, including the environmental specialist. In addition, the contractor accompanied the auditors on 7 days of site visits to WINNER activities in three watersheds: Gonaïves/La Quinte, Cabaret, and Cul de Sac. The auditors also interviewed the subcontractor who drafted WINNER's PERSUAP.

To gain an understanding of the program, the audit team reviewed documents including the preprogram assessment, contract, negotiation memorandum, contract modifications, performance management plan, site visit reports, operating plans, portfolio reviews, and documents required by 22 CFR 216 for environmental compliance.

We also reviewed contractor documentation including the contractor's proposal, periodic progress reports, work plans, subcontracts and grant agreements, procurement policies and procedures, and documents supporting compliance with environmental requirements.

We reviewed applicable policies, regulations, and guidelines pertaining to USAID/Haiti's implementation of the program, including USAID's ADS, the CFR, FAR, UN papers on food security and USAID guidance on compliance with earmark requirements. We visited sites in three of the four watersheds WINNER covers to see completed and ongoing activities and to interview program beneficiaries. We judgmentally selected a wide but correlated sample of activities in the three watersheds.

The following table lists the number and dollar amount of activities we visited, compared with total activities (either completed or in process) as of July 2011.

<i>Category</i>	<i>Activities Completed or in Process</i>	<i>Sample of Activities Visited</i>	<i>%</i>	<i>Value of All Activities Completed or in Process (\$)</i>	<i>Value of Activities Visited (\$)</i>	<i>%</i>
Livelihood	112	21	19	8,830,442	4,437,764	50
Infrastructure	73	21	29	8,283,408	6,094,855	74
Watershed Governance	31	1	3	726,149	11,074	2
Public-Private Partnership	24	4	17	1,235,937	706,981	57
Total	240	47	20	19,075,936	11,250,674	59

MANAGEMENT COMMENTS



TO: Mr. Jon Chasson, RIG/San Salvador

FROM: Carleene Dei, Mission Director /S/

DATE: March 12, 2012

SUBJECT: Mission Response to the draft RIG Audit Report of USAID/Haiti Watershed Initiative for National Natural Environmental Resources (WINNER) Program (Report Number 1-521-12-00X-P).

This memorandum represents USAID/Haiti's formal response to the draft RIG Audit of the WINNER program to determine whether subject program is achieving its main goal of reducing economic and environmental vulnerability.

USAID/Haiti appreciates the time and effort of the RIG staff in carrying out this audit and the professional and cooperative manner in which the audit was conducted.

General Comments:

For the 12 recommendations, USAID/Haiti presents below either clarifications or an action plan and timetable for the implementation and/or closing of the recommendations.

Recommendation 1: We recommend that USAID/Haiti develop a transition plan for the cessation of activities in the Gonaives/La Quinte watershed, outlining the dispositions of assets developed as a result of the program activities.

Mission Planned Action:

USAID/Haiti submitted a plan to OIG on November 17, 2011. OIG determined that "this document has no date or source of origin. In addition, the plan does not indicate the disposition of studies conducted as it was discussed in the exit meeting".

The USAID transition plan was written based on the content of the WINNER work plan approved by USAID/Haiti on October 31, 2011. An agreement is being negotiated with the community in Gonaives to transfer the "Centre Rural de Développement Durable" (CRDD) to

the not-for-profit organization, Foundation Eben Ezer in order to pursue the development objectives set by USAID/Haiti.

WINNER did not conduct specific studies for the Gonaives region. The project only prepared the baseline study that will be filed in the Development Experience Clearinghouse (DEC), and technical documents needed for their infrastructure work.

The Mission hopes that this clarification will allow recommendation 3 to be closed upon issuance of the final report.

Recommendation 2: We recommend that USAID/Haiti prepare a modification to Watershed Initiative for Natural Environmental Resources contract to include language for compliance with environmental requirements per Title 22 of the Code of Federal Regulations, Part 216.

Mission Planned Action:

USAID/Haiti agrees with this recommendation and environmental language will be included in a modification that will be prepared by early April 2012.

Recommendation 3: We recommend that USAID/Haiti consult with the environmental compliance staff and develop a written assessment of what further environmental evaluations may be required for the irrigation rehabilitation of the Grise River, the Boukanbrou drainage canal, and the mango export value chain.

Mission Planned Action:

USAID/Haiti responded as follows to this recommendation on November 17, 2011:

“The activities listed for this recommendation fall under the WINNER IEE and are covered by the PEA. In addition to that, an umbrella environmental mitigation and monitoring plan has been requested from WINNER; such a plan can be used for multiple sites where the same activity is being implemented. Fate of the removed silt and debris must be in accordance with the recommendations in the PEA. The sites must be visited by the contractor, inspected for compliance and a report made to the COTR. One plan/report can be submitted to cover multiple sites having the same conditions”. OIG determined that it was not responsive to the recommendation.

The above response was developed in consultation with the Mission Environmental Officer (MEO). USAID/Haiti included recommendations on Environmental Compliance provided by the Regional Environmental Advisor (REA) in the email sent to approve the new WINNER work plan on October 31, 2011. All MEO and REA recommendations will be addressed in the umbrella environmental mitigation and monitoring plan which will be submitted by WINNER by mid-April 2012.

The Mission hopes that this additional clarification will allow recommendation 6 to be closed upon issuance of the final report.

Recommendation 4: We recommend that USAID/Haiti implement water quality testing as appropriate per USAID requirements and per the Program Environmental Assessment requirements and document the results of these tests.

Mission Planned Action:

The Mission agrees with this recommendation. Drinking water provided in Gonaives will be tested by the end of April 2012.

Recommendation 5: We recommend that USAID/Haiti develop procedures to integrate the Regional Environmental Advisor and the Mission Environmental Officer into planning, design and monitoring of Watershed Initiative for National Natural Environmental Resources program's activities.

Mission Planned Action:

USAID/Haiti responded as follows to this recommendation on November 17, 2011:

“The Economic Growth and Agricultural Development office (EGAD) has a new staff that is responsible for helping the COTR oversee Chemonic's compliance of Regulation 216. This employee works in close collaboration with the MEO. The MEO organized a field visit with the technical team in early September 2011. Joint field visits will now happen at least twice a year”. In response, OIG asked how USAID will ensure that the REA and MEO are integrated into the planning and designing phases of the activities.

Under ADS 201, the pre-obligation requirements include working with the MEO/REA/BEO for the environmental procedures. This regulation is followed for all the projects, including WINNER. The response provided by USAID in November 2011 mentioned measures taken to improve environmental monitoring of the WINNER project. USAID therefore believes that with the aforementioned clarification this recommendation should be closed.

Recommendation 6: We recommend that USAID/Haiti determine and document the necessary actions to ensure that Chemonics provides adequate environmental oversight for the Watershed Initiative for National Natural Environmental Resources program.

Mission Planned Action:

The Mission agrees with this recommendation. WINNER will recruit a new professional to assist the Environmental specialist by August 2012. By this date, regional staff will be trained to be able to monitor environmental compliance. Furthermore, a new Foreign Service Environmental Officer arrived in the Dominican Republic in February 2012. Her duties are regional and Haiti will be her primary focus. She will make regular trips to Haiti, which include field visits to Feed The Future project sites.

Recommendation 7: We recommend that USAID/Haiti, in coordination with the appropriate government of Haiti officials, develop a sustainability plan for proposed future infrastructure work on this activity that establishes what entities are responsible for maintaining infrastructure prior to undertaking further construction activities on the Grise River.

Mission Planned Action:

Public infrastructure is always rehabilitated in coordination with the GOH entity that is responsible for maintaining it. For rivers, the Ministry of Agriculture is in charge, although Ministry of Environment takes care of environmental issues. USAID also strengthens water user associations that will manage the systems as required in the national irrigation policy. A sustainability plan will be signed with the responsible GOH Ministries before we start any infrastructure work.

Recommendation 8: We recommend that USAID/Haiti develop a plan for promoting the use of non-chemical fertilizers and pesticides in the agriculture supply stores.

Mission Planned Action:

USAID/Haiti responded as follows to this recommendation on November 17, 2011:

“The Ecuador based environmental firm Sun Mountain was hired to work on these issues with WINNER. They had their first mission in Haiti in November 2011. The Terms of References (TORs) for this assignment is provided separately. University of Florida is also working on Integrated Pest Management (IPM) alternatives that will reduce the use of pesticide in WINNER’s intervention areas. The Mission is supporting the best approach for sustainably improving soil fertility; a mix of organic and mineral fertilizers”.

USAD/Haiti advocates for the use of non-chemical fertilizers and pesticides by promoting composting and integrated pest management techniques. Furthermore the use of pesticides under the WINNER project complies with the Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP).

The Mission hopes that this additional clarification will allow recommendation 10 to be closed upon issuance of the final report.

Recommendation 9: We recommend that USAID/Haiti develop an integrated pest management training course to be provided to all farmers in the master farmer training program, to include, at a minimum, safe pesticide use, essential protective equipment, and non-chemical control options.

Mission Planned Action:

USAID/Haiti responded as follows to this recommendation on November 17:

“The Ecuador based Environmental firm Sun Mountain was hired to work on these issues with WINNER. They had their first mission in Haiti in November 2011”. OIG determined that the response was responsive to the recommendation, specifying that issuance of the subcontract

would close this recommendation. WINNER is finalizing its negotiation with Sun Mountain. The subcontract will be issued by March 15, 2012.

Recommendation 10: We recommend that USAID/Haiti's Mission Environmental Officer, in conjunction with Chemonics, develop formal procedures for periodically monitoring the WINNER-supported supply stores.

Mission Planned Action:

USAID/Haiti agrees with this recommendation. Formal procedures will be developed and the input stores will be visited by MEO or others once every 2 months, starting March 15, 2012.

Recommendation 11: We recommend that USAID/Haiti staff obtain training in biodiversity, and consult with biodiversity staff in USAID/Washington in their program adjustments or design.

Mission Planned Action:

USAID/Haiti agrees with this recommendation. As specified on November 17, 2011, USAID's senior natural resource management officer has attended training on biodiversity organized by USAID. At least one other employee will be trained in the next 12 months. USAID/Haiti also worked with several biodiversity advisors in Washington in the past and is currently planning a TDY during the period of March 20 to March 30, 2012 for staff in Washington who will help incorporate biodiversity activities in the Feed the Future initiative.

Recommendation 12: We recommend that USAID/Haiti institute a Mission policy for documenting its application of biodiversity earmarked funds towards biologically significant areas as determined by Haiti biodiversity assessments and ensure that it meets all four biodiversity code requirements with earmarked funds.

Mission Planned Action:

USAID/Haiti accepts this recommendation and will work to implement it by May 30, 2012, with support from Washington biodiversity staff.

Once again, we would like to express our appreciation for the professional manner in which the audit was conducted. The initiative of listing in advance the documentation needed for the audit contributed to a smoother implementation of the field work.

This audit has given us the opportunity to receive clear and to the point recommendations that will enable us to improve overall management of activities conducted under the WINNER program in Haiti.

Key Program Activities as of July 2011

Gonaïves/La Quinte	Cabaret/Montrouis	Cul de Sac	Mirebalais
57 Activities(All), 30 Completed (C), 12 In- Process (IP), 15 dropped (D)— \$5.3 million	66 Activities(All), 19 Completed (C), 29 In-Process (IP), 18 not started (NS)— \$1.7 million	108 Activities(All), 47 Completed (C), 59 In-Process (IP), 2 not started (NS)— \$10.6 million	66 Activities(All), 14 Completed (C), 30 In- Process (IP), 5 not started (NS), 17 Dropped (D)— \$1.5 million
LIVELIHOOD			
-Demonstration farms -Agriculture campaigns -Master farming training -Agro-supply stores -Public-private partnerships (PPPs) (mangoes, biofuel) All-18, C-7, IP-9, D-2 \$1.8 million	-Demonstration farms -Agriculture campaigns -Agroforestry campaigns -Master farming training -Agro-supply stores -Restore biodiversity (mangroves, forests) All-30, C-14, IP-14, NS-2 \$1.3 million	-Demonstration farms -Agriculture campaigns -Master farming training -Agro-supply stores -PPPs (flowers) -Restore biodiversity (nurseries, agroforestry) All-39, C-9, IP-30, NS-0 \$4.5 million	-Demonstration farms -Agriculture campaigns -Agroforestry campaigns -Master farming training -Agro-supply stores -PPPs -Restore biodiversity (nurseries, agroforestry) All-31, C-13, IP-16, NS-1, D-1 \$1.3 million
INFRASTRUCTURE			
-Stabilization of ravines -Irrigation systems -Reprofiling rivers -Potable water systems -Flood warning systems -Canal drainage All-22, C-19, IP-1, D-2 \$3.2 million	-River bank stabilization -Irrigation systems -Potable water systems -Flood warning systems -Canal drainage -Rehabilitation of Roads All-13, C-4, IP-8, NS-1, \$333,062	-Rainwater catchments -Irrigation systems -Reprofiling rivers -Potable water systems -Flood warning systems -Canal drainage -Roads All-36, C-21, IP-14, NS-1 \$4.7 million	-Irrigation systems -Stabilization of ravines -Potable water systems -Flood warning systems -Roads All-11, C-0, IP-6, NS-1, D-4 \$7,468
GOVERNANCE			
-Watershed governance -Disaster management plan for watershed -Training in watershed management -Watershed management plan All-12, C-3, IP-0, D-9 \$11,074	-Watershed governance structures -Survey and technical assistance, disaster preparation activities. All-16, C-1, IP-4, NS-11 \$23,634	-Watershed governance structure -Irrigation canal management -Training in watershed management -Watershed management plan All-20, C-6, IP-13, NS-1 \$671,307	-Strengthen representative governing bodies -Identify, assess, and make recommendations on policy constraints All-17, C-0, IP-4, NS-2, D-11 \$20,134
PUBLIC-PRIVATE PARTNERSHIPS			
-Establish PPP agreements between agroprocessors and producer associations -Organize up to 400 laying hens units All-5, C-1, IP-2, D-2, \$313,670	-PPP for up to 400 laying hens units -Connect small-scale manufacturers with training in chicken coop production -PPP agreements for mangoes All-7, C-0, IP-3, NS-4 \$0	-PPPs for corn, sugar cane, poultry, Jatropha All-13, C-11, IP-2, NS-0 \$758,033	-Sugar cane production in Mirebalais -PPP agreements for mangoes -PPP for up to 200 laying hens units All-7, C-1, IP-4, NS-1, D-1 \$148,377

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