



OFFICE OF INSPECTOR GENERAL

AUDIT OF USAID/ARMENIA'S CLEAN ENERGY AND WATER PROJECT

AUDIT REPORT NO. 9-111-15-002-P
FEBRUARY 25, 2015

WASHINGTON, D.C.



Office of Inspector General

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MEMORANDUM

TO: USAID/Armenia Mission Director, Karen Hilliard

FROM: IG/A/PA, Director, Jon Chasson /s/

SUBJECT: Audit of USAID/Armenia's Clean Energy and Water Project (Report No. 9-111-15-002-P)

This memorandum transmits our final report on the subject audit. In finalizing the audit report, we considered your comments on the draft and included them in their entirety, excluding attachments, in Appendix II.

This report has 16 recommendations to help improve USAID/Armenia's Clean Energy and Water Project. After reviewing information provided in response to the draft report, we determined that the mission made management decisions on all recommendations and has taken final action on Recommendations 2, 4, 5, 6, 7, 8, 9, 10, 13, and 16. Please provide evidence of final action on open recommendations to the Audit Performance and Compliance Division.

Thank you for the cooperation and assistance extended to the audit team during this audit.

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Abbreviations

The following abbreviations appear in this report:

ADS	Automated Directives System
BMO	basin management organization
CDCS	country development cooperation strategy
COR	contracting officer’s representative
OIG	Office of Inspector General
PMP	performance management plan
RBMP	river basin management plan
WRMA	Water Resources Management Agency

SUMMARY OF RESULTS

Since Armenia became independent in 1991, its energy and water sectors have played important roles in improving economic competitiveness and ensuring regional stability. For more than 10 years, USAID has worked with Armenia in developing those sectors. The country has adopted legislation governing water resource management and planning, and created basin management organizations¹ (BMOs) within the Water Resources Management Agency (WRMA).²

Figure 1. Map of Basin Management Areas



Source: Clean Energy and Water Project.

Despite such advances, Armenia still does not have a systematic, integrated approach to energy and water resource management, and the lack of government accountability and transparency affect progress. Because the government did not have river basin management plans (RBMPs)³ showing the amount of water available, the number of permits issued outstripped the supply, thus threatening economic growth and energy and water security.

¹ Armenia has six water basin management areas, and they each have an established BMO that is responsible for providing water resource management within their areas.

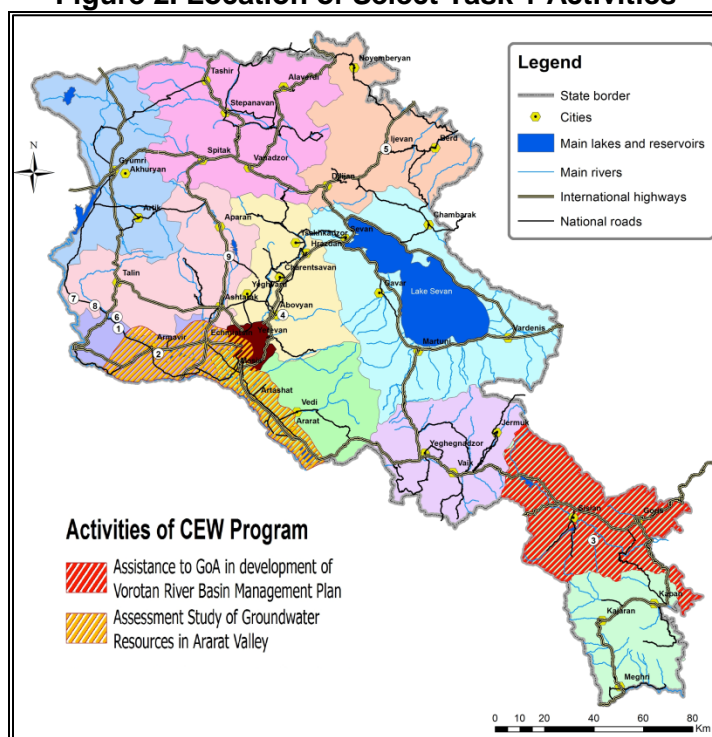
² WRMA is part of the Ministry of Nature Protection, and it is responsible for protecting and managing water resources in Armenia.

³ Water Code of the Republic of Armenia (2002) stipulates that RBMPs be developed for the country's 14 principal river basins within the six BMO areas. RBMPs have detailed information about mapping, water

To address these challenges, improve Armenia's ability to tackle the problems posed by climate change, and provide greater local access to clean energy and water, USAID/Armenia signed a \$5.67 million contract with Mendez England & Associates on September 30, 2011, to implement the Clean Energy and Water Project over 4 years. At the time of our fieldwork, the project was entering its third year through a cost-plus-fixed-fee contract.⁴ It is funded through USAID's Indefinite Quantity Contract for Integrated Water and Coastal Resources Management, and it seeks to build on the Agency's previous work in Armenia through four tasks.

Task 1. Improve integrated energy and water resource planning by (1) developing basin management plans and a computer program to help manage and make decisions in individual basins, (2) providing training, (3) establishing a Water-Energy Center of Excellence that provides consultation services through technical analysis and assistance, and (4) ascertaining usage trends through an Ararat Valley groundwater study.

Figure 2. Location of Select Task 1 Activities



Source: USAID/Armenia for the Clean Energy and Water Project.

Task 2. Help local communities and private enterprises plan, finance, and implement clean energy and water demonstration projects, thereby promoting clean energy and improving water access, sanitation, hygiene, and water management and development practices.

Task 3. Help government staff manage water resources and encourage the private sector to develop sustainable hydropower.

use and saving, ecosystems, wastewater treatment, and protection from negative impact.

⁴ See Federal Acquisition Regulations 16.306.

Task 4. Develop a master plan with other multinational donors that guides priorities for future investments in the water sector.

OIG conducted this audit to determine whether USAID/Armenia's Clean Energy and Water Project is (1) introducing an approach to sustainable energy and water management, (2) improving accessibility, reliability, efficiency, and affordability of energy and water services, and (3) strengthening hydropower and water regulations. This audit found that the project has addressed the first two goals successfully. For example, the Ararat Valley groundwater study findings prompted the government to take action to prevent illegal water use and make fisheries more responsible. Demonstration projects were coordinated with communities and partners throughout the country to bring new technology, accessibility, and reliability of energy and water resources to the Armenian people.

Furthermore, the demonstration projects had unintended successes in opening the market for solar power and promoting a competitive bidding process in Armenia. When complete, the RBMPs and computer program have the potential to help the country manage its water resources better.

We could not evaluate whether the project was strengthening hydropower regulations because Task 3 was scheduled for Year 3 and little work had been started as of October 2013. And, despite a work plan for Years 3 and 4 that is designed to help the project accomplish the remaining activities, challenges exist that may hinder the project's success and sustainability.

- The project design did not incorporate lessons learned and risks from previous projects (page 6).
- The mission did not modify the contract to reflect changes to the project strategy, deliverables, and activities (page 7).
- The government's capacity and the project's sustainability were questionable (page 9). Local government officials and donors were concerned about whether Armenia could continue project activities after the contract is over.
- The project duplicated activities, and salaries may have exceeded approved rates (page 11).
- The project's documentation was inadequate (page 13). A 2007 OIG audit report and a 2013 internal review noted problems related to inadequate documentation in project files.
- Performance data monitoring of was weak (page 13). Mendez has not made performance monitoring a priority, and the mission has not provided enough oversight and direction.

In another matter, we also found that the project focused primarily on water even though funds were obligated for water and sanitation, energy, and the promotion of a clean, productive environment (page 15).

To address these issues and strengthen the project, we recommend that USAID/Armenia:

1. Implement controls to incorporate lessons learned and concept paper⁵ review comments into project design (page 7).
2. Document how the Clean Energy and Water Project is aligned with the country development cooperation strategy (CDCS) (page 7).
3. Implement written procedures to document technical direction provided by the contracting officer's representative (COR), and give the directions to the contracting officer (page 9).
4. Discuss and document the need for a project contract modification with the contracting officer and the contractor, and modify if needed (page 9).
5. Develop and implement procedures to factor sustainability into project planning (page 10).
6. Assess and document the Armenian Government's capacity, and implement a sustainability plan for Clean Energy and Water Project activities (page 10).
7. Determine the need for activities identified as potentially duplicative, coordinate with donors and others as necessary, and document the results of the determination and coordination (page 12).
8. Provide clarification on the COR's approval of the implementing partner's documents, and train CORs on the level of technical, administrative, and financial oversight they should provide to implementers (page 12).
9. Require the contractor to provide detailed subcontractor vouchers that have budget lines for costs such as salaries, allowances, and other direct costs (page 12).
10. Provide missing rate approvals for implementing partner staff (page 12).
11. Determine the amount of salaries billed, the allowability of \$131,235 in unsupported salaries paid, and, if necessary, collect any deemed unallowable (page 12).
12. Implement controls for identifying and reconciling budgeted versus actual project costs (page 13).
13. Implement and document internal controls to make sure project management files maintain the minimum amount of documentation in accordance with the designation letter (page 13). These files should be accessible and have adequate documentation for audit purposes and future CORs.
14. Collaborate with the implementing partner to update the performance management plan (PMP) to ensure validity, integrity, precision, and reliability of data, and document the results (page 14).

⁵ According to ADS 201, a concept paper is the first step of the project design process. It provides a summary of the project after initial parameters are established. Certain people within a mission form a team that reviews the paper to identify issues.

15. Implement a plan to improve oversight and verification of the implementing partner's reported performance results (page 14).
16. Determine the amount spent on energy, and discuss energy-related project priorities with the Bureau for Economic Growth, Education, and Environment's Energy and Infrastructure Office, take any related corrective actions, and document the discussion and results (page 15).

Detailed findings appear in the following section, and Appendix I has information on the scope and methodology. Management comments appear in their entirety in Appendix II, and our evaluation of them begins on page 16.

AUDIT FINDINGS

Project Design Did Not Incorporate Lessons Learned and Risks

USAID's Automated Directives System (ADS) 201.3.11.6, the 2010 guidance in effect when the project was designed, stated that when planning projects, teams should review past Agency and development partner experience, best practices, evaluations, and other literature.

As the following examples show, our audit found that lessons learned from previous projects and input from the concept paper review team were not addressed during the planning process.

Evaluators of USAID/Armenia's Commercialization of Energy Efficiency Program, a previous energy project, urged that future projects design a sustainability plan and exit strategy at the beginning. They also recommended that future projects have a policy component to ensure that the Armenian Government would promote energy-efficient technologies.

In January 2011 the concept paper review team for the Clean Energy and Water Project noted that the Water-Energy Center of Excellence may not be sustainable and may duplicate the Energy Institute that is established already in Armenia. The mission's Economic Growth Office⁶ responded that it would continue to explore the need for the center, but this task was included as a contract requirement, and the responsibility to determine need was delegated to Mendez.

At the end of a USAID project in 2009, the implementing partner for the Program for Institutional and Regulatory Strengthening of Water Management in Armenia raised concerns to the mission about the Armenian Government's continued centralized authority for water permits. The partner also was concerned with the government's decision not to make information available to the public from the State Water Cadastre Information System, which USAID designed and funded.

The Clean Energy and Water Project's concept paper did not discuss how to resolve these concerns, but instead stated that new institutions established in the institutional and regulatory program had decentralized water management successfully.

When we asked for a risk analysis, the COR said she performed a "gap analysis" instead and that stakeholders, including other donors, were consulted during project design. However, the analysis did not identify risks and mitigation factors, and some recommendations were not implemented. For example, it recommended that continuing water resource management assistance be "contingent on the achievement of agreed-upon benchmarks and [Armenian Government] accountability for the commitments it makes."

Although USAID/Armenia's CDCS was finished in 2013 after the Clean Energy and Water Project began, it describes issues in governance related to inefficiencies, lack of institutional capacity, poorly implemented reforms, and the need for decentralization. All of these findings and risks were underrepresented in the concept paper and the contract's scope of work. At the time of fieldwork, the mission was planning to but had not yet realigned the project with the CDCS because it was just recently finished.

⁶ The project is led from this office.

Furthermore, the 2012 portfolio review identified delays in deliverables and project management problems that caused Mendez to hire a new chief of party. However, the review did not mention issues or risks related to specific activities.

Lessons learned, risk analysis, or concept paper review comments were not incorporated into project design because of a lack of mission controls over the design process.

By not considering lessons learned and comments from the review team, the mission has a project with a poorly constructed scope of work and little direction and assurance of long-term success. As a result, it faces the same problems now that could have been mitigated years ago.

Recommendation 1. *We recommend that USAID/Armenia implement controls to incorporate lessons learned and concept paper review comments into project design.*

Recommendation 2. *We recommend that USAID/Armenia document how the Clean Energy and Water Project is aligned with the country development cooperation strategy.*

Mission Did Not Modify Contract to Reflect Changes

According to the COR's designation letter, the COR had the authority to provide limited technical direction, including explaining contract details and shifting emphasis among work areas as long as the direction was within the scope of the contract, in writing, and did not affect the cost, quality, or quantity of deliverables. The letter also stated that the contracting officer was the only person authorized to make changes to the contract's scope of work.⁷

However, the mission made significant changes in the project's strategy, deliverables, and activities that were not in the scope of work for this project. While most still align with the objectives, they require a contract modification. Examples are discussed below.

Two-Phase Approach Removed. The scope called for a two-phase approach that staggered the activities and deliverables throughout the 4-year project because of funding concerns. Mission officials said it was no longer necessary because they had secured funding for the whole project. However, the contract was not modified to reflect this change.

Deliverable Added to Task 1. The contract states that subbasins be selected, for which RBMPs will be developed based on a defined set of criteria. In the Year 3 and 4 work plan, Mendez reported that it intends to complete three RBMPs, as well as a comprehensive southern basin management plan, which was not part of the contract.

Mission officials said they did not think the comprehensive plan required an increased effort and they recommended that Mendez get the Armenian Government to adopt the southern basin management plan. However, they did not modify the contract to include this.

New Projects Introduced to Task 2. As required by the contract, in Year 1 the Clean Energy and Water Project prepared a report to explain the strategy for selecting sites for demonstration projects under Task 2. This report identified approximately 65 potential projects with partnerships. In Year 2 the mission approved some of those projects beginning and asked

⁷ This is a requirement of Federal Acquisition Regulation 43.102.

Mendez to create larger projects for a potential partnership with VivaCell, a cell phone company. Later in Year 2, the mission asked Mendez to develop new, larger projects for a potential partnership with the U.S. Department of Defense.

After the projects for VivaCell began, mission officials informed Mendez that the partnership fell through and it could postpone or cancel the projects. Mendez officials said they did not want to abandon the communities and work that had begun; so they continued those projects and decreased the size of the remaining demonstration projects.

The mission's decision to ask for new projects that were not in the original plan required Mendez to spend additional time to design them, and affected the cost and quality of the remaining deliverables.

Mission officials said because the contract states the need for partnerships with the private sector, they did not consider the new projects to be outside the contract. However, Mendez had already identified partners in its initial report of potential projects.



Some of the projects USAID funded under Task 2 included equipping a medical clinic with a solar air heating system (left) and replacing a village's corroded steel and cast-iron water pipes (right) with ones made of polyethylene. (Photos by OIG, October 2013)

Regulation Under Task 3 Already Adopted. The contract requires the implementing partner to draft legislation that encourages the private sector to develop small hydropower facilities under Task 3. However, the Armenian Government adopted relevant hydropower regulation in October 2011 when the project began.

Donor Plan Under Task 4 Changed. Under Task 4, the contract states that the implementing partner will create a plan to guide donors' future investments in the water sector. According to Mendez officials, the World Bank committed to lead the effort during project planning. However, the plans changed and the bank published a "concept note," or pamphlet instead that described the work it performed in the water sector.

As a result, Mendez and the mission decided to draft a similar document on USAID's role—a substantially smaller endeavor than the original donor plan because it only summarizes work already done. Mission officials said they had not decided whether the concept note under Task 4 would add value or be removed as a contract requirement.

The COR said she discussed the changes described with employees in the acquisition office, and they did not think contract modifications were required. Therefore, she did not bring them to the contracting officer's attention as required by her designation letter. When we discussed the changes with the contracting officer, he did not decide whether they required modifications, but agreed that he should have been made aware of them.

Changes should be documented in a contract modification or change order to show that all parties agree to them and that the implementing partner is aware of its responsibilities. Without a modification, there can be confusion about expectations and requirements. Because of the frequent changes to this project, Mendez spent time trying to implement activities that were not in the scope or no longer relevant. The changes also meant that the mission did not receive some of the required deliverables.

Recommendation 3. *We recommend that USAID/Armenia implement written procedures to document technical direction provided by the contracting officer's representative and give the directions to the contracting officer.*

Recommendation 4. *We recommend that USAID/Armenia discuss and document the need for a Clean Energy and Water Project contract modification with the contracting officer and the contractor, and modify if needed.*

Government's Capacity and Project's Sustainability Were Questionable

USAID's Policy Framework 2011-2015 identifies building in sustainability from the start as an operational principle. Therefore, a project should start only if the community is committed to maintaining the activity after the USAID project ends.

The Armenian Government may not have the capacity to continue project activities, and the project may not be sustainable. For example, local government officials and other donors said the government might not have the resources, including hardware, to use the computer program once the project is completed. One person asked whether adequate training on using and maintaining the program would be provided because it is complex and will be transferred 3 months before the project ends—leaving little time to work out any issues or make adjustments. In addition, project officials said the program will be calibrated only for the southern basin at the time of transfer, and other basins will not be able to use it until they are calibrated. There was also concern about the accuracy of the program's data and the fact that it would need to be updated.

In addition, a government official said there is a lack of consensus over who is responsible for water management. Officials at the WRMA and BMOs said they have asked the Armenian Government for funding to create basin plans for several years, to no avail. A donor official said this is particularly important because funding is needed to implement the RBMPs, and promote permit enforcement.

Mendez officials said the government has been aware of the need for the Task 1 Ararat Valley groundwater study, but the study never received funding from the government, which is why USAID undertook the effort.



USAID's project paid for studies at fish farms, like this one in the Ararat Valley, that measure their effects on the environment. (Photo by OIG, October 2013)

In a related matter, some government officials and donors said studies and discussions should occur before establishing the Water-Energy Center of Excellence to determine whether it could be sustainable and how to pay for it.

Sustainability was not built in from the start of the project even though the mission was aware of past concerns about the government's support. Risks related to the government's capacity were not sufficiently considered during project planning, as discussed in the first finding. Therefore, USAID may be spending money on activities that are not sustainable, and the government remains dependent on donor funding for clean energy and water activities.

Recommendation 5. We recommend that USAID/Armenia develop and implement procedures to factor sustainability into project planning.

Recommendation 6. We recommend USAID/Armenia assess and document the Armenian Government's capacity and implement a sustainability plan for the Clean Energy and Water Project activities.

Project Duplicated Activities, and Salaries May Have Exceeded Approved Rates

According to ADS 596, control activities should govern all functions of the Agency to ensure accountability for resources. ADS 202 states, “Early action in response to problems is essential in managing for results.”

We identified the following examples of potential wasted time and resources, and questionable costs.

- A new activity under Task 3 is to develop a methodology for ecological flow,⁸ which other donors are doing already. A senior government official suggested that Mendez not duplicate those efforts.
- Under Task 4, WRMA officials said the concept note on USAID efforts would not be useful for them.
- During project design, the concept paper review team documented concerns that the Water-Energy Center of Excellence would duplicate the Energy Institute already established in Armenia.
- Under Task 1, the contract states that a computer program should be created to help the government make decisions about water resource management. According to project officials, based on the scope and the former chief of party’s insistence, the local project staff spent unnecessary time trying international open-source models for the system when they knew Armenia would require a unique program.

In addition, the contract names Booz Allen Hamilton Inc. as a subcontractor for the project. The firm was scheduled to receive \$1.16 million, or about 20 percent, of the total cost. Mission officials determined that a short-term technical assistant Booz Allen hired to review a report provided sub-par deliverables. They questioned the number of hours and amount billed, and said the review could have been done better locally for much less money. Mendez officials acknowledged that the amount seemed high and asked Booz Allen to address the issue. In response, the subcontractor reduced the number of hours from 89.5 to 36.

Mendez also recognized the waste of using an international subcontractor for this type of work and proposed eliminating the rest of the subcontract, with the exception of one climate change expert. Mission officials said they wanted the subcontractors’ vouchers to have a detailed breakdown of costs.

Potential waste existed because the mission staff explicitly approved only the documents listed in the contract and did not respond to Mendez’s requests for guidance, instruction, or approval. The COR said that if the contractor does not receive comments, the silence constitutes approval. She also said the COR training instructor told her not to approve things formally that don’t require COR approval per the contract.

⁸ Ecological flow is the amount of water needed to maintain a healthy aquatic environment.

Mendez asked the mission for a more formal approval and acceptance process, and the COR sent the request to the acquisition office. She said she did not get a response. Mendez officials said that because a contract is binding, they are trying to finish all of the activities regardless of the changes.

Salaries May Have Exceeded Allowable Amounts. The mission did not have documentation⁹ showing approval of the rates paid to four Mendez employees, and the amounts were not in the original approved budget. In addition, USAID may have overpaid employees at least \$131,235 over a 2-year period. Salaries for some employees were higher than expected. For example, a translator/driver was paid the same as an engineer and double what a translator/editor received.

Mendez officials said they overlooked the rate approvals because the chief of party was ill at the beginning of the project. They attributed the salary differences to an error during employee negotiations and said USAID was billed using the approved rate (we did not have time to verify whether this was accurate).

If there are discrepancies between the salaries USAID paid and what was approved, it may have occurred because no one in the mission knew who was responsible for confirming that costs, such as salaries, were in accordance with the budget. Mission staff said they do a general review of the budget each year. The mission director said confirming that costs align with the budget for all projects would be too time-consuming. A mission employee said contracting officers can approve any salary as long as they feel it is reasonable.

Funds and time spent on activities that are duplicative or unnecessary divert resources from activities that could help the project succeed. For the questionable salary costs, the mission may be overpaying contract staff, and these funds could be put to better use to meet the project objectives. We estimate if there is an overpayment, it is more than \$131,235, because the figure calculated is only for Years 1 and 2, and employees without rate approvals were not counted.

Recommendation 7. We recommend that USAID/Armenia, in coordination with donors and others as necessary, determine the need for activities identified as potentially duplicative and document the results of the determination and coordination.

Recommendation 8. We recommend that USAID/Armenia provide clarification on the contracting officer representative's approval of the implementing partner's documents, and train contracting officer representatives on the level of technical, administrative, and financial oversight they should provide to implementers.

Recommendation 9. We recommend that USAID/Armenia require the contractor to provide detailed subcontractors' vouchers that have budget lines for costs such as salaries, allowances, and other direct costs.

Recommendation 10. We recommend that USAID/Armenia provide missing rate approvals for implementing partner staff.

Recommendation 11. We recommend that USAID/Armenia determine the amount of salaries billed, the allowability of \$131,235 in unsupported salaries paid, and collect any deemed unallowable.

⁹ Missions use the AID 1420-17 Contractor Employee Biographical Data Sheet to make sure employees are compensated at the approved rate.

Recommendation 12. *We recommend that USAID/Armenia implement controls for identifying and reconciling budgeted versus actual project costs.*

Project Documentation Remained Inadequate

The 1999 edition of the Government Accountability Office's (GAO's) *Standards for Internal Control in the Federal Government* states that internal control monitoring is useful for assessing effectiveness and performance quality. This includes monitoring to ensure that audit and review findings are resolved.

The COR's designation letter states that she is responsible for establishing and maintaining adequate files to carry out contract management duties. These files document her actions and help future CORs and others understand why she took them. The files also serve as important documentation for audit purposes.

A 2007 OIG audit of USAID/Armenia's Energy and Water Sector Reform Program stated, "Program files [did] not always adequately document substantive changes and developments, key decisions and the status of activities under the program." The report recommended that the mission take steps to ensure that program staff fully implement and adhere to documentation requirements.

In 2013 USAID/Armenia's Federal Managers Financial Integrity Act review noted that files for the CORs and for agreement officer's representatives did not have all documents specified in their designation letters and that not all travel or site visits were documented properly. During our audit, we found similar problems. For example, the COR kept some key documents in a paper folder and others electronically. She kept some important files in a work e-mail account and recorded some site visit reports in a notebook.

These documentation problems occurred because management did not devote enough attention and oversight to resolving them. Inadequate maintenance of project documentation impedes a COR's ability to manage the contract properly and can negatively affect the project under contract.

Recommendation 13. *We recommend that USAID/Armenia implement and document internal controls to make sure project management files maintain the minimum amount of documentation, in accordance with the designation letter. These files should be accessible and have adequate documentation for audit purposes and future contracting officers' representatives.*

Performance Data Monitoring Was Weak

Performance monitoring is a key component of USAID's program cycle that aims to determine whether intended results are being achieved and operations are on course. Agency guidance on assessing performance requires the PMP to provide a precise definition for each indicator, information on data sources, and the methods of data collection. According to ADS 203, data

collection should be done carefully to minimize the risk of error, and the performance data must represent the intended results clearly and adequately.

Plan Does Not Include Collection Methods for All Indicators. One project indicator, *Total savings (in \$) from pollution mitigation and reduction*, is intended to capture the cost of electrical energy saved due to project implementation. However, Mendez's employees could not provide documentation on the method and acknowledged they are not sure whether it is correct. They also could not provide a written method used for collecting the data on *Number of private sector firms with improved management practices as a result of United States Government (USG) assistance*.

Mendez Was Not Collecting or Maintaining Adequate Data. The Clean Energy and Water PMP states that the data source for the indicator *Person hours of training completed in water technologies and management practices* is training attendance records. However, Mendez employees said they are using meeting notes instead of attendance records—that is not in the PMP.

We also found documentation for indicator data was in several different locations and maintained by several employees. At the time of fieldwork, Mendez had begun compiling documentation for indicator data in one location.

Indicators Were Not Tied Directly to Project Outcomes. The project outcome of strengthened and improved water-use permits decision processes has two indicators: *Number of meetings [of the decision support system] advisory group* and *Number of institutions with improved capacity to address climate change issues as a result of USG assistance*.

Holding meetings, however, does not clearly indicate that a permit decision process will improve. Likewise, the number of institutions that receive training on climate change issues and consider them in their operations does not link directly to the intended outcome.

These problems happened for two reasons. Mendez officials said they had not made performance monitoring a priority. Also, USAID staff did not provide enough oversight and direction to Mendez on monitoring. In addition, the mission had not examined the contractor's data collection methods adequately, and there was some confusion over who was supposed to do so.

Poor data quality erodes confidence in reported results and weakens decision-making. It does not allow the mission to determine whether results are being achieved. By capturing data not tied clearly to project outcomes, USAID may not be getting what it needs to assess progress.

Recommendation 14. *We recommend that USAID/Armenia collaborate with the implementing partner to update the performance management plan to ensure validity, integrity, precision, and reliability of data, and document the results.*

Recommendation 15. *We recommend that USAID/Armenia implement a plan to improve oversight and verification of the implementing partner's reported performance results.*

OTHER MATTER

Project Focused Primarily on Water

The 1999 GAO's *Standards for Internal Control* identifies control activities as an integral part of an entity's accountability for stewardship of government resources and achieving results. Examples of activities include proper execution, accurate and timely recording, and appropriate documentation of transactions and events. The standards state, "Managers also need to compare actual performance to planned or expected results."

Staff in USAID's Bureau for Economic Growth, Education, and Environment's Energy and Infrastructure Office said they were concerned that USAID/Armenia's Clean Energy and Water Project focused primarily on water. According to mission staff, as of January 2014, USAID/Armenia had obligated \$1.4 million for activities that addressed water and sanitation, \$1.8 million for energy, and \$1 million to promote a clean, productive environment.

Despite obligated funding, at the time of fieldwork the project focused primarily on water. Task 1's focus is solely on water with the exception of one part of the computer program and RBMP related to climate change and the salary of a climate change specialist. Task 3 originally focused some on energy; however, that has shifted to water.

Only Task 2 demonstration projects cover energy, and the total budget for them is \$405,000, including a request for a \$50,000 increase for years 3 and 4. Ten of the 15 projects deal with energy. Some include installing LEDs, radiant heating, and solar water heaters.

Mission officials said they did not believe they were using any earmarked funds with restricted uses. They said they had completed the required operating reports and it was Washington's responsibility to ask questions or for more information. We did not assess how much of the \$1.8 million obligated for energy was spent. However, we make the following recommendation.

Recommendation 16. *We recommend that USAID/Armenia determine the amount spent on energy, and discuss energy-related project priorities with the Bureau for Economic Growth, Education, and Environment's Energy and Infrastructure Office, take any related corrective actions, and document the discussion and results.*

EVALUATION OF MANAGEMENT COMMENTS

In its response to the draft report, USAID/Armenia agreed with and made management decisions on all 16 recommendations. It took final action on ten: Recommendations 2, 4, 5, 6, 7, 8, 9, 10, 13 and 16. We acknowledge the management decisions. An evaluation of management comments follows.

Recommendation 1. USAID/Armenia agreed with this recommendation and has taken steps to address it by incorporating lessons learned and concept paper review comments into the Economic Growth Office's project appraisal document. To make sure future project design incorporates these, the mission plans to update the appropriate mission order by May 29, 2015. We acknowledge the mission's management decision.

Recommendation 2. USAID/Armenia provided documentation in the Economic Growth Office's project appraisal document to align the Clean Energy and Water Project with the CDCS. Based on the supporting documentation provided, we acknowledge management's decision and final action.

Recommendation 3. USAID/Armenia said it plans to develop written procedures through an acquisition and assistance notice, with instructions for documenting technical directions that CORs provide to contractors. The mission said it would share the instructions with the contracting officer and issue the notice by May 29, 2015. We acknowledge the mission's management decision.

Recommendation 4. USAID/Armenia issued a contract modification to realign the budget on April 11, 2014. The mission said the budget realignment addressed several changes, including the level of involvement of subcontractors. Based on the comments and supporting documentation provided, we acknowledge management's decision and final action.

Recommendation 5. In October 2014, USAID/Armenia approved the Economic Growth Office's project appraisal document, which included a sustainability analysis. Based on the comments and supporting documentation provided, we acknowledge management's decision and final action.

Recommendation 6. USAID/Armenia conducted sustainability planning for all Economic Growth activities, including the Clean Energy and Water Project, as part of the project appraisal document. The mission provided documentation of meetings with Armenian Government ministries and other donors, and said these meetings were held to assess the capacity for current and future activities. Based on comments and supporting documentation provided, we acknowledge management's decision and final action.

Recommendation 7. USAID/Armenia has taken steps to avoid duplicating the development of an ecological flow methodology. The mission also determined that the Water Center of Excellence is going to focus primarily on water, and the Scientific Research Institute of Energy will focus on energy generation, distribution, and transmission. Based on the comments, and documentation of donor coordination, we acknowledge management's decision and final action.

Recommendation 8. USAID/Armenia provided documentation that the Clean Energy and Water Project COR updated her acquisition and assistance management training certification in September 2014. Based on the documentation, we acknowledge management's decision and final action.

Recommendation 9. USAID/Armenia asked the contractor to submit detailed expense breakdowns for all subcontracts including salaries, allowances, and other direct costs on January 26, 2015. Based on the documentation, we acknowledge management's decision and final action.

Recommendation 10. USAID/Armenia agreed with this recommendation. The mission's contracting officer made a decision to obtain rate approvals for staff above grade 8 and those not included in the final proposal budget. The mission provided these rate approvals. Based on the comments and documentation, we acknowledge management's decision and final action.

Recommendation 11. USAID/Armenia agreed to review the salary costs, determine the allowability of salaries paid, and collect any amounts deemed unallowable by May 29, 2015. We acknowledge the mission's management decision.

Recommendation 12. USAID/Armenia agreed with the recommendation and stated that it would have the COR and voucher examiners review budgeted versus actual project costs on a monthly basis beginning on February 1, 2015. We acknowledge the mission's management decision. Final action requires documentation of reconciliations.

Recommendation 13. According to the management comments, USAID/Armenia is part of a worldwide procurement system review program carried out by the Office of Acquisition's Evaluation Division. As part of that, the mission's Acquisition and Assistance Office conducted a management review of the COR's files in November 2014. In addition, the mission said it would conduct COR file reviews annually. We acknowledge management's decision and final action.

Recommendation 14. USAID/Armenia agreed to work with the implementing partner and the program office to update the PMP by May 29, 2015. We acknowledge the mission's management decision.

Recommendation 15. USAID/Armenia agreed to conduct an updated data quality assessment of the Clean Energy and Water Project's performance indicators by May 29, 2015. We acknowledge the mission's management decision.

Recommendation 16. USAID/Armenia calculated the total amount spent and expected to be spent on energy for the project as of February 2, 2015. The mission also provided documentation of meetings with employees from the Europe and Eurasia Bureau's Energy and Infrastructure Office, and the December 2014 concept note for the Science, Technology, Innovation, and Partnership program focusing on water and energy. Based on comments and documentation, we acknowledge management's decision and final action.

SCOPE AND METHODOLOGY

Scope

OIG's Performance Audits division conducted this audit in accordance with generally accepted government auditing standards. They 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 objective. We believe that the evidence obtained provides that reasonable basis.

The purpose of this audit was to determine whether the \$5.67 million USAID/Armenia Clean Energy and Water Project is achieving its main goals. This audit covered activities and decisions made from project development through fieldwork, which included Years 1 and 2 of implementation. We performed fieldwork in Armenia from October 3 through October 30, 2013, at USAID/Armenia and Mendez's office in Armenia. Follow-up work was performed through e-mail from Washington, D.C. We also performed site visits throughout Armenia and visited Mendez's headquarters in Bethesda, Maryland.

The audit team assessed significant internal controls that the mission and Mendez used to manage project activities. We also assessed the contractor's progress reports and work plans. We held interviews and conducted site visits to validate project achievements. As part of our assessment, we reviewed the following documents: (1) annual portfolio reviews, (2) contractor performance assessments, (3) the mission's Federal Manager's Financial Integrity Act results for FY 2013, (4) Mendez's financial audit results, (5) the mission's financial review of Mendez, (6) site visit notes, (7) past audit reports, and (8) past evaluations of similar projects.

Methodology

To plan for this audit, OIG reviewed the contract and associated modifications, project design documents, PMPs, Mendez's work plans, progress reports, environmental assessments, budget, and other supporting documents. We reviewed the mission's country assistance strategy, CDCS, and the Economic Growth Office's PMP. We also reviewed applicable policies and procedures pertaining to USAID/Armenia's implementation of the project, including various ADSs in effect during the project design and at the time of our fieldwork.

To answer the audit objective, we identified the project's main goals and significant risks. During fieldwork, the audit team interviewed mission staff including the COR, monitoring and evaluation specialist, financial management staff, acquisition assistant, and the regional contracting officer. We also had phone interviews with staff from the Bureau for Economic Growth, Education, and Environment's Energy and Infrastructure Office and Water Office in Washington, D.C., while in Armenia. To understand the activities conducted under the four project tasks, we interviewed the Mendez chief of party and the local project staff in Armenia.

Given the nature of the project activities, we could not statistically sample or project our audit results. We also did not test a sample of indicators because the project monitoring was incomplete. Instead, we analyzed the PMP, data sources, indicators, and outcomes.

The audit team performed site visits to six demonstration projects under Task 2 and interviewed beneficiaries. The team judgmentally selected the sites based on their completion and location. Mendez employees took the team to three fisheries in Armenia to understand the purpose of Ararat Valley groundwater study under Task 1. The team interviewed government officials from project-related ministries and BMO representatives. We also interviewed a local nongovernmental organization and other international donors performing work in the Armenian water sector.

MANAGEMENT COMMENTS



Date: February 5, 2015

To: IG/A/PA, Director, Jon Chasson

From: USAID/Armenia Mission Director, Karen R Hilliard /s

Subject: Audit of USAID/Armenia's Clean Energy and Water

Project Ref: Management Comments to Draft Report

No.9-111-14-00X-P

USAID/Armenia appreciates the opportunity to comment on the draft audit report and notes the recognition in the draft report that the Clean Energy and Water Project (CEWP) has successfully prompted government action to prevent illegal and promote responsible water use and that the demonstration projects have proved successful. USAID Armenia will endeavor to implement the report's recommendations based on the plan and timeline provided below.

Recommendation 1: *We recommend that USAID/Armenia implement controls to incorporate lessons learned and concept paper review comments into project design.*

Mission Response:

USAID/Armenia agrees with this recommendation. The following corrective actions have already been taken to improve Mission controls in this respect:

USAID/Armenia addressed the recommendation through the Economic Growth Project Appraisal Document (EG PAD) for Development Objective 1: More inclusive and sustainable economic growth and EG PAD Review Memo (Attachments 1, 2 and 3). The EG PAD was approved on October, 29, 2014. In the development of these documents, USAID/Armenia has conducted significant analysis in designing the PAD to inform the Mission's overall approach. The EG Assessment (Attachment 4) along with major lessons learned and best practices from the various project evaluations helped to shape how we focused our approach for the EG PAD.

To ensure the incorporation of review comments into project design, the EG Design Team extensively sharpened the EG PAD in accordance with Concept Paper Approval Memo (Attachment 3) and fully aligned it with the CDCS and principles of USAID Forward along

with Science, Technology, Innovation and Partnership (STIP) approaches. The EG PAD focuses on leaving legacies in our economic assistance and maximizing sustainability over the life of the PAD ending in 2019.

In addition, the mission order on project design process will be updated by May 29, 2015, addressing details of the process and ensuring that future planning incorporates lessons learned and concept paper review comments.

Recommendation 2: *We recommend that USAID/Armenia document how the Clean Energy and Water Project is aligned with the country development cooperation strategy.*

Mission Response:

USAID/Armenia agrees with this recommendation. The following corrective actions have already been taken to address the recommendation:

USAID/Armenia addressed the recommendation through the EG PAD, which describes how the Clean Energy Water Project aligned with the USAID/Armenia CDSC.

USAID/Armenia believes that the above action fully addresses Recommendation 2 and requests its closure.

Recommendation 3: *We recommend that USAID/Armenia implement written procedures to document technical direction provided by the contracting officer's representative and give the directions to the contracting officer.*

USAID/Armenia agrees with this recommendation. The mission will develop written procedures in the form of a Mission Acquisition and Assistance Notice in order to spell out procedures for documenting technical directions provided to contractors by CORs and ensuring that these technical directions are shared with the CO.

The Acquisition and Assistance Notice on technical directions will be issued by May 29, 2015.

Recommendation 4: *We recommend that USAID/Armenia discuss and document the need for a Clean Energy and Water Project contract modification with the contracting officer and the contractor, and modify if needed.*

Mission Response:

USAID/Armenia agrees with this recommendation. On April 22, 2014, USAID/Armenia issued Contract Modification No. 6 (Attachment 5), which served to realign the budget to address several changes, including the changes regarding the level of involvement of subcontractors. Based upon several discussions with the CO we have decided that the SOW is now satisfactory and there is no need for further modification of the contract.

USAID/Armenia believes that the above action fully addresses Recommendation 4 and requests its closure.

Recommendation 5: *We recommend that USAID/Armenia develop and implement procedures to factor sustainability into project planning.*

Mission Response:

USAID/Armenia agrees with this recommendation. This recommendation has been addressed in the approved EG PAD (Attachments 1 and 3). The planning requirements for the PAD require completion of a sustainability analysis. The sustainability analysis is factored into the EG PAD and is used for ongoing and future activities.

USAID/Armenia believes that the above action fully addresses Recommendation 5 and requests its closure.

Recommendation 6: *We recommend USAID/Armenia assess and document the Armenian Government's capacity and implement a sustainability plan for the Clean Energy and Water Project activities.*

Mission Response:

USAID/Armenia agrees with this recommendation. During the strategy development, EG PAD design, and implementation of the previous and current projects, USAID/Armenia had several meetings and consultations with Governmental Ministries and Agencies and other donors working in the energy and water sectors. These consultations were an important part of the EG PAD development process and resulted in a good grasp of the Governmental capacities and is documented in the CDSC, Armenia Biodiversity Analysis Update, EG Assessment and EG PAD (Attachments 1, 4, 6 and 7). The recent World Bank Note "Toward Integrated Water Resource Management in Armenia" was prepared in consultation with the USAID and includes discussion on institutional capacities in the sector, including government institutions (Attachments 8).

The EG PAD included sustainability planning for all EG activities, including the areas of water and clean energy that, along with further consultations, help ensure the sustainability for the Clean Energy and Water Project activities. In addition, a number of STIP activities that are planned in the area of clean energy and water will also specifically address sustainability, including government capacity issues and leaving a legacy behind.

USAID/Armenia believes that the above actions fully address Recommendation 6 and requests its closure.

Recommendation 7: *We recommend that USAID/Armenia, in coordination with donors*

and others as necessary determine the need for activities identified as potentially duplicative and document the results of the determination and coordination.

Mission Response:

USAID/Armenia agrees with this recommendation and has been taking action in this regard. USAID/Armenia and the CEW project has been, and will continue to coordinate with other donors on energy and water activities, in particular with the World Bank, Asian Development Bank, UNDP, EU-funded projects, and KfW.

Based on the auditors exit briefing recommendation to further examine potential duplication of efforts, USAID and CEWP have discussed the request for assistance in development of ecological flow methodology during several meetings with the Ministry of Nature Protection (MNP) and a EU-funded project (Attachments 9,10,11,12, 13 and 14). These discussions demonstrate greater donor coordination to avoid duplication.

During the development process of the EGPAD and STIP signature effort concept paper, the mission looked at activities of the water-energy centers of excellence and concluded that the focus of Scientific Research Institute of Energy is energy generation, distribution and transmission, while the Water Center of Excellence is going to focus primarily on water and the water and energy nexus. USAID/Armenia will continue to make sure that Centers of Excellence compliments each other and do not duplicate efforts (Attachments 1, 3, 15 and 27).

USAID/Armenia believes that the above actions fully address Recommendation 7 and requests its closure.

Recommendation 8: *We recommend that USAID/Armenia provide clarification on the contracting officer representative's approval of the implementing partner's documents, and train contracting officer representatives on the level of technical, administrative, and financial oversight they should provide to implementers.*

Mission Response:

USAID/Armenia agrees with this recommendation and of the importance of continuing the training of AOR/CORs at the Mission. Once an AOR/COR certification has been obtained, further training is administered in the form of continuous learning points required every two years based on the requirements of the Federal Acquisition Institute's Federal Acquisition Certification-Contracting Officer's Representatives (FAC-COR) Program. The COR of this project took an updated Acquisition & Assistance Management for CORs/AORs (A&A104) course and received new certification in September 2014 (Attachment 16).

USAID/Armenia believes that the above action fully addresses Recommendation 8 and requests its closure.

Recommendation 9: We recommend that USAID/Armenia require the contractor to provide detailed subcontractors' vouchers that have budget lines for costs such as salaries, allowances, and other direct costs.

Mission Response:

USAID/Armenia agrees with recommendation. The contractor has been advised to submit detailed expense breakdown for all subcontracts to exercise better controls over the project expenditures (Attachment 17).

USAID/Armenia believes that the above action fully addresses Recommendation 9 and requests its closure.

Recommendation 10: We recommend that USAID/Armenia provide missing rate approvals for implementing partner staff.

Mission Response:

USAID/Armenia agrees with this recommendation. Attached to these comments are the missing rate approvals for implementing partner staff above grade 8 (Attachments 18, 19, 20, 21 and 22).

USAID/Armenia believes that these actions fully address Recommendation 10 and requests its closure.

Recommendation 11: We recommend that USAID/Armenia determine the amount of salaries billed, the allowability of \$131,235 in unsupported salaries paid, and collect any deemed unallowable.

Mission Response:

USAID/Armenia concurs with this recommendation. USAID/Armenia will review the costs and determine the allowability of salaries paid and collect any amounts deemed unallowable. The target completion date is May 29, 2015.

Recommendation 12: We recommend that USAID/Armenia implement controls for identifying and reconciling budgeted versus actual project costs.

Mission Response:

USAID/Armenia concurs with this recommendation. The COR along with voucher examiners were reviewing budget vs actual expenses occasionally. Starting February 1, 2015, COR and voucher examiners will be exercising *budgeted versus actual project costs review* on a monthly basis to ensure proper control over the approved budget categories.

USAID/Armenia believes that the above action fully addresses Recommendation 12 and

requests its closure.

Recommendation 13: *We recommend that USAID/Armenia implement and document internal controls to make sure project management files maintain the minimum amount of documentation, in accordance with the designation letter. These files should be accessible and have adequate documentation for audit purposes and future contracting officers' representatives.*

Mission Response:

USAID/Armenia agrees with this recommendation and has already taken corrective actions to address the recommendation. In particular, in November 2014, the Acquisition and Assistance Office conducted a management review of COR files. This file review was conducted in support of a procurement assessment of the Caucasus region by the USAID/Washington Office of Acquisition Evaluation Division (OAA/E) and the results were submitted to OAA/E. This assessment was part of the ongoing Worldwide Procurement System Review program by OAA/E to provide oversight of the procurement process in USAID/Washington and at USAID missions abroad. The mission plans to continue conducting COR file reviews on an annual basis.

USAID/Armenia believes that these actions fully address Recommendation 13 and requests its closure.

Recommendation 14: *We recommend that USAID/Armenia collaborate with the implementing partner to update the performance management plan to ensure validity integrity, precision, and reliability of data, and document the results.*

Mission Response: Please see response to Recommendation 15.

Recommendation 15: *We recommend that USAID/Armenia implement a plan to improve oversight and verification of the implementing partner's reported performance results.*

Mission Response:

USAID/Armenia agrees with recommendations 14 and 15. USAID/Armenia fully appreciates the importance of collaborating with the implementing partner in developing and updating the performance management plan to ensure validity, integrity, precision, and reliability of data, and documenting the results.

To address recommendations 14 and 15, USAID/Armenia will more deeply cooperate with the implementing partner on updating the performance management plan to ensure validity, integrity, precision, and reliability of data, and document the results. The Program Office is planning to invite TDYs from the Program Office of the E&E Bureau for three weeks starting from April 1, to deepen cooperation between CORs/AORs, Program Office, and implementing partners and improve oversight and verification of the implementing partner's

reported performance results.

The COR of the CEW project, in coordination with USAID/Armenia Program Office, will work with the implementing partner to update the PMP by May 29, 2015.

The COR, in coordination with USAID/Armenia Program Office, will conduct an update of Data Quality Assessment of the CEW project's performance indicators by May 29, 2015.

Recommendation 16: *We recommend that USAID/Armenia determine the amount spent on energy, and discuss energy related project priorities with the Bureau for Economic Growth, Education, and Environment's Energy and Infrastructure Office, take any related corrective actions, and document the discussion and results.*

Mission response:

USAID/Armenia agrees with this recommendation. We would like to emphasize that in hybrid water/energy/environment projects the components are very much interrelated. For example, the basin planning effort is about integrated energy and water resource planning and management, and water pilots have electricity components like electrical pumping water for drinking purposes, and electricity for water and wastewater treatment facilities.

The Task 1 is about integrated energy and water management planning. As such, the project had calculated the hydropower potential of each river basin compared with utilized hydropower capacity, and estimated potential for further development of hydropower in targeted rivers. This approach has been also transferred to the River Basin Management Plan (RBMP) and Decision Support System. The work was done by an energy efficient specialist, a hydrologist, and a basin planner in consultations with respective international and local experts and a variety of stakeholders. In addition, the RBMP climate change component includes software, a climate change specialist, and time of the basin planner, GIS and modelling specialists, the COP, international experts and project support staff. Currently the project is addressing issues of environmental (ecological) flows to protect ecosystems and properly address permitting issues for hydro development. As such there is a significant amount of funds that has been spent and will be spend on the clean energy under task 1.

As for Task 2, a total of \$405,000 is the budgeted amount for all demonstration projects and includes a \$50,000 increase request for years 3 and 4. The indicated amount includes only a portion for the infrastructure development and it does not include respective time and salary of the COP and other involved staff, including supporting staff, monitoring visits, etc. Given that majority of the infrastructure projects are in the energy sector and considering other administrative costs, the portion of the clean energy funds that have been and will be spent is higher than the mentioned amount for the demonstration projects.

The estimate of the total amount spent and expected to be spent on energy under the CEWP is

\$1,807,328.00 (Attachment 23).

USAID/Armenia is discussing the CEWP project with the Energy and Infrastructure Office of E&E Bureau, as well as with Bureau for Economic Growth, Education, and Environment.

In particular, representatives of E&E Bureau's *Energy and Infrastructure Office* visited Armenia in 2013, 2014 and 2015, had discussions with USAID Mission and CEW staff and made site visits to observe project pilots (Attachments 24, 25 and 26). Recent discussions with the Bureau for Economic Growth, Education and Environment, as well as E&E Bureau's *Energy and Infrastructure Office* took place during the development of the STIP Signature Effort that focused on clean energy and water (Attachment 27).

Based on recommendation provided in the draft audit report we will coordinate more rigorously and document discussions and results for ongoing and upcoming activities.

USAID/Armenia believes that these actions fully address Recommendation 16 and requests its closure.

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