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EVALUATION OF THE MOBILIZATION ACTION AGAINST CORRUPTION (MAAC), COMPETITIVENESS OF THE ARMENIA PRIVATE SECTOR (CAPS), SUN MICROSYSTEMS GDA, AND THE COMMERCIALIZATION OF ENERGY EFFICIENCY PROGRAM (CEEP) PROJECTS

USAID/ARMENIA

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This publication was produced for review by the United States Agency for International Development. It was prepared by John "Jack" Sullivan (Social Impact), Carl Ulbricht (SI), Donovan Rudisuhle (SI), Anna Sedrakyan (Management Systems International), and Lilit Melikyan (MSI).

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Introduction to the Evaluations

Social Impact (SI) is pleased to submit to USAID/Armenia the final reports on four evaluations conducted by a joint team composed of specialists from SI and Management Systems International (MSI). As requested by the Mission Director, we are providing the reports in a single document. Each of the evaluation reports, however, stands on its own. Each report also contains annexes that list the documents reviewed and the individuals interviewed. Those have been compiled together following the end of the texts of the reports.

SI, MSI and our team members wish to thank the Mission Director and many USAID personnel who took a personal interest in the assignments. The guidance and assistance received from the Mission was highly appreciated and invaluable to achieving the final results.

Evaluation of
The Mobilizing Action Against Corruption
(MAAC)
Project

Prepared by Social Impact, Inc.

John H. Sullivan, Ph.D., and
Carl Ulbricht

Acknowledgments:

In addition to indicating our gratitude to the USAID Mission for its guidance and excellent assistance, the MAAC sub team wishes to express our appreciation to Francois Vezina, Chief of Party, Eduardo Flores-Trejo, Deputy Chief of Party, and the entire Armenian staff of Casals & Associates, Inc., for the time and effort they expended to provide us with needed documents and for arranging appointments with key informants (KIs). We also thank the many Armenian government officials, NGO representatives, and other individuals who took time from busy schedules to be interviewed

Acronyms

AAC	Advocacy and Assistance Centers
ABA ROLI	American Bar Association Rule of Law Initiative
ACSMC	Anti-Corruption Strategy Monitoring Commision
C&A	Casals & Associates, Inc.
CoC	Chamber of Control
CRRC	Caucasus Research Resource Center
CSO	Civil Society Organization
CTO	Cognizant Technical Officer
FOICA	Freedom of Information Center of Armenia
GOAM	Government of Armenia
GRECO	Group of States Against Corruption, Council of Europe
HRD	Human Rights Defender
IACC	International Anti-Corruption Conference
ICHRP	International Council on Human Rights Policy
MAAC	Mobilizing Action Against Corruption Activity
MES	Ministry of Education and Science
MOH	Ministry of Health
NIE	National Institute of Education
NGO	Non-Governmental Organization
RFA	Request for Applications
RFP	Request for Proposal
SOW	Scope of Work
STS	State Tax Service
TI	Transparency International
UITE	Union of Information Technology Enterprise

Executive Summary

Introduction: This report is the product of an evaluation assignment conducted in June and July 2010 by John H. Sullivan, Ph.D., and Carl Ulbricht of Social Impact Inc., of Arlington, VA.

Methodology: This evaluation made use of the several methodologies, including intensive document review, interviews with key informants, focus groups, and a few site visits.

Background and design of the project: Against a backdrop of studies showing deep-rooted corruption in the country permeating all levels of government and all sectors of society, MAAC was conceived as a freestanding project that would mount an aggressive and multifaceted campaign against corruption in Armenia. The project was designed to have a 3-year base period with a 2-year option, and a total budget of $9.8 million. The project was awarded to Casals & Associates, Inc. of Alexandria, Virginia in July 2007. The base period expires in July 2010 and an extension has been granted. As of May 31, 2010, $5.84 has been expended.

Design: The MAAC Project was designed with four principal components:
1: Establish a mechanism that addresses grievances and effects systems-level and procedural reforms.
2: Design and implement anti-corruption initiatives with targeted government agencies.
3. Provide grants to Civil Society Organizations (CSOs) to develop innovative approaches to combat corruption.
4. Increase awareness among youth and adult against corruption.

Findings: Design: the project was seen as aggressive and antagonistic and there was some initial resistance in government circles, leading to administrative problems for the contractor. Component 1 drew on the experience of existing legal assistance centers in the country, but was unique in its focus on corruption. Component 2 appears to have been designed with little or no input from government agencies, and was over-ambitious in scope. Component 3 did not envisage any particular focus for the anti-corruption grants to CSOs. Component 4 was designed to break acceptance of corruption and to focus on youth.

Findings: Implementation: The funding of 11 Advocacy and Assistance Centers across the country is generally considered by stakeholders to be the principal achievement of MAAC. However most of the implementing NGOs have failed to develop a degree of cooperation with the authorities as required by the project design. The centers are expensive to run, with their sustainability by no means assured, and some of them handle a disappointingly low volume of enquiries.

In component 2, the contractor's engagement with the 3 counterparts named in the SoW has brought limited results, with the most positive aspects being its support to the Anti-

Corruption Strategy Monitoring Commission to develop a strategy and action plan, and then its support of implementation monitoring. The project also identified other counterparts and worked with 6 government agencies with similarly mixed results; some attempts at collaboration never really got off the ground.

A total of 19 grants have been made under component 3, with the themes being chosen by the CSO grantees. A variety of sectors have been covered; 7 of the grants concerned corruption in the public health system. Although many of the grantees are optimistic about sustainability, only a small number of the projects have led to systemic changes.

Under component 4, the project has funded several television programs that feature anti-corruption themes, and has published a newsletter and information sheets that feature individual "success stories". Household surveys have been conducted in 2008 and 2009, but show little if any impact by the project.

Findings: Results: MAAC is behind on achieving many of the important indicators for the components, and is failing to impact on the cross-cutting indicators, which tend to show that perceived corruption in Armenia has increased.

Conclusions: MAAC was poorly designed and this has impacted on implementation. The SOW was optimistic regarding impact and at the same time antagonistic in tone. The contractor has pursued limited goals when working with government agencies, rather than seeking high-level support for more fundamental change. The AACs are the major MAAC achievement, but are not a uniform system and are unlikely to be sustainable. The CSO grants have led to a disappointingly small number of systems-level changes with little attempt at synergy and coalition-building, and on the whole achievements appear to have been modest relative to the resources expended. MAAC's public awareness activities have highlighted corruption issues, but surveys indicate that, if anything, corruption has worsened in the country.

Recommendations:
1. The U.S. should continue to encourage anti-corruption activities as part of all or most of its projects, not a stand-alone effort.
2. High-level efforts should be made to identify champions in government and to design effective but non-confrontational reform programs.
3. As the AACs are arguably the best product of the MAAC project, they deserve further support to ensure sustainability to the fullest possible extent.
4. The contractor should not be obliged to make a minimum of 17 CSO grants during the remaining period simply to achieve the overall target of 50.
5. Mission management should consider early termination of the MAAC project and redesign an activity more appropriate for current needs.

I. Methodologies:

This evaluation made use of the several methodologies noted above, including intensive document review, interviews with key informants, and a limited number (2) of site visits. Although an online survey of beneficiaries was contemplated, concern by USAID staff about the access of respondents to e-mail caused a shift to focus groups. It also should be noted that, at the request of USAID, the MAAC sub team submitted a "summary report" of its findings, conclusions and recommendations regarding the MAAC Project within a week of its return from Yerevan.

II. Background of the Project:

When Armenia gained independence from the Soviet Union in 1991, the first non-Baltic country to do so, it faced numerous challenges. As the years passed the international community became concerned that the dominance of the executive branch, coupled with a weak democratic political culture, was resulting in increasing systemic corruption in government and society. Surveys taken by Transparency International (TI) and other organizations in the mid-2000s indicated that a majority of Armenians believed that corruption had increased during the past three years. In preparation for its 2004-2008 Country Strategy, USAID/Yerevan commissioned a Rule of Law/Anti-Corruption Assessment. Among its conclusions: "Corruption in Armenia is rampant and systemic....Corruption permeates all levels of government and affects all segments of society."

Against this backdrop, the MAAC project was conceived, developed, funded and contracted. The basic framework for the MAAC, its scope of work (SOW), envisioned a freestanding project that would mount an aggressive and multifaceted campaign against corruption in Armenia. It was anticipated that the MAAC activity would address corruption in Armenia on the demand side by supporting civil society efforts and on the supply side by partnering with specific government entities that demonstrate the political will to implement anti-corruption efforts. This design was chosen after some debate within the Mission's Democracy and Governance staff about adopting this approach *vis-à-vis* including anti-corruption as a major element in most or all of the Mission's portfolio. Concerns centered around the willingness of Armenian state agencies to collaborate with an undisguised frontal assault on corruption.

Following a full and open competition the contract for the MAAC project was award to Casals & Associates, Inc. of Alexandria, Virginia. The award, funded initially at $9.98 million, was made in July, 2007. The project was anticipated to have a three year base period and two option years for a total of five years. As of May 31, 2010, $5.84 million has been expended the base period ends in July of this year and an extension already has been granted. The amount obligated for the extension is $1.14 million. If no further funds are authorized the amount obligated after five years would be $6.39 million.

The MAAC Project was designed with four principal components:

1: Establish a mechanism that addresses grievances and effects systems-level and procedural reforms.
2: Design and implement anti-corruption initiatives with targeted government agencies.
3. Provide grants to Civil Society Organizations (CSOs) to develop innovative approaches to combat corruption.
4. Increase awareness among youth and adult against corruption.

It should be noted that these four components drive both the results indicators and are the basis for the breakout of funding amounts.

III. The Context of Anti-Corruption Strategy and Programming

The MAAC evaluation team has been asked to put its evaluation into the context of best practices and lessons learned in order to assist the Mission in future anti-corrupting program decisions. In approaching this subject several points must be made as a kind of preface:

1. Unlike many areas of international development concern, anti-corruption programming has not yielded significantly to becoming more highly focused with time. As the current USAID website entitled "Types of Anti-Corruption Programming" indicates from its opening sentence, the Agency has "developed a wide range of programs for fighting corruption. " This is born out further by the DCHA/DG Activities Handbook of October 2009 that lists no fewer than 40 of possible anti-corruption activities and adds: "This list of possible activities is indicative, not necessarily exhaustive."

2. The USAID document also notes that anti-corruption programming is "often in response to local program environments and problems or to specific windows of opportunity within a region or country." In effect then, anti-corruption initiatives have often been reactive in nature, responding to specific situations in specific countries. No "silver bullet" has been discovered to be applied generally to situations of corruption.

3. A review of recent publications from organizations like the World Bank and UNDP indicates a similar lack of real ability to winnow down the potential types of anti-corruption intervention to a few that have certified prospects of success.

4. Much of the academic literature on anti-corruption is dated. For example, the February, 2009, USAID Anti-Corruption Assessment Handbook references no scholarly works published after 2005.

5. That said, a useful document from the standpoint of benefiting from experience is the November, 2009, document from USAID entitled "Lessons Learned Fighting Corruption in the MCC Threshold Countries: The USAID Experience." This study assessed the lessons to be drawn from $250 million in anti-corruption programs that USAID designed and implemented in 14 MCC threshold countries. Collectively, it is stated, this investment represented the largest freestanding anti-corruption program USAID had designed and implemented. One of the stated purposes of the document was to "codify

some best practices and lessons learned to guide future programming by USAID in the anti-corruption arena."

We believe that this document provides helpful recent guidance and direction that USAID/Yerevan may wish to consider as it moves forward to address corruption in Armenia. It breaks anti-corruption efforts into several areas, roughly tracking with the USAID/EE Bureau's TAPEE formulation. Using those headings, the following are "lessons learned" that may have the most utility for USAID/Yerevan:

1. **Statutory Framework**. While a sound statutory framework is very important to combating corruption, the study indicates that long delays typify attempts to combat corruption through legislative and political processes. Emphasizing a formal change in laws often has been time consuming and frustrating. The document suggests that supporting domestic stakeholders in their advocacy and being willing to settle for improved practices on a less formal basis often can be more successful.

2. **Identify and Expose**. The study points out that as important as they are, transparency enhancing mechanisms are limited if there are not accompanying processes for reviewing the information. It suggests an important role for civil society in appropriately using the information being made available.

3. **Reducing Opportunities.** The "Lessons Learned" document points out the importance of government streamlining processes, e-governance, automated systems, and limiting official discretion in the battle against corruption. These steps can be applied as part of programs in multiple sectors.

4. **The Culture of Corruption:** Here the document suggests the utility of collaborative development of ethics codes by officials at all levels of an organization, followed by providing training in the codes to the larger community of officials.

5. **Public Perception:** The document points out that raising public awareness of corruption has its own down side. The public can become cynical about the extent of corruption and the potential for reform. Such an attitude can seriously undermine programming.

The USAID document also describes best practices for implementation strategies. It emphasizes the need for sustained political will on the part of the government and the public. It suggests the importance of making anti-corruption initiatives congruent with host country strategic approaches and of using existing institutional structures to the extent possible. Creation of new institutions is deemed "problematic" and discouraged.

A second document that contains valuable 'lessons learned' is USAID's Anticorruption Strategy (2005). Some of the 'less effective' approaches listed on page 12 of the strategy make informative reading:

- Public sector reforms in environments of low political will appear to have limited chances of success.

- Failure to take a long-term, sustained approach to the problem of corruption means that the approach is unlikely to succeed.

- Though clear planning is needed to avoid the problem of proliferation of agencies without clear definitions of roles and responsibilities, "national anticorruption plans" can be time-consuming distractions and ultimately may not be executable. Often developed with donor technical assistance and including every conceivable reform, these plans can easily become large and unwieldy wish-lists that far outstrip implementation capacities. Both the USAID Strategy Paper and the November 2009 experience document present important considerations for the design and implementation of the MAAC Project and have helped inform the Team's evaluation activities.

IV. Findings for the MAAC Project

Our MAAC findings are divided into three major areas: design, implementation and results. Each of these also addresses separately the four major components.

A. Findings: Design

The design of the MAAC Project was described as problematic by a number of respondents. Even the name -- Mobilizing Action Against Corruption -- was seen by some as unduly aggressive and antagonistic to the government. Further evidence of this was the suspension by USAID of MAAC public activities in November, 2007, after the first major event, a launching ceremony on Nov. 7, which apparently alerted government officials to the existence of the project and prompted a response. Two days after the project launch the application for residency cards for the two international members of the Casals team, the Chief of Party (COP) and his Deputy, were denied.

A Mission KI told us that some in the Armenian government thought that MAAC was an American effort to foment revolution. The Casals COP told us that he was followed by government operatives following his arrival in country. Only after some high level negotiations was the government mollified. Residency permits were granted and two months later, on January 30, 2008, the suspension of public activities was lifted by the Mission. Note that this occurred a full six months after contract award.

Design - Component 1: The entities for addressing grievances, which many respondents believe to be the most positive outcome of MAAC, were named by the project, Advocacy and Assistance Centers (AACs). The concept of a specific organization to accept and follow up on citizen grievances was not completely unfamiliar in Armenia. Organizations such as the Armenian Young Lawyers Association (AYLA) and Transparency International already had assistance centers as did the American Bar Assn. through its Central European & Eurasian Law Initiative (ABA-CEELI), funded by USAID. The AACs were perhaps unique in that they were to be entirely focused on receiving reports of alleged corruption, were to be in every county *(marz)*, and form a "network."

Design - Component 2: Although MAAC anticipates collaborating closely with government agencies and three are specifically mentioned in the scope of work, there is scant evidence of close and careful dialogue with high or even medium-level government officials in advance about the scope and purpose of the project or what is might accomplish. None of our government KIs indicated significant interaction about MAAC prior to its launch. This could well account for the Armenian government's initial reaction.

Design- Component 3: Anti-corruption activity grants to local civil society organizations (CSOs) were anticipated to be both in specific, targeted areas and for unsolicited grants from CSOs. The original goal was for 50 to 100 such grants, most of them small (under $30,000). The SOW distinguished them from other Mission and donor grants in that they would focus specifically on and support only anti-corruption activities. Use of the NGO Marketplace mechanism is specifically mentioned and was employed in Year Two of the project. A review of the grants given indicates that the funding was not targeted at any specific region or sector but widely scattered.

Design - Component 4: Public awareness was portrayed in the project design as breaking "the cradle to grave" acceptance of corruption, specifically targeting youth, and making both youth and adults more knowledgeable about the causes and effects of corruption. In addition to the use of electronic media, suggested avenues included enlisting journalists and the Diaspora in the effort. Neither group, however, has been significantly involved in the awareness efforts.

B. Findings: Implementation of the MAAC

At the time of our evaluation field work, MAAC was finishing its third year. Because of its rocky beginnings, however, the project had only been operative for 30 months. The Casals implementing team of some nine full-time staff, two expatriates and seven Armenian locals, have been responsible for the implementation of the MAAC. They were accorded the approbation of many KIs for their accessibility, responsiveness and dedication.

Implementation: Component 1: The MAAC Project has financed an AAC in Yerevan and in each of the other 10 *marz* of Armenia. While they are generally considered by stakeholders and others to be the principal achievement of MAAC, they do not represent a single mechanism, but rather a loose network of organizations linked by a website but little else. Moreover, the 11 AACs are divided into two distinct, virtually antagonistic, modes of operation. Five of them, those run by the Armenian Young Lawyers Association (AYLA), operate largely at the local levels through memoranda of understanding (MOUs) with local authorities. Most of the cases they accept are handled administratively. None of the other six have signed MOUs with state counterparts, although two of them may have informal agreements with government units. Three AACs (operated by Transparency International (TI) and its sub-grantees) are strongly opposed to any links with government bodies. They take their cases to prosecutors and

the courts. The original SOW, however, states that: "In order to be successful, the MAAC project must establish relationships between the AACs and government."

The AACs also differ significantly in the effectiveness and efficiency of operations. The Aragatsotn *Marz* AAC, in a sparsely populated rural area that the evaluation team visited, has three employees. Operated by AYLA, it reported handled an average of 50 citizen reports a month for the 10 months ending in May 2010. It also had 16 cases resulting in corrective action over that period. By contrast the Yerevan AAC run by Transparency International (TI) – in which lives more than a third of the population of Armenia – for the same timeframe reported an average of 31 cases per month and only 6 that resulted in corrective action. It has nine employees involved in the AAC work, although at least two of them are part-time.

Although this component was to effect systems-level and procedural anti-corruption reforms, none were reported at the national level and only the AYLA MOUs with local government officials appear to have affected limited procedural reforms at the *marz* level (although it is too early to definitively assess the impact of the MOUs). Costing an estimated $500,000 annually to operate, the AACs have only one more year of MAAC funding available, and that at a reduced level.

In addition, it should be noted that a number of other legal advice and assistance centers currently operate in Armenia. AYLA, in addition to the centers funded by MAAC, also has citizens' advice offices in Yerevan, Gyumri, Vanadzor, Gavar and Kapan. ABA CEELI, with USAID funding, supports legal clinics in Yerevan, Gyumri, Gavar and Kapan. While the ACCs established by MAAC are the only ones that specifically target corruption cases, a high degree of duplication exists in terms of the initial inquiries that citizens bring to these centers.

At the time of the evaluation fieldwork, MAAC had just begun the process of issuing full and open tenders for a further year operation of the AACs. It is to be hoped that this process may lead to improved efficiency and effectiveness.

Implementation-Component 2: The original Statement of Work envisaged that MAAC would work with a number of government agencies in what the document itself described as "an ambitious agenda". The targets set for the project were:

- At least 2 government partner agencies and systemic reform projects submitted for approval to USAID and begin implementation by the end of Year 1.
- At least 3 new, systemic reform projects developed and implemented with government agencies in each subsequent year.

Further, the SOW exhorted the contractor to "plan activities to yield early and frequent victories", noting that "enabling systems-level solutions to reduce opportunities for corruption is a key goal of MAAC". At the same time, it was clear from passages elsewhere in the document that corruption was perceived to be entrenched and political will lacking. Thus if difficulties were encountered, the SOW envisaged various way to

overcome them, including the recommendation that "the Contractor could request that officials from USAID, the U.S. Embassy, or other donors apply pressure at higher levels." Although the Prime Minister is widely seen as a reform-minded leader in government, no evidence exists that the project made any attempt to engage him in formal discussions about guidance for MAAC. Even when it became clear that the project was not achieving its objectives, the contractor appears not to have asked for USAID or Embassy help in gaining high-level access.

Initially, as dictated by the SOW, the contractor worked with the Chamber of Control (CoC), the Human Rights Defender (HRD, aka ombudsman) and the Anti-Corruption Strategy Monitoring Commission (ACSMC). Other agencies with which MAAC implemented activities included the Ministry of Health, State Revenue Committee, and Ministry of Education together with the National Institute of Education. MAAC also tried but largely failed to develop cooperation with the National Assembly, whilst proposed work with the Civil Service Council never got off the ground. A brief description of MAAC's efforts and achievements with each of these partners is set out below.

Chamber of Control: MAAC was initially optimistic that this counterpart was reform-minded and willing to collaborate. Early assistance was centered round general capacity building and the drafting of a training plan, as well as a review of guidelines and procedures that had previously been provided to the CoC by the World Bank. Then in 2008 CoC officials were taken on study trip to Bulgaria, to learn from the experience of the Bulgarian National Audit Office. Upon their return, the debriefing was positive and it was agreed that the agency would develop its strategy. However, relations deteriorated thereafter, with no further assistance agreed, and no sign of the strategy, despite MAAC requests for an up-date on progress. When the evaluators interviewed the counterpart, they got the impression of a prickly relationship with MAAC. Somewhat dismissively, the evaluators were given a copy of the draft strategy with permission to share it with the project. While this initial draft does give an overall sense of the CoC's mission that was totally lacking during the interview. In discussions, much was said about equipment that the CoC had either received from donors or still needed, but nothing about the ultimate goal of the agency's work and the way it might contribute to a reduction in misuse of public funds.

Human Rights Defender: Work with the HRD/ Ombudsman has been disappointing overall; despite extensive contacts over the three years, outputs have been thin on the ground. Highlights have been a training workshop for HRD staff linking human rights protection and anticorruption, and the publication of the Armenian translation of a report which highlights the links between human rights violations and corruption. At the same time, MAAC has striven to establish close cooperation between the ombudsman and the AACs. Whilst there have been examples of AACs passing on human rights cases to the ombudsman, this has not crystallized as a formal agreement. MAAC drafted a cooperation framework with which a majority of the AACs agreed, but the HRD has declined to sign it.

Anti-Corruption Strategy Monitoring Commission (ACSMC): The project has had some success here in that the strategy and action plan have been approved by the Anti-Corruption Council and then adopted by Government decision. The project's role in this has included funding development of the monitoring and evaluation system, as well as supporting an NGO to facilitate public consultation meetings and thus enhance civil society participation during the drafting of the strategy. At the same time, the project's international expert made recommendations on the strategy. A key issue is the excessive volume and lack of prioritization – the action plan has 124 action points. Unfortunately the ACSMC took the view that, in contrast to the previous strategy, all sectors must be covered – hence a wide-ranging document which lacks focus.

More recently, the project has been funding experts to train and assist those responsible within the ministries to monitor and report on implementation of the action plan. The Chairman of the ACSMC said of these experts: 'they are like my staff', thereby highlighting the fact that the ACSMC has no budget or permanent staff. Whilst there are assurances that a permanent staff will be forthcoming, there is no indication of when this will be; to date, the whole process has been donor-led, and the ACSMC, which has not met since last December, was described to us by a donor as a "paper tiger."
Relations with Gevorg Kostanyan, the Chairman of the ACSMC, have generally been good, although he has refused to support implementation of a corruption perceptions survey of government employees, and more recently there appears to have been a misunderstanding regarding an international expert hired by the project to work on the issue of ethics commissions. Mr. Kostanyan advised that he did not need an expert at this stage, but the expert came anyway.

Ministry of Health: While the project has funded several CSO initiatives in the health sector, under Component 2 its activities in this sector have been more limited, largely confined to conducting anti-corruption training. The one more substantive piece of work has been support to an NGO in Armavir marz to monitor the "State-guaranteed free of charge birth-assistance and introduction of the Obstetrical State Certificate (OSC) system".

State Revenue Committee: MAAC's first contact with the State Revenue Committee (SRC), the government tax service, was early on in the project, when it received a request to design an internal whistleblower system. Subsequently cooperation was suspended, and so the assistance did not achieve its objective. More recently, the project was able to respond to a request to draft guidelines on the detection of bribes in companies' accounts. This would enable Armenia to comply with a GRECO recommendation. MAAC accordingly provided technical assistance to draft the guidelines, which were modeled on international best practice and then (through consultations) modified to incorporate relevant Armenian examples of corruption activities. Subsequently 400 tax auditors were trained, and the guidelines were approved by the SRC and posted on its website. A SRC representative was unable to confirm whether this activity has led to increased detection of corruption, since apparently the SRC's statistical reporting system has recently changed and it is not possible to compare old and new statistics with respect to this particular category of corruption offence.

Ministry of Education with the National Institute of Education: This has been a successful activity, in that it has achieved the immediate objective. Good collaboration was established with both government agencies to develop an anti-corruption teachers' manual and to train teachers on how to include anti-corruption topics in the national curriculum. Technical assistance inputs were well targeted and good use was made of Baltic experience in this field. The manual was approved by the National Institute of Education and 1400 teachers (one in each school across the country) were trained via a ToT program. Already, anti-corruption is being taught as part of the citizenship curriculum. However it is too early to assess the impact on pupils and the wider effect on social circles.

National Assembly (NA): During the past 12 months the project has attempted to develop relations with the NA, based initially on a request from the latter for assistance. MAAC drafted a program of technical assistance and made contact with the Global Organization of Parliamentarians Against Corruption (GOPAC). The latter expressed interest in assisting, and MAAC spent further time exploring potential collaboration. However, at a meeting with NA representatives in which MAAC set out a proposed scope of work, there was no indication from the counterpart of their agreement. Subsequently, MAAC funded an NA representative (along with the head of the ACSMC) to attend an international conference where they met GOPAC representatives. Even after that, the NA took no action.

Civil Service Council (CSC): Early on in the project, MAAC funded Vache Kalashyan, head of the Union of Armenian Government Employees NGO ('UAGE'), to draft a model code of ethics for public servants. This was potentially of use to the CSC in its efforts to develop the law on public service, not least since UAGE has close contacts with the CSC. Much later on, the project attempted to open a dialogue with the CSC on the issue of ethics in the public service, particularly as regards ethics committees and declarations of interest. However, a UAGE proposal was rejected by MAAC due to sustainability issues. MAAC then drafted a program of technical assistance, but could not agree it with the CSC, facing differences of opinion and then a lack of response from the CSC.

Implementation-Component 3: The Scope of Work states that the contractor "will solicit and award grants using four methodologies: 1) NGO marketplace, 2) Annual Program Statement (APS), 3) Direct solicitation, and 4) Coalition Building", and prescribes that between 50 and 100 grants will be made over the life of the project. Currently the project has awarded a total of 33 grants, including those to NGOs to establish the AACs. The contractor is planning to fund a new round of 17-19 grants in 2010, at a reduced level of $15,000 for each grant, to enable the minimum target of 50 grants to be met whilst keeping within the budget.

The SoW states that "all grants should be geared toward concrete actions and include clear and tangible expected results", and prescribes by way of results that: "at least 5

projects/activities are sustainable, i.e. will continue without additional grant funding from the Contractor by the end of the base period and 5 additional by the end of the award."

Of the 33 grants awarded so far, 19 have been under component 3: 11 through APS and 8 through the NGO marketplace. Although MAAC has chosen not to encourage particular themes, nevertheless 7 of the grants have been in the health sector; other themes have included local government (4 grants) and media (2).

MAAC has spent considerable time and resources on the administration of the grants, not least because the APS grant-making process included 3 stages: concept paper, full proposal and then a sometimes lengthy negotiation process before the grants were awarded. The NGO marketplace involved a design phase with involvement of an international expert and then, after the one-day event (attended by 1700 people), further negotiations with the 8 selected NGOs to achieve workable projects and agreed budgets.

Systems-level changes: In our focus group with CSO recipients, two reported important national changes as a result of their activities: one regarding customs procedures on imports of IT components, the other on labeling of non-food items. In addition, one organization working in a single marz reported significant local hospital reforms as a result of its grant-funded activities.

Many of the other projects were local in scope and focused more on raising awareness and expectations of the population than on securing permanent changes. Where some changes had been achieved, this was often the result of monitoring and the engendering of enthusiasm. As that enthusiasm wanes and/or the monitoring stops, there is always the danger that the old way of doing things will resume.

Sustainability: A majority of those participating in the focus group assessed that their activities were at least partially sustainable. There appear to be two main factors that ensure continuation:

- Availability of funding, usually from other international donors but in one case in the form of local donations to their foundation
- A good working relationship established with government counterparts and other stakeholders, ensuring that the reform process was on the way to becoming institutionalized

Generally, the more successful and sustainable projects were those where the NGOs involved had already gained a reputable track record in their sector.

Success stories: Grant recipients interviewed during the focus group were generally quite positive as regards their achievements and the chance of sustaining their activities. Individual success stories include:

UITE: This project aimed to contribute to preventing corruption in customs services through improvements in administering customs regulations. The initial reaction of the government counterpart was one of rejection, but after the 6th or 7th meeting the two sides

had developed a level of mutual trust and a joint working group was established which continues to this day. The result has been improved treatment of IT imports.

Martuni Women Community Council: The goal of this project was to prevent corruption in birth-assistance sphere of health sector in 4 regions of Gegharkunik marz. In the opinion of the NGO, there is now no bribe-taking in the hospitals they monitored. They know this because they continue to monitor those hospitals under the Nova project.

Formula LLC: This grant project prepared and broadcast 7 "Special Reportage" TV programs on corruption issues. Apparently popular, a further series may occur if funding can be found. What made this activity unusual is the fact that the programs were aired on the main state TV channel, which ordinarily is very wary of making any criticism of the authorities.

Anti-corruption forums: Seven such forums have been held over the first 3 years of the project – not at the rate of one every 2-3 months that the contractor had intended. Themes have ranged from health and education, to the private sector and the link between corruption and human rights breaches. It is difficult to assess the impact of these forums. Certainly they have enabled frank debate and the participation of a wide range of stakeholders. But clearly they have not been designed to lead to specific changes, and there is no indication that they have done so. They have played a part in increasing "sensitization" of the population to corruption issues, but it is too early (and in any case very difficult) to measure long-term effects.

Implementation - Component 4: Increased anti-corruption awareness has been implemented through a MAAC strategy with local media outlets. The project has funded several television programs that feature anti-corruption themes. In addition it has published a newsletter and information sheets that feature individual "success stories" at the local and national levels. Partly to gauge the effect of these efforts and, indeed, the entire MAAC program, household surveys have been conducted in 2008 and 2009. A similar survey was commenced at the end of 2009 to sample anti-corruption attitudes in the business sector. A third survey of civil servants has been delayed indefinitely by the Armenian Government. Unfortunately, using the 2008 household survey as a baseline, the 2009 survey shows little or no improvement in the corruption situation in Armenia. On one key question regarding knowledge of the AACs, for example, citizens were only marginally more aware of a place to take their grievances than the previous year despite MAAC-initiated publicity efforts.

C. Findings: Results

The MAAC project has a rich set of performance indicators for inputs, outputs and results. Originally there were 14 indicators for Component 1, 12 for Component 2, 8 for Component 3, and 10 for Component 4, and 3 cross-cutting all components -- a total of 47. As implementation has proceeded, however, the contractor has asked that some of these be eliminated. In an agreement with the USAID COTR in September 2009 several indicators were dropped. Subsequently the contractor has asked to drop an additional

indicator for Component 3 that measures the number of sustainable CSO projects to which MAAC grants have been made. Despite sustainability being a major emphasis in USAID projects and the MAAC SOW, the COP asserted that the MAAC CSO grants were not meant to be sustainable. He further indicated that the Mission had dropped the requirement in its extension although the project modification document does not indicate any change.

Beyond the indicators, MAAC sets out expected results for each component. By its own reckoning in the most recent MAAC the project is behind on three important indicators dealing with the implementation of procedural and system level reforms through the Component 1 AAC process. For Component 2 the record indicates that only four of 12 indicators have been met. Importantly, to cite the report: "MAAC is well behind on for indicators related to implementation of reforms by government, the number of cases processed by HRD, and all indicators related to the Chamber of Control." Although most indicators for Component 3 have been satisfied, the project is still well short of the 50-100 anti-corruption grants anticipated in the SOW. As for the indicators of Component 4 public awareness, the 2007 and 2008 household surveys show that the situation has worsened. The figures show that 1) an increasing number of Armenians believe that corruption is a inescapable fact of life, 2) are more willing to tolerate corruption, and 3) are less aware of what government is doing to fight corruption.

Similar shortcomings have been evident for the cross-cutting indicators. The MAAC projected that by the 4th quarter of FY2010, Armenia would increase its ranking on the Transparency International Corruption Perceptions Index (TI-CPI) from 2.9 to 3.3. Instead, Armenia has fallen in rank to 2.7. This places it 120th among 180 countries (down from 99th). Just half a decade ago it was 88th on the same scale. On other corruption indices Armenia has stayed about the same or declined slightly.

V. Conclusions

1. The MAAC Project was poorly designed from the outset. Despite strong concerns expressed by some Mission staff about the approach, the project describes a highly aggressive direct frontal attack on corruption in Armenia, using phrases like putting "heat" on government stakeholders and applying "pressure" at higher levels by, among other tactics, enjoining journalists. At the same time, however, MAAC set its own success on reaching understandings with key government entities and officials about anti-corruption activities, agreements that were to be codified through MOUs. Thus, on the one hand the scope of work set an antagonistic tone that risked alienating government, and on the other hand it was naively optimistic in planning to engage state bodies in a reform process that was expected to have a significant impact on corruption levels.

2. While MAAC activities have been undertaken on behalf of some government agencies, not one Armenian governmental body has been willing to sign an agreement with the contractor. Moreover, once the training and supervision of departmental monitors ends in a few weeks, no new initiatives with government are in immediate prospect. Obviously an evident lack of "political will" to fight corruption by Armenian government officials contributes to this inactivity. It does not appears, however, that any

concerted effort has been made by MAAC to secure high level support for significant reforms; as a result, the activities have tended to "tinker at the edges" while leaving the key issues untouched.

3. The AACs are clearly the major MAAC achievement. At the same time they do not add up to the type of mechanism envisaged in the scope of work. As noted earlier, they differ widely in approach, efficiency and effectiveness. Moreover, their sustainability is very much in question. According to the contractor, two U.S. potential funding sources have been identified. Yet at an annual cost of $500,000 for the 11 AACs, it is difficult to anticipate full and continued funding for multiple years.

4. Most of the NGOs interviewed are upbeat about their achievements and future plans, and arguably the contractor has achieved the target of 5 sustainable projects/activities during the base period. However, there have been a disappointingly small number of systems-level changes – not least due to the fact that many of the projects apparently were not designed to achieve this goal. The contractor has not focused on building networks and coalitions, making little attempt to find synergies between the projects in the same sector (e.g. health). As with the other components of the project, achievements appear to have been modest relative to the resources expended.

5. While the NGOs that participated in our focus group indicated that their own sustainability was not in jeopardy, their focused anti-corruption initiatives may depend on new grants being available from MAAC. It is questionable whether, as planned, giving 17 new grants in 2010 will result in tangible systemic changes since the grants will not be targeted at any specific sector or region and will be funded at a maximum of $15,000 each. The issue of sustainability, despite disclaimers by the contractor, also must be faced.

6. Although MAAC may have kept the subject of anti-corruption within the attention of the Armenian public and governments by its media, public outreach, and other activities, the sole quantitative measure of progress in awareness – the household surveys – show disappointingly little change. Many Armenians, including a majority of the stakeholders to whom we spoke, think corruption has worsened in Armenia over the past two years, not improved. The draft 2009 American Corruption Survey of Households bears out that trend. Finally, one key indicator chosen at the outset for the MAAC, the TI-CPI for Armenia. Now in sharp decline, that score indicates a lack of project effectiveness.

7. It is not clear that during the 3-year base period any MAAC project components have led to tangible reductions in corruption – even the efforts that MAAC regards as a success. Whether it is training HRD officials, or adopting the Anti-corruption Strategy and Action Plan, or introducing anti-corruption education in schools, there is no indication that these activities have led to a decrease in corruption. Similarly, training tax auditors in how to detect bribes, or improving the capacity of the Chamber of Control, may be laudable, but it assumes that the skills acquired are then used to counter corruption. This is not necessarily the case. Similarly, the overall impression of the range of MAAC's dialogue with government counterparts is that activities have been tangential.

As a result of the inability to tackle issues head-on, the project's activities have had only peripheral effects. Given the prevailing political climate in Armenia, this situation is not likely to change during the next two years.

In summary, we recall the words of Amalya Kostanyan, head of the Armenian chapter of Transparency International, when she spoke at the 4th Anti-Corruption Forum which MAAC sponsored:

> *"I believe that if we do some things in some areas – I'm sorry but I cannot consider that to be adequate in the fight against corruption"*
> (quoted in the proceedings of the 4th Anti-Corruption Forum, July 22, 2009)

The above statement was made in the context of perceived widespread abuses in the elections system, but could apply equally to the relevance of MAAC's activities against the background of the perceived high incidence of corruption in the Armenian government. The gist of the idea is that it is not particularly relevant to engage in a handful of relatively minor initiatives when the project purpose is to effect system-level changes that lead to a reduction in corruption.

VI. Recommendations

1. While the U.S. should continue to encourage anti-corruption activities in Armenia, the effort should be part of all or most of its projects, not a stand-alone effort such as MAAC. Concentrating intensively on one sector, such as health, might be a corollary option.

2. High-level efforts should be made to identify champions in government and to design effective but non-confrontational reform programs. In order to achieve significant results in a difficult political climate, anti-corruption projects, with USAID and Embassy support, should attempt to make formal and informal top-level contact as a means of assessing and potentially enhancing political will. Other methods to overcome potential resistance could include: a) agreeing on NGO monitoring and a consultative process to identify required reforms; and b) providing for phased introduction of reforms to reduce antagonism and fearfulness of government officials.

3. As the AACs are arguably the best product of the MAAC Project, they deserve further support to ensure sustainability to the fullest possible extent. This should take the form of: a)providing continued funding – whether through MAAC, the Civil Society Program, or another mechanism – for at least a year and preferably longer for the more effective centers; b) maximizing efficiencies by downsizing AAC staffs and seeking other economies commensurate with the level of inquiries the centers are handling.; c) assisting grantees to find alternative funding sources, including from European donors, and d) avoiding duplication with similar centers (ABA CEELI, AYLA) in the *marzes.*

At the request of the Mission we also have considered a role for the Human Rights Defender (HRD) office. The HRD is attempting outreach by establishing regional offices in both the north and south of Armenia. Would it be possible for the Mission to negotiate

an agreement that would fold some of the AACs into this arrangement? We find that problematic. The HRD almost certainly would want to provide total direction of the AACs. Moreover, many of the centers will refuse to ally themselves with any government office.

4. The Mission should free the contractor of the responsibility to make 50 grants by the end of the contract, a requirement that seems to be driving the decision to make 17 smaller grants during 2010. Instead, encourage CSO proposals that support key Mission-identified reforms and provide grants of more substantial amounts if warranted. For the future USAID should fund CSO anti-corruption grants, including media initiatives, through the Civil Society Program.

5. Mission management should consider early termination of the MAAC project and redesign an activity more appropriate for current needs.

Evaluation of
The Competitiveness of the Armenia Private Sector (CAPS) Project

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Acronyms

CAPS	Competitiveness of the Armenia Private Sector
EIF	Enterprise Incubator Foundation
GMP	Good Manufacturing Practices
GOAM	Government of Armenia
MOE	Ministry of Economy
MPI	Union of Medicine Producers and Importers
NSS	National Statistical Service
TAIEX	Technical Assistance and Information Exchange
USAID	United States Agency for International Development
YSMU	Yerevan State Medical University

Executive Summary

The Competitiveness of the Armenia Private Sector (CAPS) project was successful in meeting its stated objectives. Interviewees in all three of the industry clusters voiced favorable opinions regarding their interactions with the project. There was virtually universal agreement among interviewees and focus group participants that their respective industry cluster had received valuable benefits from CAPS' activities and that the project was a positive factor in fostering economic growth and employment opportunities in Armenia.

The principal vehicles used by CAPS were training, funding of international experts, sponsorship of conferences and trade association events, assistance with regulatory and legislative reform, identification of foreign markets and potential business partners, development of promotional literature and materials and creation of industry cross-linkages.

The vast majority of persons contacted stated that they would like to see a continuation CAPS' activities in a future project based on the same successful model. Many of them offered valuable suggestions to improve the effectiveness of any future activities under consideration by USAID.

The evaluation team found that there was balanced gender participation in all aspects of the activities conducted throughout the three clusters.

I. Description of the Project

The CAPS project was launched in September 2005 under a $14.1 million grant from USAID for the purpose of assisting Armenia in its efforts to develop its key industries with the specific objective of increasing employment, promoting exports and growing local businesses by promoting productivity, competitiveness and policy reform. The mechanism used by CAPS is a cluster approach that incorporates all of the major stakeholders and participants within a specific industry. This includes private companies, individual entrepreneurs, government agencies and regulatory authorities, educational institutions, trade associations and civil society organizations. Information technology, pharmaceuticals and tourism are the three clusters that were identified as targets of CAPS financial and technical assistance. CAPS' methodology is a demand-driven approach that stresses job creation, cluster-based development, local ownership of strategies, action and results and market-oriented themes. The principal vehicles used by CAPS to carry out its activities are educational seminars, facilitation of international technical assistance, sponsorship of trade fairs, identification of foreign markets and partners, assistance with legislative reform efforts and preparation of marketing and promotional literature.

The project strives to demonstrate results and achieve sustainability by:

- Building sustainable institutional capacity
- Transferring the organization of initiatives to counterparts
- Building public awareness on key competitiveness issues
- Achieving clear policy reform results

The CAPS project is scheduled to terminate in February 2011.

II. Purpose of the Evaluation

The primary purpose of this evaluation was to provide USAID/Armenia with an objective external economic impact assessment of this important program that will soon be concluding and to apply the experiences and lessons learned to the next generation of economic growth

initiatives. The evaluation endeavored to measure and analyze the impact of CAPS project activities through an "effectiveness assessment" lens. That is, how well did the project activities catalyze economic growth and contribute to productivity gains and workforce development in the three selected sectors?

III. Evaluation Methodology

The objective of the evaluation was to provide USAID with defensible conclusions and actionable recommendations for the purpose of helping USAID and its Armenian partners establish priorities and plan their activities for any future interventions in these designated sectors.

To accomplish this, the evaluation team met with a variety of stakeholders for each of the designated clusters. With the assistance of CAPS officials, the consultants met with cluster coordinators, trade associations, private companies, entrepreneurs, government agencies, educators, students, civil society organizations and other beneficiaries of the project. In addition, focus groups were held with groups of stakeholders for the purpose of obtaining their opinions of project effectiveness and to provide a forum for them to voice their recommendations regarding ways to improve the project in any future extension or redesign by USAID. The consultants conducted their interviews in Yerevan, Gyumri and Vayk and focus groups were also held at all three of these locations.

In accordance with its standard qualitative information collection technique, the team convened three focus groups of business representatives and concerned individuals in Yerevan, one in Gyumri and one in Vayk. These groups were composed of individuals such as business owners, startup entrepreneurs, trainees, university professors and other direct beneficiaries of CAPS assistance. These groups averaged about 6 to 10 individuals who were gathered together at each location for a series of discussions lasting 1 to 2 hours where they were requested to voice their experiences regarding working and collaborating with CAPS. In addition, they were asked about particular sector needs and the degree of success they achieved using CAPS' various approaches to project identification and implementation

In addition to the above, concerned individuals and local government representatives at project sites were interviewed using an open semi-structured questionnaire format. The topics and the wording of the questions were very flexible to allow for the diverse nature of the individuals that met with the team.

In summary, within the very short time available for this impact assessment, the team conducted dialogues with as varied a group of participants as is possible. The study also referred to existing documentation to ensure that the team obtained the best possible understanding of all aspects of the interventions.

Assisted by the CAPS project staff, the team referred to various analytical reports prepared by third parties as secondary data to assess the catalytic effect of the project and the corresponding productivity increase. In particular, the team used following reports:

- Armenian Information Technology Sector, Software and Services. 2009 Industry Report, Ministry of Economy of the RA, USAID/CAPS, EIF
- Armenian Pharmaceutical Industry. Investment Handbook 2008, USAID/CAPS, MPI Union, Armenian Development Agency

- Armenian Tourism Industry. Investment Handbook 2008, USAID/CAPS, Armenian Tourism Development Agency, Armenian Development Agency
- Jermuk Comprehensive Development Plan, 2008, Ministry of Economy, USAID/CAPS
- Information Technology Growth Model, 2007, EIF, Economy and Values Research Center
- Tourism Strategy For Armenia, 2007-2030, Ministry of Economy, USAID/CAPS, Economy and Value Research Center, Armenia 2020
- National Competitiveness Report of Armenia, 2009, Economy and Values Research Center"
- A number of other published sources provided by various government and analytic entities.

IV. Overall Findings and Conclusions

Overall, the CAPS-assisted clusters demonstrated varying degrees of growth over the period from 2005 to 2010. The IT Cluster (excluding telecom) saw a 17% increase from 2008 to 2009 and there was a corresponding 3% increase in the Tourism Cluster, this in spite of the global economic crisis. (the increase counts the overall turnover) for the same period. The pharmaceutical sector registered a 3% decline overall in 2009, although this figure includes data on pharmacies. Pharmaceutical production, the focus of CAPS interventions in the sector, experienced an average growth of 7% last year. The increase was primarily a consequence of increased domestic sales, with the export of local pharmaceutical products increasing by only 4.7%, according to the National Statistical Service (NSS). However, the pharmaceutical industry has not yet seen any CAPS-related growth, as CAPS has only intervened recently, and its efforts have been focused on obtaining GMP certification for Armenian laboratories and manufacturers. When this goal is achieved, Armenian firms should be in a position to such to actually increase their export sales by having unfettered access to the EU market.

According to CAPS semi-annual and annual reports to USAID, in 2009 3,500 new jobs were created, just short of the target of 3,800. This figure includes jobs created directly or indirectly as a result of CAPS activity. Sales and revenue targets were surpassed and overall productivity increased by 8%, exceeding the target of 6%. Armenian firms participating in the CAPS clusters have made significant progress in adopting international best practices, with 15 of them adopting them, while only 4 were envisioned in the target. The project also supported the adoption of six pro-business reforms which benefited the CAPS cluster, surpassing the target of four.

The structures and processes established in the IT, Tourism and Pharmaceutical Clusters have resulted in improved cooperation and communication among stakeholders. Interviewees from both the private sector and the project itself stated that they had good cooperation with those governmental agencies with which they routinely interacted. However, numerous stakeholders mentioned that there was an occasional failure of the government agencies to collaborate effectively with each other.

The Head of the Drug Agency expressed frustration in dealing with the Ministry of Health, and so did the CAPS project staff. In particular, the project staff mentioned that there was absolutely no one in the Ministry of Health responsible for the development and follow-up of GMP regulations. It was only after the Ministry of Economy took over the responsibility for developing these regulations and presenting them to the Government for approval that the Ministry of Health finally got involved in the process.

The lack of capacity and poor motivation at the lower levels of the ministries was cited as the principal factor that contributed to time-consuming and burdensome experiences in dealing with government organizations.

There is no reliable way of establishing a specific percentage of growth attributable to CAPS' intervention, but stakeholders universally stated that the favorable outcomes they experienced would not have been possible in the absence of CAPS' support.

In terms of sustainability and cost effectiveness, it can generally be concluded from the interviews that project activities were relevant to the current industry needs, and beneficiaries were optimistic about their long-term sustainability. However, it is not possible to make a statement regarding cost-effectiveness because the contractor's records do not disaggregate expenditures in a way that they can be easily matched to project activities. The information is available, but a time-consuming effort would be required in order to analyze and organize the numbers in a way that they could be associated with specific project activities.

Strengths of the CAPS Project – All Three Sectors:

- CAPS strengthened the foundation for IT sector development and created linkages with the Tourism and Pharmaceutical Clusters.
- CAPS promoted start-up support, capacity building and workforce development activities and encouraged co-funding and in-kind assistance from the private sector.
- New business associations were created and existing associations were strengthened through CAPS' intervention.
- Targeted trainings and education were made available to a wide variety of business stakeholders.
- CAPS assistance helped to improve the marketing, branding and packaging capabilities of the firms that were assisted.
- CAPS supported improvements in policy and regulatory environment.
- International certification programs were introduced in all three industries.

Weaknesses of the CAPS Project:

- CAPS' scope of work was too broad and too many small activities were dispersed across the target sectors, reducing the focus of efforts. These activities were not connected to each other, and in some instances even contradicted each another.
- This excessively broad scope led to uncertainty in planning the project activities at the inception, thus impeding the effective startup of the project. When the activities began to reach a point where they were actually having a demonstrable positive effect, the project was beginning to wind down its five and a half year life.

- The future sustainability of the newly created business associations that received CAPS funding is uncertain, particularly those in the tourism industry. This is attributable in part by a failure to attract a majority of the potential members, who may not perceive a benefit in membership, or who are unwilling to pay the membership fees.

Key challenges ahead:

- One recurring comment that was voiced to the evaluators was that a continuing effort is required to change the mindset of managers, professionals and the public in general in terms of accepting new ways of thinking. In particular, they stressed the importance of educating and persuading managers at all levels that they can improve the efficiency of their businesses and increase their revenues by adopting modern IT practices.
- Along the same lines, stakeholders in the pharmaceutical sector said that it is necessary to educate doctors, pharmacists and patients about the fact that locally produced drugs are of equal quality and effectiveness as imported products.
- Corruption was also mentioned frequently as an impediment to business efficiency and economic growth.

A. Sectoral Findings, Conclusions and Recommendations

1. Information Technology Cluster

Findings: Information technology has become one of the driving sectors of Armenia's economy, contributing to innovation and productivity growth in the country and generating substantial export sales. According to the Enterprise Incubator Foundation (EIF) survey 2009 on Armenian Information Technology Sector Software and Services, the IT sector has registered an average annual growth in revenues of 24.2% from 2006 to 2009. In absolute figures, IT sector revenues reached $129.9 million in 2009, an increase from $84.2 million in 2006 and $111.3 million in 2008.

According to the 2009 State of IT Industry Report, prepared jointly by the EIF and CAPS based on the figures provided by the National Statistical Service, the IT sector accounts for 1.3% of GDP in Armenia, which is comparable with that of other leadings economies. By comparison, the IT industry share in India's GDP is 1.4% and in Germany's it is 1.3%. From 2003 to 2009, the IT industry's contribution to total exports rose from 3.6% to 5.6%, and domestic sales and revenues increased from $42 million in 2008 to $59 million in 2009.

A wide range of CAPS activities contributed to this growth, both on the export and domestic sales side. There were a number of country and industry promotion initiatives, such as supporting companies to participate in global IT fairs and conferences which assisted Armenian firms to find new partners and sign sales and services contracts with them. Issues of industry confidentiality precluded obtaining quantitative data, but numerous instances of these partnerships and agreements were said to have occurred as a consequence of CAPS' involvement. The promotion of IT solutions in other sectors, particularly in tourism, contributed to increased domestic sales of IT companies, as local firms began to adopt new technologies for the first time.

Numerous industry-wide events were organized locally with broad international participation, and this created awareness gave local Armenian firms more visibility. In particular, it is worth mentioning such major events as the ArmTech Congress, DigiTec Expos, Meetings Without Ties and the annual Armenian IT Competitiveness Conference. These activities created a favorable environment that enabled members of the IT Cluster to collaborate effectively and helped create a positive business climate for IT, as well as improve the competitiveness of Armenia's IT sector in international and domestic markets.

In addition, these industry events also had the effect of creating awareness of other local industries on IT use for their needs, and furthermore stimulated IT industry representatives to raise their concerns regarding legal and regulatory matters to the Government.

CAPS also contributed to improvements in the regulatory and legal environment. With CAPS' assistance in 2008, the Government adopted a 10-year development strategy and vision for the IT sector. In 2009, CAPS developed an E-Government Road Map which it is using to outline its activities and execute its IT strategy. This provided the basis for including funding in the 2010 budget for the Digitec Expo, Meetings Without Ties and other events.

CAPS' firm-level assistance was directed towards international IT standards localization and the establishment of internationally recognized certification programs. As a result, participating firms were successful in meeting the expectations of foreign partners and customers in terms of quality, price and service. The project focused its firm-level assistance program in critical operational areas, such as sales and marketing, motivation, innovation and knowledge management, among others. CAPS also worked towards the localization of international IT standards to improve their understanding among local firms. This, combined with training and international certification programs enhanced the capability of industry members to cooperate in joint ventures, outsourcing opportunities and project management.

In 2009, the total workforce in the IT sector reached around 5,200 specialists. However, the availability of up-to-date, practical IT vocational and university programs is still inadequate in Armenia. Therefore CAPS' role in this area was to bridge the gap between the skills acquired in higher education and the needs of employers. This was accomplished through internship programs, upgrading of university curricula, localization of IT international standards and the promotion of IT specializations within society and business. The training initiatives at vocational schools and universities that were promoted by CAPS facilitated the upgrading of IT education and increased the number of trained individuals with the skills and experience demanded by the marketplace. During the focus group that was conducted in Gyumri, the consultants were told that 47 out of the 58 participants in the CAPS-funded training programs found immediate employment.

Conclusions:

As a result of numerous meetings with project beneficiaries and industry representatives, and a review of project documentation, the evaluation team has arrived at the following conclusions with regard to CAPS' support to IT Cluster:

- Workforce development activities, such as short and long-term training programs and vocational education programs were of considerable value to the industry. In addition, interviewees consistently stated that internship programs allowed recent graduates to find jobs more easily.

- CAPS' market development initiatives, particularly industry promotion activities, helped IT companies to increase both domestic and international sales.
- Cluster development support resulted in a more cohesive IT industry that is able to collaborate effectively and take ownership of initiatives so as to create a more favorable business environment. For example, in its role as an industry mirror, the Union of Information Technology Enterprises of Armenia paved the way for the industry to lobby the government and promote its interests in terms of the legal and regulatory environment.
- Firm-level assistance led to improved capacity of local companies to effectively compete in the international marketplace. However, if continued, a more comprehensive approach to this component should be considered. This might include elements such as seed financing, training and certification, capacity development and marketing assistance.

Recommendations:

- A comprehensive firm-level assistance package should be provided that includes financing, capacity and workforce development, certification support, company promotion, all with the special emphasis on IT start-up companies.
- Consideration should be given to increasing access to financing by creating a development credit authority and/or a venture fund type structure.
- Design and implement activities to strengthen managerial and entrepreneurial skills. This could include things such as specialized training programs and seminars and lectures conducted by recognized business executives. There could also be support for universities and larger GDA projects, such as opening of a new entrepreneurship or business school with the joint participation of an internationally recognized university.
- Support initiatives designed to foster development of e-society, such as supporting those activities established under the "Armenia E-Society Development Concept, 2010-2012" which was developed by the Ministry of Economy and approved by the Government of Armenia (GOAM). This program has the objective of creating a wide broadband network for the purpose of making e-services accessible throughout the country.
- Continue to promote the IT sector as a vehicle for encouraging local firms to increase their efficiency by embracing modern IT strategies in their everyday conduct of business.
- Explore the possibility of offering assistance to the government to help implement their 10-year IT strategy.

2. Pharmaceutical Cluster

The Pharmaceutical Cluster was added to the CAPS scope in 2007, and initial activities in this area only began in 2008, which was very late in the game. These efforts focused mainly on the development of the cluster strategic action plan, which was designed to identify key initiatives and build consensus among the industry stakeholders.

Based on the results of this assessment exercise, CAPS' assistance focused on two key initiatives: 1) broad adoption of Good Manufacturing Practices (GMP) by all participating

producers, and 2) improved market research and targeted promotion of Armenia's pharmaceutical industry, emphasizing the industry's core strengths and the expected benefits of broad adoption of GMP.

To accomplish this, the CAPS project supported a number of activities designed to help move the industry towards the acceptance of international operational standards, develop the capacity of firms to target new markets and bring key educational institutions and business associations into active cluster roles so as to strengthen collaboration and improve the competitiveness of the industry.

CAPS helped the Union of Medicine Producers and Importers (MPI) to establish the GXP Center of Excellence and conduct Armenia's first GMP training. The Center will be providing GMP training, certification and assessment for the purpose of building GXP competency within the industry. Furthermore, CAPS technical assistance strengthened the Center's facilities and training capacity through improvement of their library and procurement of equipment used to conduct GMP training for all member and non-member companies in the sector. The services offered by the Center of Excellence are fee-based and it is expected that the Center will be sustainable upon the phase-out of CAPS support.

In 2009, CAPS organized a number of training courses with the GXP Center of Excellence (CoE) on GMP, Good Distribution Practices (GDP), pharmaceutical marketing, and GMP workplace assessments. A total of 113 representatives of pharmaceutical companies, the Ministry of Health, the National Institute of Health, the Scientific Center of Drug and Medical Technology Expertise (SCDMTE) and various universities participated in the training courses.

The Government is planning to adopt a new GMP regulation by the end of 2010. Therefore, CAPS provided valuable and timely assistance to these public entities in terms of developing the GMP regulatory framework. This was accomplished by working with state bodies on drafting and adopting the GMP regulations, supporting the Drug Agency to finalize the inspectorate manual, assisting with the publication of an Armenian "Orange Book" that establishes GMP requirements and supporting the Drug Agency's participation in training programs and study visits under the EU-funded Technical Assistance and Information Exchange (TAIEX) program.

CAPS firm-level support to the 10 cluster companies has helped them move closer to GMP compliance, or at least acknowledge the importance of GMP compliance. The project has helped to strengthen general management skills within cluster companies through the development of an investment plan for one company, and support for customer relationship management for two other firms. The short period of time available following the technical assessment exercise and the lack of preparation at the other seven firms precluded in-depth assistance on the part of CAPS.

CAPS' Market Development Component activities focused on improving the domestic perception of Armenia's pharmaceutical manufacturing industry and its products through a local promotional campaign organized with CAPS support and co-funding from the industry. Due to funding restrictions, the campaign had very limited effect on the local market.

Under the Workforce Development Component of the Pharmaceutical Cluster, collaboration between Yerevan State Medical University (YSMU) and the University of Southern California (USC) was established to enhance production-related curricula at YSMU and strengthen linkages with the private sector companies. The project also helped YSMU to access support from the

European Union's TAIEX program to review a broader range of curricula. Internships implemented through the framework of the project facilitated the strengthening of linkages between universities and the labor market.

CAPS continues its efforts with existing initiatives in the cluster by supporting the GXP Center of Excellence, building the capacity of the Union of Medicine Producers and Importers (MPI), developing a University Partnership with YSMU and others so as to help ensure their continuation after the project.

Conclusions:

- CAPS' assistance resulted in providing a demonstration effect to other clusters, such as IT and pharmaceuticals. However, cluster coordination still requires significant improvements in order for them to become more cohesive and effective.
- Lack of proper government regulations and a coordinating ministry led to uncertainly in the regulatory and legal environment, especially with regard to GMP regulations, whose adoption is necessary in order for local companies to export.
- Because of their late inception, CAPS activities in Pharmaceutical Cluster were limited both in terms of timing and funding. An example of this was the local PR campaign that was undertaken with a very limited amount of funding and as a consequence, had an almost undetectable effect, as evidenced in local sales figures provided by the National Statistical Service.
- Expensive advertising campaigns and bribery practiced by foreign firms and their importer partners was cited as an obstacle for Armenian firms to increase their shares in local market. Still, it is necessary to conduct campaigns to educate the public and professionals alike that locally produced products are of equal quality and less expensive.
- The vocational education and training activities were appreciated by the industry and were successfully implemented on a cost-sharing basis and this served to strengthen linkages between the private sector and educational institutions.
- The industry needs further institutional and technical support to complete the GMP certification process.

Recommendations:

- USAID should continue to support the GMP certification process until it is finalized. This involves the adoption of the respective decree by the government and the subsequent completion of the certification of all of the individual companies.
- USAID should consider providing an international expert to participate in the first round of producer certifications by accompanying the local staff during their assessments.
- A campaign should be conducted to educate doctors, pharmacists and the general public about the fact that national products produced by Armenian companies are safe and equally effective as more costly imported products.
- Consideration should also be given to pursuing ISO 17025 laboratory testing and calibration certification, especially if the government labs might be used in

counterterrorism efforts by providing quick and accurate analysis of suspected narcotic substances.

- An anti-corruption component should be included to address the pervasive problem of bribes or other illegitimate incentives paid by pharmaceutical manufacturers to doctors and pharmacists for the purpose of promoting their brands.

3. Tourism Cluster

In 2007, the CAPS project helped the Ministry of Economy (MOE) to conduct a survey of tourist arrivals. Since then, the MOE and the NSS have continued collecting this information. Their data reveals that despite a 4% decline in global tourism numbers in 2009, Armenia saw an increase in its number of visitors. In the past year, the Tourism Cluster has made progress developing regional cooperation with neighboring countries, and continued targeted promotion directed at Italy and France as desirable geographical markets. It also addressed the religious travel segment, upgraded key tourist attractions and strengthened the quality of tourism education by collaborating with internationally-accredited foreign universities, increasing the skills of lecturers and introducing international curricula.

Overall, the National Statistical Service reported that 86,569 tourists visited Armenia during the first three months of 2009, which represents a 2.8 % increase over the same period last year. One of the evaluation focus group participants, Mr. Mekhak Apresyan, the Head of the Tourism and Regional Economic Development Department at the Ministry of Economy, was recently quoted in the news media as stating: “Armenia’s annual growth in tourist arrivals has been 23-25% over the past seven years”...“A 9.4 % increase was recorded in the number of the tourists in 2008 (558,443) compared to 2007 (510,287).”

Legal and institutional support provided by CAPS included assistance to develop and adopt a Tourism Master Strategy, draft and submit a new Tourism Law to the Ministry of Economy (MOE) and provide legal recommendations to the MOE and private sector organizations. CAPS attempted to approach the General Department of Civil Aviation about performing an Air Transport Competitiveness Assessment. However, this seems to be too sensitive area to get involved at this time. CAPS also assisted the National Statistical Service (NSS) to obtain more reliable visitor information statistics and identifying the problem behind the inaccuracy of existing data. Upon the request of the Minister of Economy, CAPS provided assistance for the creation of a Jermuk Tourism Development Strategy that was approved in January 2010.

To increase the workforce capacity in this cluster in accordance with its mandate, CAPS worked with universities specialized in tourism education. CAPS facilitated two university academic partnerships, a long-term partnership between Virginia Tech University and the Armenian Greek College and a curricula-based partnership between George Washington University and the American University of Armenia. Programs were implemented in food safety and destination management. CAPS also organized an internship program for students from tourism-related universities, a tourism summer school and follow-up support to lecturers who participated in the Community Connections Tourism Educators Exchange Program.

The numerous stakeholders interviewed agreed that the targeted promotion of Armenia as a tourist destination in the Italian and French travel markets advocated by CAPS was highly valued by industry representatives, both private and public. Artak Ghazaryan, the CAPS Director, was quoted in an American Chamber of Commerce in Armenia publication as stating that CAPS'

targeted promotions to the Italian market during 2007 and 2008 resulted in a 35% increase in Italian tourist arrivals to Armenia and a doubling of visa applications.

Among other activities, CAPS has continued to support World Federation of Tourist Guide Associations (WFTGA) training and development of the capacity of the Armenian Guides Guild to improve customer service.

The visitor experience at many of Armenia's attractions was further improved last year through support for the Armenian Monuments Awareness Program (AMAP), which placed high-quality, USAID-branded panels, directional signs and placards at more than 40 locations throughout the country. During their field trips, the consultants personally witnessed foreign and domestic tourists spending time reading the informational placards that gave the historical and cultural background of the site in four languages.

The Tourism Cluster continued to gain strength over the past year with more evidence of collaboration, networking, information sharing, partnership development and joint actions among members of the cluster, including government and academia. Examples of successful collaboration include the regional tourism workshop in Istanbul, the annual Tourism Competitiveness Conference and the CTS Travel Fair.

Conclusions:

- The project has a long list of activities in the Tourism Cluster. However, they are less efficient than comparable activities in two other clusters. The degraded infrastructure, the closed aviation sector and the lack of modern, affordable hotels are certainly contributing factors, but these areas were not within the scope of the CAPS project. Addressing difficult structural issues such as these is a long-term process that will require proactive initiatives on the part of both business and government.
- Country promotion activities targeted at Italy and France had a significant effect of raising the level of awareness in those markets and increasing the number of tourists. There are no precise figures available as of this writing, but there is delayed data being gathered by the NSS which will likely support the anecdotal accounts heard by the consultants during their interviews. However, it is impossible to determine whether these tourists were informed by the CAPS campaign, a friend or a relative or some other source.
- Some areas crucial for tourism development, such as aviation, are still closed to collaboration and effective dialogue.
- CAPS supported the establishment of associations in the Tourism Cluster and provided funding for them. However, their sustainability is uncertain due to the fact they are too weak at the moment and too dependent on donor-funding. In addition, they are fragmented along occupational lines and do not represent the whole industry, and consequently do not have a clear strategy for expansion and development.
- Natural synergies with IT companies led to increased productivity of tourism companies. An example of this sort of mutually beneficial business collaboration would be the adoption of appropriate software designed, installed and serviced by an Armenian IT

company that would allow a tour operator to sell a tour packaged online and provide booking and reservation services at the same time.

- Quality service in this industry is lacking, despite the number of activities designed to improve it. The usual quality measures applicable to any service, such as timely and accurate responses and polite and comprehensive satisfaction of a customer's request, are frequently absent.
- The tourism infrastructure is in a state of deterioration and there is a lack of middle-tier hotels to serve tourists who are on a limited budget and cannot afford luxury accommodations.

Recommendations:

- If support to Tourism Cluster is to be maintained in the future, targeted promotions of Armenia as a tourist destination should be continued.
- USAID should provide detailed firm-level assistance to develop, package and sell new and attractive tourism products on international markets.
- Assistance in increasing the quality and quantity of proposed service spectrum would also help develop this sector.

V. Summary of Recommendations

Future projects should build on the successes of the CAPS project, both in terms of productivity increases and cluster strengthening, both of which have been major success stories to date.

Specifically, the recommendations are:

Narrow the scope

To achieve more tangible outcomes, USAID should consider narrowing down the scope of their new program so as to focus on several select activities than can demonstrate results. Having too many smaller dispersed activities over several clusters make management and planning much more complicated, and the outcomes become diluted.

Small scale activities should be dropped and the program should concentrate on large sub-projects within a particular industry, such as GMP certification for pharmaceuticals. Another component could be an incubation/start-up support effort which would encompass an integrated approach including a seed financing facility, training and capacity development, marketing and promotion on international markets.

Another different approach could entail a scenario whereby the new project would only cover the IT sector and focus its efforts on the cross-sectoral use of technology. IT services are generally underutilized in Armenia, and promoting local IT companies on the domestic market would help support not only them, but also their non-IT partners who sell their products to Armenian companies from other industries e.g. tourism, pharmaceuticals, chemistry, mining, etc.

In any of these scenarios, collaboration with the industry associations and the GOAM is going to be necessary to ensure state support and understanding of the donor's activity.

Use a combination of industries to create natural synergies

Having more than one sector included in the development program can lead to the creation of natural synergies between the companies operating in these areas. The CAPS experiences demonstrated that the use of IT solutions has significantly increased in the Tourism Cluster since they had the opportunity to communicate with each other and understand the benefits of mutual cooperation.

Include new promising sub-sectors in the new program, such as engineering services (industrial automation, precision electronics, etc)

To maximize the impact of local economic development, productivity increases and job creation, USAID must clearly identify potential obstacles and develop realistic opportunities that foster competitive economic growth in Armenia.

Further capacity building should be provided to targeted businesses, business service providers and associations, all of which have the potential to encourage local investment and leverage other donor and public funds.

VI. Lessons Learned

After looking closely at the documents provided and having interviewed numerous beneficiaries of the project, the evaluation team concludes that the processes, innovations, institutions, partnerships and linkages that were introduced are fundamentally sustainable in that CAPS activities were instrumental in building capacity in the country and stimulating growth in the industries that were targeted, thus validating this particular form of development model.

However, long-term sustainability will be influenced by global economic factors and the ability to secure financing for some of the more costly elements of the various programs, such as hardware and software replacement, international conferences and seminars, study tours and foreign experts and speakers.

In terms of cooperation, CAPS was effective in collaborating with the government, private companies and universities. There are other programs targeting the IT sector in Armenia sponsored by corporations such as Microsoft, Hewlett-Packard and D-Link. These would appear to be equally appreciated by the beneficiaries and serve to foster healthy competition in the sector.

Gender equity in all project activities was evident to the evaluation team, which found that in most instances there was a balance of gender participation in project activities. It was the evaluators' impression that the widespread gender equality that was observed at all of the project sites was a consequence of sociological characteristics prevalent in Armenian society. That is, there was equal demand among men and women for the services and benefits provided by USAID's projects.

Sun Microsystems GDA Evaluation

Prepared by

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Acronyms

AOPC	Sun Technologies Based Armenian Open Programming Competition
ArmStat	Armenian Statistical Service
CAPS	Competitive Armenia Private Sectors
EIF	Enterprise Incubator Foundation
GITC	Gyumri Information Technologies Center
ILT	Instructor Led Training
R&D	Research and Development
RAU	Russian-Armenian (Slavonic) University
SDC	Solution Development Center
SEUA	State Engineering University of Armenia
USAID	United States Agency for International Development
YSU	Yerevan State University

Executive Summary

The Sun Microsystems GDA project was successful in achieving its goals of increasing the sophistication of the IT sector in Armenia. As a consequence of its support of educational institutions and collaboration with the private sector, it was possible to prepare students with the knowledge and skills that are necessary to bridge the gap between their academic foundation and the realities of the marketplace. As a result, graduates of the participating universities were able to obtain internships with local firms that invariably led to full time employment.

The laboratories and testing facilities created under the project provided an environment whereby new and existing IT firms could test new applications without incurring the prohibitive expense of investing in the high-end hardware and software that would be required to conduct these experiments.

Also, the incubators supported by the project provided the opportunity for young entrepreneurs to create new companies and invent new technologies that have applications not only for the domestic market but also with significant export potential.

I. Description of the Project

United States Agency for International Development (USAID), the Enterprise Incubator Foundation (EIF), and Sun Microsystems Inc. have jointly implemented a project aimed at tackling the chronic shortage of qualified IT employees and the low added value that has characterized Armenian IT businesses. The objective of the project was to strengthen the skills of university graduates and introduce high productivity services to the Armenian IT sector.

In cooperation with major Armenian private firms and universities, the project focused on upgrading educational infrastructures, creating advanced Research and Development (R&D) labs and facilities for software testing and integration. The total budget for the program was $1,510,636, of which USAID contributed $750,000.

Key objectives of the program included student training and development emphasizing the acquisition of technical expertise that is consistent with industry standards, implementation of new courses covering advanced technologies employed at Sun Microsystems and other leading high-tech corporations, and establishment of modern research, development, integration, and testing facilities with competent teams capable of providing complex services to local and international clients. No less important was the task to ensure that the program and its components would be sustainable after the initial funding is exhausted and that it would remain fully operational and capable of growth in the long run, all the while providing significant value to the program partners and Armenian IT industry.

The Program had two components, each concentrating on one of the industry needs:

1. Training laboratories to offer up-to-date courses covering technologies demanded by industry.
2. Solution development, integration, and testing centers to promote new product development and R&D.

II. Evaluation Purpose and Methodology

The purpose of the evaluation was to obtain a comprehensive and balanced overview of project activities and results for the purpose of helping USAID plan its activities for any future interventions in these designated sectors.

To accomplish this, the evaluation team met with the main stakeholders of the program, such as university labs coordinators and Sun Solution Development Center representatives, as well as with entrepreneurs at newly-formed spin-off companies. In addition, meetings were scheduled with a diversity of stakeholders for the Sun Microsystems GDA project and tours were arranged to visit the various laboratories, server farms and incubators created under the auspices of this joint effort.

III. Findings

In line with key objectives of the program, several major components program were implemented:

Sun Training Labs –training component*:* Within the overall scope of the project, the training component included the following principal activities as published in the EIF's Project Completion Report.

- Establishment of Sun Training Laboratories in Armenian educational institutions
- Organization of Sun-related short courses for IT professionals
- Promotion of Sun technologies at Armenian universities
- Organization of Sun-related contests for young professionals

As a result of the project, four Sun Training Labs were established at:

- Yerevan State University (YSU)
- State Engineering University of Armenia (SEUA)
- Russian-Armenian (Slavonic) University (RAU), and
- Gyumri Information Technologies Center (GITC).

A special 6-month Optional Course Program was developed to be taught at the labs, including the following major subjects:

- Java programming
- Object-Oriented Programming
- Web technologies
- Databases

In total, 185 students were trained. At GITC's Lab, 40 students completed courses on Sun's technologies in 2008 and 2009.

Sun Academic Initiative: To secure access to Sun's latest technologies, participating universities were assisted to enroll in the Sun Academic Initiative, one of the programs Sun offers to further its collaborative relationship with educational institutions. As a result of joining the program, State Engineering University of Armenia, Yerevan State University and Russian Armenian (Slavonic) University received opportunities to enjoy:

- Free access to an extensive portfolio of Web-based courses through the Sun Learning Connection
- Free Web-based access to Instructor Led Training (ILT) courseware
- Free Web-based ePractice Certification Exams
- Discounts for Certification Exams

Short-Term Courses: The pilot short-term training courses were implemented within the project scope to provide opportunities for existing professionals to improve their skills. Under this initiative, two short-term courses on the Linux operating system were conducted.

Promotion of Sun technologies in Armenian Universities: Sun-related technologies were further promoted through the introduction of the Sun Campus Ambassadors program which, in collaboration with Sun Training Labs and the Sun Academic Initiative, aims to build communities around Sun's free and open source platforms (OpenSolaris, Open SPARC and Java) and also promote developer tools among academic developers, such as students, faculty and researchers. As a result, two Sun Campus Ambassadors at the Russian-Armenian (Slavonic) University and the American University of Armenia were contracted in October 2008 to promote Sun's open-source technologies in a student environment, including OpenSolaris, Java, Netbeans, and Sun Studio.

Sun Technologies Based Armenian Open Programming Competition (AOPC): AOPC is an annual programming contest aimed at challenging the skills of young IT professionals up to age 30 in Armenia. AOPC has been in place since 2003. Within the project scope, the 5th Armenian Open Programming Competition (AOPC) was dedicated to Sun Technologies. In total, 116 people applied to participate in the contest. A Winners Award Ceremony was held on December 16, 2008. Along with the main awards for the 3 best individual and group participants, special prizes were given to the best female participant and participant who provided the best Java solution.

Solution Development Center (SDC): The Center was created with the intention of providing Armenian companies with integration and testing services, as well as offering a hosting platform for software solutions developed in Armenia. The Center's secondary key task was to focus on research and development activities that are currently not pursued by Armenian software firms due to the high risk associated with such projects. It was also envisaged that the Center's team would register a legal entity and continue on its own after the program ends.

The SDC promotes start-up ventures and seeks out new clients through participation in industry functions and events and networking with contacts developed at these forums, which are a good source for insider information about what is going on in the business.

The long-term sustainability of the SDC will be dependent upon its ability to solicit new business and secure contracts that will provide the necessary cash flow to cover its operating expenses. Given the Center's reputation and the fact that its services are valued by its clients, its medium-term sustainability should be assured. However, at some point in the future, it will be necessary to upgrade the Center's hardware and software, and this will represent a significant outlay. At present, there are plans to formulate a second Sun project for submission to USAID that provides for upgrading hardware and software and expanding the scope of the SDC's services.

EIF's Final Report to USAID on Project Implementation describes the following SDC activities:

SDC Projects:

- The SDC team has been collaborating with Matenadaran, Armenia's state repository of ancient manuscripts, on the digitization and archival of ancient texts and books. Software solutions and hardware options are researched, and Sun's experience in library and archival solutions are reviewed and applied. Program partner Aviainfotel currently works on the development of a specialized search engine that will be used to index and search archived and digitized manuscripts.
- The SDC team is involved in the design and development of an e-education platform architecture. Sun's experience in implementing electronic and online educational systems in Spain and Mexico serve as models for this project. In addition, the team conducts research on the possible implementation of e-tax services in Armenia fashioned after Sun's experience in Ukraine. The project focuses primarily on the hardware aspects of e-tax services implementation. The team is currently working on the business model analysis for the purpose of designing key processes and their subsequent implementation.
- Several internet service providers are currently using Sun's lab hardware for testing various hosting services. In addition, several companies are testing their new products on the Sun servers. This includes Sourcio, which runs its web monitoring services Monitorus (http://mon.itor.us/).
- The SDC team conducted an analysis and review of a new programming language called Caper (dynamic Compliable, Asynchronous, Parallel Events Routines): Caper's capabilities were evaluated in terms of resource use intensity and behavior when running 200,000 parallel processes. Subsequently, there was a review and testing of applications developed with Caper, including a graphics editing program.
- The team has been reviewing long-term opportunities for Sun's software labs taking into consideration the latest developments at Sun Microsystems and in the worldwide IT industry in general. This analysis will allow the team to design a concept for the further development of new projects.

- The team is working on a Web Mail system to address an issue prevalent with many email systems in Armenia: the web mail systems hang or the session times out when very a large number of emails (tens of thousands) is available in the inbox or an email folder. The new system will use a special algorithm in order to show the email folder with such large number of messages in proper time without timeouts.
- The SDC team is working on a special software program called eSpeech that will be used by logopedists to help Armenian children with speech disorders. The team built the prototype and is currently testing it on the available equipment for bugs and remote access issues.

IT Industry Statistics Tool: A key component of the Sun project is the implementation of a web-based information system that will be used by Armenian IT companies to submit statistical data. The SDC, under the guidance of the Ministry of Economy and with the assistance of the Armenian Statistical Service (ArmStat), has developed an online tool than can be used to periodically collect basic key statistics from the Armenian IT sector. The participating companies use a web interface to fill out online surveys that include both data that firms have been providing to the ArmStat so far, as well as information that EIF has been gathering from the sector during its periodic surveys.

Software Process Improvement Services: The SDC provided CMMI-based software (Capability Maturity Model Integration) process improvement services to both local and global markets. An appropriate service package, marketing and sales plans have been developed. The three main components of the service package are: Awareness Workshop, Assessment/Benchmarking and SPI project setup and coaching.

IV. Conclusions

The Sun Microsystems GDA program has proven to be an effective vehicle for training students and providing them with a path to full time employment with local businesses.

- The main successes of the Sun Microsystems GDA project have been the effective collaboration with the Enterprise Incubator Foundation and the establishment of the four computer laboratories and an R&D testing laboratory. Many students have been able to receive internships with established companies which have led to full-time offers. Project officials stated that 70% of the 185 graduates of the Sun training program received immediate offers of full-time employment and the remaining graduates all found jobs within two or three months. The consultants were also told that in general, students with a straight mainstream IT education didn't fare as well on the job market because they were trained on obsolete platforms and their skills did not match current industry requirements.
- The incubators have spawned a number of promising start-ups that are already generating revenue and employment. In Yerevan, Develop Way CJSC employs about 10 people and there are four students doing internships there under the Competitive Armenia Private Sectors (CAPS) program. In June, three graduates of the Sun Slavonic University Lab

started a new venture. One of them was the winner of the Armenian Open Programming Contest, which was organized under the sponsorship of this project. Aside from themselves, the entrepreneurs employ freelancers on an intermittent basis. In Gyumri, graduates of the Sun Lab program at the Gyumri IT Center started a company that employs five people and a number of freelancers.

- The Sun Microsystems GDA program is teaching up-to-date skills that are relevant to current employment opportunities in the Armenian IT sector, especially Java and Linux, both of which are universally applicable throughout the industry, independent of corporate affiliations or brand identities.
- The program has gained considerable momentum since the time it was established and the training capacity and development of new curricula are both likely to be sustainable in the long run. However, it may be necessary to identify sources of financing for eventual hardware replacement and software upgrades in the future.
- According to the persons interviewed, there is balanced gender participation in the training and subsequent employment for participants in the Sun Microsystems GDA program. Female graduates found jobs in ways similar to their male colleagues. Although the consultants did not observe any instances of female entrepreneurs actually establishing new ventures, some may have found employment with firms started by their male counterparts.
- Universities, private IT businesses and students all expressed satisfaction with the Sun Microsystems program.
- The SDC's success was a consequence of its strategy to provide Armenian companies with unique, affordable integration and testing services, as well as serving as a hosting platform for software solutions developed locally in Armenia. Another key advantage was that it focused on research and development activities not pursued by Armenian software firms due the high risk associated with such projects. Armenia's attractiveness as a center for serious, sustainable state-of-the-art R&D is further evidenced by the very significant investment made by Synopsis in their Yerevan facility.
- The model is working as evidenced by the satisfaction of the stakeholders that use it. In Gyumri, students at the GITC Sun Lab were very enthusiastic about their training and their prospect for becoming entrepreneurs in the future. In Yerevan, the Develop Way startup incubated under the SDC succeeded in securing a contract from the National Statistical Service to develop a web-based information system that will be used by Armenian IT companies to submit statistical data to the government.
- The stakeholders interviewed by the evaluation team expressed satisfaction with the existing modalities used for training courses. A number of individuals expressed enthusiasm for the potential of e-learning courses delivered by video conferencing from remote locations overseas.

V. Recommendations

- Utilize CAPS/Sun experience in building GDAs with more large companies in the future.
- Apply similar GDA models in other sectors and promote cross-sectoral GDAs (e.g. waste management, environment, etc with use of high-tech).
- Continue to provide resources and encouragement for young entrepreneurs who aspire to establish new firms using innovative, locally developed technologies.
- Consider extending the project keeping in mind the three previous recommendations.

VI. Lessons Learned

The best practices for the implementation of Global Development Alliance projects in Armenia are very much dependent upon the nature of the undertaking. However, in general it can be pointed out that the presence of private (and especially transnational/multinational) companies provides more flexibility and potential sustainability after a major donor's phase-out.

Further, it is worth considering public-private partnerships with other global companies present today in the Armenian IT market to pick up the momentum and build upon the achievements of this program.

At the same time, the availability of short-term training courses as part of the scope of such program would increase the number of beneficiary students and provide more flexibility for training component management.

Evaluation of the Commercialization of Energy Efficiency Program (CEEP)

Prepared by
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ACRONYMS AND ABBREVIATIONS

ASIF	Armenian Social Investment Fund
ASE	Alliance to Save Energy
AEAI	Advanced engineering Associates International
AED	Academy for Educational Development
ArmSEFF	Armenia Sustainable Energy Finance facility
CEEP	Commercialization of Energy Efficiency Program
CFF	Cafeschian Family Foundation
CAPS	Competitive Armenia Private Sectors (USAID Armenia funded project)
DCA	Development Credit Authority
ESRE	National Program on Energy Saving and Renewable Energy
ESIB	Energy Saving in the construction sector in Eastern Europe and Central Asia
EE	Energy efficiency
EBRD	European Bank for Reconstruction and Development
ESCO	Energy service company
FSD	Financial Sector Deepening Program (USAID Armenia)
GHG	greenhouse gas
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GOAM	Government of Armenia
GWh	Gigawatt Hour
GCal	Gigacalories
IRR	Internal Rate of Return
IFC	International Finance Corporation
IFI	International financing institution
LFI	Local financing institution
LGB	Local government body
MUNEE	Municipal Network for energy Efficiency
MSI	Management Systems International
MW	Megawatt
PPP	Purchasing Power Parity
RE	Renewable energy
R2E2	Renewable Energy and Energy Efficiency Fund
SME	Small and Medium Enterprise
SEI	Sustainable finance Initiative
TA	Technical assistance
UHP	Urban Heating Project
USAID	United States Agency for International Development
UNDP	United Nations Development Program
WB	World bank

Executive Summary

The "Commercialization of Energy Efficiency Program (CEEP)", implemented by Advanced Engineering Associates International (AEIA), with the overall budget of around US$3 million, *had the following general objectives: (I) to increase the use of clean, safe and affordable energy efficient (EE) technologies by residential, commercial, industrial and municipal energy consumers; (ii) to increase private sector lending for EE projects; (iii) to conduct a limited number of socially-oriented EE projects; and (iv) to prepare the sector for expected energy price increases. CEEP set to achieve these objectives by implementing the following Tasks.*

> *Task 1: Development and Strengthening of Energy Sector SMEs.*
>
> *Task 2: Facilitating Private Provision of Long-Term Financing for Energy Efficiency Projects*
>
> *Task 3: Implementation of a Limited Number of Socially-Oriented Energy Efficiency Projects*

Begun in June 2007, the duration of CEEP was planned for two years (base period), with a one-year option period. Currently the project is extended until mid October 2010. The program was planned to become a "one stop shop," offering assistance in a number of areas, such as preparation of business plans, introduction and promotion of efficient and cost-effective technical solutions in buildings, necessary for developing "bankable" investment proposals, etc. CEEP also engaged in a number of activities to eliminate or reduce barriers such as limited access to financing, and to promote the implementation of energy efficiency measures in Armenia.

The purpose of this evaluation is to assess the end-results and outcomes of CEEP to inform future USAID/Armenia decision-making with regard to similar undertakings that combine sector reform with improved social well-being of vulnerable populations. The methodology used combined: document review, interviews with key informants (KII), focus groups, site visits and observation.

<u>Key Findings</u>

The project was relevant in that it aimed at addressing an important issue for the economy and the energy sector in Armenia. It was also complementary to the other donor funded projects.

The project facilitated the conclusion of 10 bank funded projects against the target of 3, which is a significant achievement, testifying for the efficient one-to-ne advisory work by the project with the respective key staff, and given that the funding was from bank own resources in the environment of financial crisis. Beyond these ten projects, the project did not bring about significant increased access to finance/increased level of lending by the banks for EE projects (one of the project partner LFIs reported an increase in the levels of funding for EE projects). The interviewed industry experts were unanimous in their opinion that TA alone will not bring up these changes, and special credit lines are needed for this to happen. In the absence of such funding by other IFIs achieving the goal of increased commercial funding by the local financing institutions was too optimistic. This constraint was potentially reinforced by the fact that the partial guarantee scheme under DCA tentatively envisioned in the program did not materialize.

Having said that, banks are certainly more *capable* in lending for EE projects, since the project contributed to the increase in the knowledge base in risk and profitability assessment of EE

projects, specialized banking products, suitable for using in lending for EE projects, and basics of conducting energy audits. Key bank personnel are also more *aware* of more sophisticated financial instruments and funding schemes for EE projects due to the exposure to the experience of more advanced CIS countries, and hence- more capable of applying these in Armenia, in case the business and legislative environment become more enabling.

Since the project did not have a policy component, it did not have a direct impact on the changes in the energy polices. The indirect effects (impact) of the project on changes in the energy market were through (a) better informed and trained ESCOs, and (b) better informed banks, with staff trained in assessment of EE projects. Banks are more ready to engage in the upcoming large scale funding schemes for EE projects by such IFIs as IFC an EBRD.

CEEP was effective in delivering the program outputs at a high level of quality: guides, training courses for bankers and ESCOs, exposure visits for bankers, securing significant leverage for socially oriented programs, quality of the completion of the socially oriented programs, facilitating conclusion of bank funded EE projects (10 against the target of 3) and working on more than 30 EE project concepts. The program has met most of its targets (agreed with USAID), except for:

- training large enough number of finance professionals. The project shifted from a workshop mode of training to one-to-one training of bankers mid-project which resulted in training less number of people than planned. Unwillingness on behalf of the bank staff side to trade their day-today job for the workshop type training is the reason cited by the CEEP staff for such a shift
- reaching out to potentially larger numbers of enterprises to assist them with business plans, understanding of EE concepts and building up skills in using these for developing further business presentations for the banks. CEEP staff explains this by the limited capacity of its staffing resources.

CEEP facilitated bank-funded projects do not cover the municipal and residential sectors, although these were part of the initial SOW of the project concept. CEEP staff explained this with the fact that:

- For municipal sector: local government bodies (LGBs), are not eligible for borrowing.
- For the residential sector: while Homeowner Associations (HOA) are eligible for borrowing, in their vast majority they are not creditworthy.

The project was mostly efficient in delivering it's agreed upon outputs on time and on budget: the only exception is the component of bankers' training, which was implemented with a delay. CEEP staff was praised by the beneficiaries in being hands-on and efficient in responding to their requests for advice.
While the project delivered all but one (airing of the PSA component) of the agreed with USAID components under the public awareness campaign, the outreach was not large enough, (both in terms of reaching out to the general public and to residential and municipal sectors) and the campaign was hardly innovative in nature. This is at least partly explained by the limited amount of funding allocated for this component. The limited scale of the public awareness campaign meant that consumer awareness in using EE technologies and practices has most likely increased only marginally- mostly through the increased awareness of direct beneficiaries of the project and, to a certain extent, trickle up effects of spreading the information among the peers. Hence

the project could not have resulted in significant change in consumer behavior. Moreover, the progression from the *awareness that was generated* to *use* is currently hampered by the existing barriers in financing and legislation/regulations.
The capacities of ESCOs have significantly increased, most notably with regards to the application of new technologies, and understanding the basics of implementing EE projects. However, the program did not attempt to raise them to the next level on their path of becoming true ESCOs, and in particular, to a shift to performance based contracting. Also the program did not work with companies on the EE supply side.

The Program generated significant leverage to USG funding, with the social objects contributing 50% of the costs. The primary objective of the leverage requirement was however replication by other parties of such projects. While there were several cases when the same or other local government bodies which were ready to contribute up to 50% of the costs having seen the results of the already completed projects, then approached CEEP for conducting similar projects, no examples of replication by major donor agency/benefactor of similar projects without USG funding were found. This casts doubts about the effectiveness of the chosen design of this scheme as a stimulus for such replication to happen, especially so, if not coupled with large scale public awareness campaign. The impact on social well-being of the targeted population is undoubtedly very positive. In socially-oriented projects, the CEEP Program:

- Helped to improve the quality of life and day-to-day work for the customers and personnel.
- Contributed to increased school attendance by children in winter months.
- Often resulted in significant costs savings to hospitals, allowing them to use the freed up resources to service a larger number of the socially vulnerable population.
- Contributed to the expansion of the services provided by these institutions.

In the bank –funded projects, the impact was also positive, resulting in sales growth and expansion of exports, and, ultimately- increase in employment.

Due to larger than expected increase in gas prices, the potential savings from electricity to gas switching have declined by 20% on average. There are still substantial savings in fuel switching when energy efficient technologies are used, however, and the direct beneficiaries of the project and their peers, are aware that using gas instead of electricity is less attractive now.
The project has taken measures to ensure the impact on gender in project implementation and management. Also, the impacts of the socially oriented projects are more pronounced on women. As for gender equity, all of the key personnel of ESCOs are male.

As for the sustainability, the know-how transferred to the key bank and company staff with whom the project worked and to the ESCOs, is an invaluable intangible asset which will stay with these companies and banks and help their future progress whether in expanding their EE funding business or development as true ESCOs. However, the sustainability of the processes, innovations, institutions, partnerships and linkages introduced by the project was hampered mainly by the insufficient effort in and building institutional partnerships with the larger constituents of companies, consumers and their unions; lack of significant efforts in institutional capacity building of the ESCO Association (especially in terms of supporting them on their way to sustainability), as well as the lack of thought through efforts to build a constituency of EE consultants.

Lessons Learned

- Close interaction with bank staff, on-the job-training are effective tools in facilitating bank lending to EE projects and increasing bankers' understanding of EE lending. CEEP experience proved that this approach is productive even in the harsh environment of financial crisis. Training should include more exposure to the advanced experiences in the promotion of EE from countries at similar stages of development: study tours proved to be very beneficial. However:

- TA alone will not lead to significant increase in funding by LFIs for EE projects beyond the immediate project activities: Special credit lines, risk guarantee schemes, EE investment funds and other funding mechanisms need to go hand in hand with technical assistance;

- Training of LFIs should be more broad -based: The training should include a larger number of banking professionals. To support this, more funding needs to be allocated within project budgets and innovative methods for training schemes need to be explored/developed to accommodate the constraints posed by the work schedules of banking professionals.

- More visible, large scale and innovative public awareness campaigns are needed to achieve the goals of increased awareness and use of EE technologies, policies and practices. To support this, more funding needs to be allocated within project budgets.

- Continued and quality TA and coaching of ESCOs could bring to significant improvement in their capacities, knowledge and practices. CEEP (as a logical continuation of its predecessor projects) have demonstrated the effectiveness of this approach. However, challenges in developing ESCOs must be recognized and addressed: While it is widely understood that ESCOs need to be developed and supported on their path of becoming true ESCOs and operating with internationally recognized practices, the challenges of doing so should be explicitly recognized, analyzed, and solutions sought to support the journey in a stepwise fashion. In particular, introduction of performance based contracting is needed, but this would have to be supported with a pilot, specifically designed schemes, etc.

- Importance of developing the supply side: Future projects should specifically address the need to develop the supply side of EE promotion.

- A Sustainability and an exit plan (sustainable legacy institutions and partnerships) are both required: Future projects will need to develop a sustainability plan and exit strategy at the beginning, and steps taken to implement them.

- Including socially oriented programs in the EE commercialization projects can result in very positive social impacts on the targeted segments. CEEP results are very impressive in this regard and significant cost sharing by the project beneficiaries, local authorities and other donors.

- It is important to include a policy component in the project design in future undertakings of a similar nature or ensure that the respective and specific needed improvements in the policy/legal frameworks/regulations are being pursued. Alternatively close cooperation with other (IFI or government funded) programs is needed. Policy level work is very

important for the promotion of EE (especially so, if the goal of such an undertaking is to reduce barriers for the promotion of EE technologies, as was the case with CEEP) both in terms of achieving the expected results of the project and to ensure their sustainability. Maintaining close dialogue with the respective government bodies and sharing the results/learning from the project needs to be ensured.

- Pre- and post implementation household and business surveys are needed to assess the effectiveness of certain components of future programs, e.g. public awareness campaigns. Outcome level indicators should be specified, and baseline and ongoing data collected to assist in conducting more rigorous outcome and impact evaluations

The need to promote EE in Armenia is going to increase due to the fact that the upcoming decommissioning of the nuclear power plant by 2016 requires the country to develop RE. Additionally, Armenia is a signatory of such international agreements as Copenhagen Accord, under which the country has committed to increasing energy production based on RE sources and improving EE in all sectors of the economy, as well as in buildings and construction. Better use of the potential of EE will limit the dependency of the country on imported fuel.

There are several major players in the field of promoting EE in Armenia. In particular: 1) EBRD funded ArmSEFF (branch of Caucasus EEP) and IFC "Armenia Sustainable Energy Finance Project" are bringing US$75 million in total for onlending for EE projects; and 2) WB start-up implementation of a new loan "Energy Supply Reliability and Energy Efficiency Project" (US$10-12 million) where it will target EE in public buildings.

Future Needs for Developing EE in Armenia

On balance, and through the analysis of the needs in promoting EE in Armenia on one hand and the committed assistance from other donors and the World Bank, it could be concluded that there will still be major unmet needs, including:

- Stimulating supply side of local EE market: production and testing.
- Promotion of EE in the existing housing stock.
- Conducting innovative projects, which while risky for bank lending, would allow piloting and/or adapting new technologies in Armenia and testing new funding and implementation schemes.
- Continuing capacity building of ESCOs and ESCO Association.
- While the World Bank through the R2E2 fund will implement EE measures in the public sector buildings, the needs are very large, and it will also be necessary to continue the implementation of socially oriented projects. In case this is contemplated, more innovative funding schemes for socially oriented projects should be designed, potentially partially with soft loans (e.g. through a revolving fund).

I. Introduction

A. Project Background

According to the National Program on Energy Saving and Renewable Energy (ESRE)[1] the potential for energy efficiency (EE) savings in Armenia is large, including 40% in building

[1] developed by Alliance to Save Energy (ASE) with USAID Support

sector, 35-40% in food industry, while optimization of lighting was estimated to save 475 million kWh over the next 10 years. USAID has been at the forefront in promoting EE in Armenia for almost 10 years. Apart from the development of ESRE, USAID has further supported the promotion of EE measures in Armenia through:

- the MUNEE Program, which has focused on EE policy reform needs through the development of the Armenian Energy Efficiency Council, technical assistance to the drafting of the Energy Saving and Renewable Energy Law (adopted in 2004);
- Armenia Energy Efficiency, Demand-Side Management and Renewable Energy Program (EE, DSM and RE Program)", also implemented by AEAI; and
- Residential Heating Project, implemented by Chemonics International.

Other donor agencies and IFIs have also recognized the importance of the EE for Armenia. In addition to USAID, the GOAM and other donors are engaged in efforts to reform Armenia's energy sector.

- **World Bank** supported the establishment of the *Renewable Resources and Energy Efficiency Fund (R2E2 Fund).* At the start of CEEP, the R2E2 Fund took charge of implementing the WB's Urban Heating Project (UHP), with an IDA credit of US$15.0 million.
- **European Bank for Reconstruction and Development (EBRD)** has made the promotion of EE one of its core activities, mainly through. *Sustainable Energy Initiative (SEI)* since 2006
- **UNDP GEF** funded the *"Armenia – Improving the Energy Efficiency of Municipal Heating and Hot Water Supply"* (2005 – 2009), aimed to reduce greenhouse gas (GHG) emissions from heat and hot water supply services on a sustainable basis by overcoming market barriers.

With these efforts, the energy intensity of use has dropped from 97.7 kg oil equivalent per 1,000 PPP GDP in 2003 to 70.4 in 2007[2]. Still, it was assessed that there was large potential in promoting EE in Armenia. In particular:

- Energy Service Companies' (ESCO) weak institutional capacity and inadequate business management experience in expanding energy efficiency services on a commercial basis;
- Lack of experience of energy sector SMEs (such as ESCOs, construction/engineering firms and others) in developing bankable EE projects, most with very limited history of commercial borrowing and, therefore, little experience developing good business plans;
- *Most local financial institutions (LFI) lack of familiarity with the commercial and technical issues presented by EE projects, consequently, most banks perceiving EE projects as high risk and avoiding lending to the sector;*
- *Absence of long-term financing to providers (e.g., ESCOs) and consumers to fund investments in EE. Under the WB program, the beneficiaries were charged interest rates of up to 24%, so there remained a need for more and cheaper capital;*

[2] WB Armenia Country Assistance Strategy 2009-2012

- Prohibitively high capital investment costs due to the high price of imported equipment and component parts;
- Inadequate consumer awareness of the benefits of EE measures, in particular new heating technologies; of basic concepts of weatherization, modern heating equipment and services, and financing mechanisms;
- Lack of tax and other incentives to install new, and retrofit existing, heating systems, as well as to further develop ESCO services and more efficient and safer heating technologies.

Through the Commercialization of Energy Efficiency Program (CEEP) activity, USAID/Armenia aimed to build on its own past programs and complement other donors' efforts to remove or reduce obstacles to the further and faster development of the EE market. USAID/Armenia aimed to expand the use of EE technologies and practices in Armenia, resulting in energy security improvement by reducing the need for foreign energy imports, and in savings to consumers by reducing their energy costs; and to further strengthen the energy sector, along with (ESCO) capacity to provide EE services and products

B. Description of the Project

The CEEP, implemented by Advanced Engineering Associates International (AEIA), with the overall budget of around US$3 million, *had the following general objectives: (i) to increase the use of clean, safe and affordable energy efficient (EE) technologies by residential, commercial, industrial and municipal energy consumers; (ii) to increase private sector lending for EE projects; (iii) to conduct a limited number of socially-oriented EE projects; and (iv) to prepare the sector for expected energy price increases. CEEP set to achieve these objectives by implementing the following Tasks (*A reconstructed Results Chain for the project is presented in Figure 1).

Task 1: Development and Strengthening of Energy Sector SMEs.

Task 2: Facilitating Private Provision of Long-Term Financing for Energy Efficiency Projects

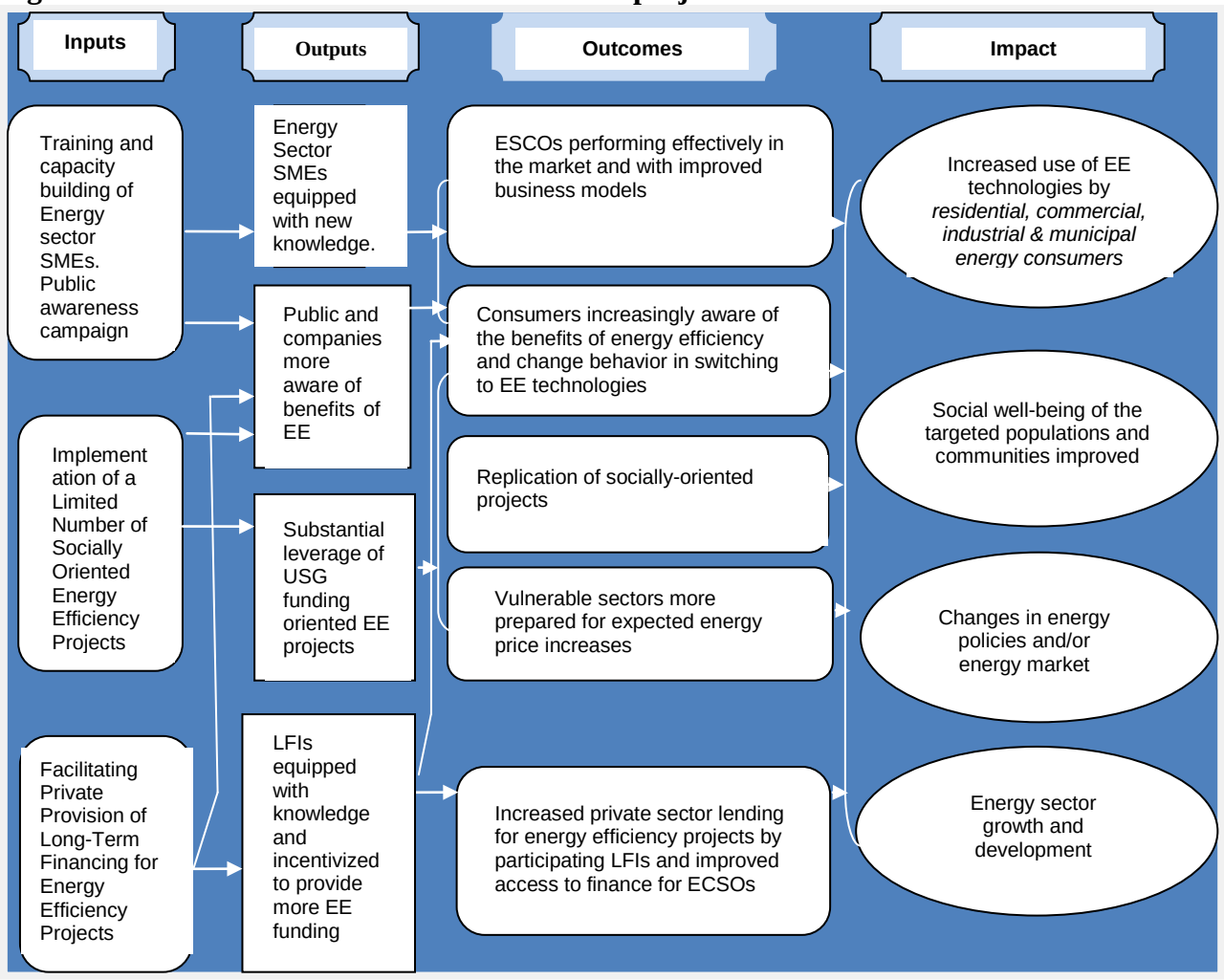
Task 3: Implementation of a Limited Number of Socially-Oriented Energy Efficiency Projects

The duration of the CEEP activity was planned for two years (base period), with a one-year option period. The project commenced in June 2007. The program was planned to become a "one stop shop," offering assistance in a number of areas, such as preparation of business plans, introduction and promotion of efficient and cost-effective technical solutions in buildings, necessary for developing "bankable" investment proposals, etc. To eliminate or reduce barriers such as limited access to financing, and to promote the implementation of EE measures in Armenia, it was planned that CEEP will engage in the following general activities:

- Training energy service companies in structuring and securing financing for EE projects;
- *Training and educating LFIs in assessing EE projects in collaboration with the Mission's Financial Sector Deepening (FSD) Project;*
- Working with local consumer organizations to provide extensive outreach and education to consumers about the economic advantages and disadvantages of energy efficiency services and equipment, as well as health, safety and environmental issues;

- Promoting consumption-based metering and billing to create incentives for energy conservation and payment of heat bills;
- Promoting the development of heat sector businesses, such as service and equipment providers, distributors and representatives; and
- Promoting, where possible, the domestic production of heating equipment and parts to reduce reliance on more expensive, imported products, thereby boosting local manufacturers and creating more options for consumers.

Figure 1: Reconstructed results chain for CEEP project



C. Purpose of the Evaluation

The purpose of evaluation is to assess the end-results and outcomes of CEEP to inform future USAID/Armenia decision-making with regard to similar undertakings combining sector reform with improved social well-being of vulnerable population. The methodology used combined: document review; interviews with key informants (KII); focus groups; site visits and observation. The matrix in the Annex lists all the evaluation questions and their data sources. These questions were designed before the field trip and then revised and updated during the field trip.

II. Findings and Conclusions

II.1 How effective was the performance management? How effective were other donor programs/ alternate approaches? What strategies, programs, processes worked, which did not and why?

CEEP was required to report on the number of common indicators under Program Element 4.1 - *Modern Energy Services, which, along with the targets and the actual results are presented in Table 1.*

Table 1 Reporting indicators, targets and results

Indicator	Target	Actual
# of people participating in USG-supported training/workshops in technical energy fields and energy-related business management	60	**35**
# of enterprises with improved business skills and operations (with developed business plans)	27	**23**
# of companies assisted in the development of bankable EE projects		**30**
# of banks consulted/trained on EE financial instruments and risk evaluation	3	**6-10**
# of bankable EE loans approved	3	**10**
# of people with increased access to modern energy services	22500	**31000**
Total capacity constructed as a result of USG assistance, MW	5-5.5	**6**
Energy savings achieved due to USG support, GWh	20-21	**18**
Cost savings earned due to USG support , US$	210K-230K	**292,630**
# of socially-oriented energy efficiency projects implemented		**18**
$US leveraged from state/local budget, other donors and beneficiaries, US$	*550,000*	***633,345***

Source: CEEP

The program was largely effective in delivering the outputs at a high level of quality. A number of targets were exceeded. Most notably:

- $633,345 was leveraged from state/local budgets, other donors and beneficiaries for the socially oriented programs, against the target of $550,000;
- 10 bank funded EE projects were concluded with CEEP facilitation against the target of 3;
- Number of people with access to modern energy services was recorded at 31000, against the target of 22500.

The program underachieved its targets for the part of the number of people trained (see the discussion below under Task 2) and enterprises with developed business plans (see the discussion below under the Task 1, Section 1.3)

In what follows below achievement of these targets is analyzed within the context of reviewing the effectiveness of specific components/deliverables under the 3 Tasks.

Task 1 Development & Strengthening of Energy Sector SMEs

Objective: *Support for energy sector SME/ESCOs development, taking them to the next level by facilitating their growth in business terms and supporting development of the industry. The technical assistance (TA) and capacity building were to support the removal of existing barriers to the provision of affordable, safe and clean EE measures*

Task 1 *Development & Strengthening of Energy Sector SMEs*

1.1 Market Analysis

Task: *Market analysis of EE potential of the various market segments (i.e., residential, industrial, commercial, municipal and institutional), taking into account anticipated increases in natural gas prices, to help identify the most opportune market segments for commercial financing and to provide a guide for selecting business models and Development Credit Authority (DCA) approaches.*

Results: A D*etailed Market Analysis of EE potential of the various market segments have been prepared in cooperation with Alliance to Save Energy (ASE).*

1.2 Business Models

Task: *Based on the results of the market analysis, prepare business models for the most viable market segment(s) that can be used by energy sector SMEs to develop bankable projects, with the aim to explore ways in which industry players could work together to help reduce risk and increase the profitability of business projects, such as: (a) collaboratively designing new products lines (i.e., new equipment or services); (b) vertical integration or functional specialization; (c) partnerships, joint ventures, mergers, etc.; and (d) client analysis (i.e., client-based targeting).*

Result: *Based on the results of the market analyses, fourteen business models for the most viable market segments were prepared and presented/disseminated among energy sector SMEs to develop bankable projects.* All of the international organizations interviewed that are now involved in EE programs praised the work done by the project in developing this (and a number of other products), introducing for many for the first time a number of concepts of EE projects contracting and financing.

1.3 Public Awareness

Task: *Increase public awareness of the benefits of using EE technologies and methodologies.*

Results: The concept of the "Outreach Plan" was developed in September 09 by CEEP and approved by USAID. Main components of the plan were: CEEP website; CEEP Brochure; production of Project Bulletins and success stories; production of ESCO Association Newsletter; program presentations and media events; and promoting general energy awareness. In practice:

- The website, brochures, project bulletins, success stories ESCO Association newsletters were prepared as planned. They were disseminated during the program events, during the various business expos, and public events.
- Media representatives were invited to all the major events organized by the program, e.g. opening of the social projects, or with the training events for the banks (with the number of the latter declining from the second year onwards, due to the shift of the project strategy to more one-to-one work mode with the bank representatives)
- As for promoting general awareness, CEEP prepared and launched series of newspapers and radio ads. However, while the outreach plan envisioned either producing new PSAs or airing the PSA, produced during the previous project, this did not materialize, due to the lack of funding.

1.3 Training and Capacity Building of CEEP training targets

Task: Provide capacity building and technical assistance (TA) to CEEP training targets, in order to improve their business operations through more efficient use of energy. *Support energy sector*

SME/ESCOs development, taking them to the next level by facilitating their growth in business terms and supporting development of the industry.

Results:

Training for ESCOs. *Trainings, workshops and consultations were provided by the project to ESCOs on the following topics: proposal writing; project management and monitoring; energy audit techniques/equipment; site selection criteria and principles; principles of EE and CEM for ESCOs and Site Energy Managers; practical course on weatherization; and energy economics. CEEP did not work with the companies representing the supply side of EE, as envisioned by the program in the initial 2007 SOW: this fact was highlighted in the SOW for the extension of the program by USAID. Support was provided to the ESCO Association (formed in 2005 with USAID support) in the preparation of the newsletters*[3]*. CEEP coached the Association in its strategic development, but no funding was allocated for ESCO Association building with CEEP: the initially allocated $15K was diverted to Task 3.*

Training for potential beneficiaries of EE projects CEEP focused on building the technical capacity of companies interested in the implementation of EE projects through (a) ongoing TA and consultation to the companies included into the pipeline of potential EE projects and (b) facilitating the process of negotiations with banks. Consultations focused on the technical and financial aspects of EE projects such as feasibility and creditworthiness assessment, basic energy audit of enterprises, development of most optimal and applicable financial instruments, interaction with banks. Companies also received hands-on training in the use of the software models for assessment of the creditworthiness of projects. The interviews with the project staff indicate that the outreach was limited primarily to the clients of the banks and to the respondents to the advertisements in the newspapers. Very limited outreach was contemplated though business associations: such efforts did not go beyond introductory meetings. The rationale for such an approach, as argued by the CEEP staff, was that a larger outreach would have resulted in a huge number of applications, and the limited CEEP staff could not have coped with the task of reviewing the potentially large number of projects.

Task 2 *Facilitating Private Provision of Long-term Financing for EE Projects*

2.1 ***Development Credit Authority (DCA)***

Task: *To help make the transition from donor support to full private sector financing of EE project*, If deemed necessary and appropriate by USAID, based on the results of the market analysis (Task 1) and taking into account prevailing market conditions: (a) Prepare a DCA concept paper and associated analyses required for the DCA financing approval action package; and; (b) ***Contingent upon approval of the DCA financing*** package, help develop and support implementation of at least two deals with the DCA.

Task 2 Facilitating Private Provision of Long-term Financing for EE Projects
Objective: *Increase the availability of bank financing for EE projects with the long-term goal to reach the point of ensuring the continuance of such financing after the CEEP activity ends. Potentially develop a DCA financing package, and if approved, help develop EE projects to be supported by the DCA financing.*

Results: The concept for using DCA was developed by the CEEP team and presented to USAID. The decision was taken

[3] The Association aims to enhance the market of energy services, strengthen cooperation of ESCOs, advocate for the rights of its members and build stronger relationships with various structures and organizations working in energy sector both in Armenia and worldwide.

by USAID not to go forward with the component. As explained by USAID, it was realized that more time would be needed than was available for the mobilization of the scheme, as well as more financing for accompanying TA. *The opinions of the interviewed experts regarding the effects of this decision on the project performance varied. Four of them thought that this component would have helped the project to achieve more impressive results under Task 2, facilitating more lending by the banks, especially to the residential sector, which was not covered under the CEEP, because lending to this sector is conserved risky by the banks. They pointed to the successful examples of utilizing DCA for USAID funded EE projects in Bulgaria*[4]*, Kazakhstan and Georgia. Two of them observed that special financing schemes for EE projects are needed more compared to guarantee schemes.*

2.2 *Bank training and Capacity Building*

Task: Training of the staff of *at least three* local banks to properly conduct loan risk evaluations of energy efficiency projects.

Results:

1) **Training locally:** *Trainings, workshops and consultations to 6-8 banks in risk evaluation/ assessment*

of EE proposals/projects were conducted. Representatives of two banks were very positive about the training and consultation they received. Especially valued was the training received in conducting energy audits. CEEP was credited in introducing the EE concepts and highlighting the importance of these for many of the banks. One of the banks, which cooperated with CEEP more closely, especially valued the assistance they received from the project in conducting leasing operations for EE projects. The number of participants in the training events aimed at banking professionals was limited, as indicated by all the interviewees, including the CEEP staff. The latter are of the opinion that classroom based training/workshops are not the best way for such training given the busy work schedules of bank staff. Accordingly, CEEP shifted to working more on one-to one basis with bankers via on the job training and consultations toward the end of the second year. This strategy limited the number of bankers exposed to CEEP training (which is the main rationale of underachieving the target, See table 1). CEEP holds that, on the other hand, this strategy helped CEEP to facilitate the conclusion of the loans. Alternative mechanisms for the training courses (e.g. *at the banks' premises)* were not fully explored. CEEP staff said that there is no widespread interest among the banks staff in EE funding at the expense of their regular work time and ongoing responsibilities, which is why such an approach was not contemplated and the classroom training mode/workshops were abandoned. Our interviews point, however, that bank staff have expressed significant interest in obtaining/improving their knowledge in EE funding concepts in the framework of other donor funded programs, even when the conditions require cost-sharing[5]. It is possible that the extent of this interest depends on the

[4] In Bulgaria the DCA facility was used twice for EE. Under the first one, UBB bank provided loans to municipalities and industries for 33 energy efficiency projects. Till 11/2003, the facility provided US$9.6 million in loans for projects totaling US$11.5 million. Under the second scheme, Europe and Eurasia Bureau extends up to US$10 million in loans to be issued by UBB, with partial guarantee from DCA. The DCA scheme guarantees leverage US$40 in commercial loans for each dollar of cost to USAID for providing the guarantee. The program also led to several larger IFI energy efficiency loans including the World Bank/GEF Bulgaria Energy Efficiency Fund and EBRD loans for industrial and residential energy efficiency improvements

[5] . In particular, International Finance Corporation (IFC) has recently (January 2010) started the implementation of the "Armenia Sustainable Energy Finance Project", which aims to establish a sustainable market for EE and RE investments and contribute to Armenia's energy self-sufficiency by working with local and international financial institutions. Among other components

overall package of funding being offered by these donors, It should be noted that the entire training budget of the project was only $25K

2) **Study Tour:** The project team organized a study tour to Moscow for the representatives of six Armenian banks - ArmBusinessbank, ArmSwissBank, Ameria Bank, Ardshininvestbank, Inecobank and VTB Bank (Armenia) to get acquainted with the IFC/WB implemented programs in EE. The study tour was organized in collaboration with IFC and Russian RBC. The objective of the tour was to help Armenian banks develop EE finance expertise and launch dedicated energy efficiency lending, which in turn could improve their clients' EE performance and diversify their credit portfolio during times of financial turmoil. All four of the participants in the study tour (representatives of the LFIs) to Moscow interviewed were very positive about its results. They were unanimous that:

- they received first-hand information and discussed specific practical issues related to creating this new market, including how to identify and assess EE projects at an enterprise, how to use various financial instruments such as fixed-income lending, project and trade finance to fund the projects, and how to work with vendors and project developers in creating co-finance products.
- the insights gained during the visits were invaluable in terms of broadening their understanding about the range of banking products and financing mechanisms which could be used in Armenia to stimulate funding for EE if and when the environment for it is more enabling, i.e. when: there exist special credit lines for EE lending; the legislation supports other-than-credit-lines funding mechanisms for EE projects (e.g. one of the bank representatives mentioned his bank is waiting for the National Assembly to pass the "Law on Investment Funds" to establish an EE investment Fund); and other supporting laws and regulations provide more incentives for EE funding by the commercial banks. In particular the interviewees voiced their support for more attractive tax incentives for EE projects

3) Over *30* ***prospective EE projects*** *for future commercial financing were prepared/advised on.*

2.3 *Develop and Facilitate Bank Funded Energy Efficiency Projects*

Task: Develop at least *three* bankable energy efficiency projects that successfully obtain long-term commercial (i.e., private sector) financing.

Results: *CEEP facilitated the conclusion of ten* bankable EE projects against the target of three[6]. The companies successfully obtained commercial financing. The CEEP Team helped the two sides in: carrying out risk analysis, assessment of the IRRs, preparing presentations for the banks, and negotiating the terms of the loan and reaching an agreement[7]. CEEP also assisted in the development of more than thirty EE projects for commercial financing, which are at different

(policy advice, public awareness campaign etc) it supports the development of RE and EE financing through educating LFIs and providing them with advisory services on a cost share basis, whereby the banks contribute 50% towards the costs.INOGATE currently implements a regional project "Energy Saving in the construction sector in Eastern Europe and Central Asia (ESIB)". A baseline survey was conducted among the bankers, which revealed significant demand in training on EE funding issues.

[6] Examples of the projects are: construction of Small Hydro Power Plant of 640 kW Waterpower in Paravaqar Village; Fuel Switch from Electricity to Natural Gas for Concrete Thermal Treatment (Construction of a boiler house equipped with 350 kW steam-boiler and gas supply pipeline); Building insulation and equipment modernization in insulation construction materials production for Sisian Chanshin; Equipment modernization project at VITAMAX-E; Construction of a new dumb (1.5 m high) for 1,400 kW Waterpower Small Hydro Power Plant in Uytz village, etc.

[7] Two out of six interviewed industry experts questioned the overall approach, namely the interference at the individual project level, claiming that this should be left entirely to the banks and clients.

stages of review at the banks. All but two of the interviewees were of the opinion that given that the timing of this component coincided with the financial crisis, that it is quite remarkable that 10 loans were extended for EE projects (facilitated by the project): because of the financial crisis the banks' lending portfolios shrank (due to stalled asset and deposit growth) with increasing dollarization; lending rates increased from 18-22% to 20-22%; maturities declined from 2.5 to 1 year; and the loan/collateral ratio decreased from 60-70% to 50-60%[8]

The projects chosen do not cover the municipal and residential sectors, although these were part of the initial SOW of the project concept. CEEP staff explained this with the fact that: (a) For municipal sector: local government bodies (LGBs), are not eligible for borrowing; (b) for the residential sector: while Homeowner Associations (HOA) are eligible for borrowing, in their vast majority they are not creditworthy.

Task 3 Implementation of a Limited Number of Socially Oriented EE Projects

Objective: Develop and implement a limited number (10- to 20) of socially-oriented EE projects in hospitals, kindergartens, special schools and other social welfare and health institutions. The intention was to implement those, ideally, in cooperation with other donors and charitable organizations (e.g., UNDP, World Bank, UNICEF, COAF, etc.) active in Armenia's EE sector. The condition was that the selection of projects for implementation must be done on a competitive basis, and cost share was to be required for all projects, except for specific cases of compelling interest. The total amount allocated for implementation of such projects for the base period was not to exceed $500,000. Due to the extensions of the project, the overall amount spent to date is about US$670K. Towards the end of the extension period the amount spent on socially oriented projects will reach US$770K.

Task 3 Implementation of a Limited Number of Socially Oriented EE Projects
Objective: *Develop and implement a limited number (10- to 20) of socially-oriented EE projects in hospitals, kindergartens, special schools and other social welfare and health institutions. The intention was to implement those, ideally, in cooperation with other donors and charitable organizations (e.g., UNDP, World Bank, UNICEF, COAF, etc.) active in Armenia's EE sector*

Results: *Eighteen socially-oriented energy efficiency projects were implemented. USAID leveraged $US 633,345 from state/local budget, other donors and beneficiaries. $633,345 was leveraged from state/local budgets, other donors and beneficiaries for the socially oriented programs, against the target of $550,000. Number of people with access to modern energy services was recorded at 31000, against the target of 22500.* Evaluation criteria used were: estimated energy saving potential, saving/investment ratio, investment return rate (SIR, IRR), payback period (advantage given to proposals with shorter payback period), cost share size, sustainability of the project (ability of the end-user to bear the future cost associated with the maintenance and operation of the system), potential for replication, i.e. the possibility to implement similar project by other Parties and with independent financing, and importance of the project, i.e. exposure to large number of beneficiaries and the demonstration value of the project.

II.2 Has consumer awareness of using energy efficiency technologies increased?

Expected Result (ER)[9]: increased use of energy efficient technologies as Armenian consumers become increasingly aware of the benefits of EE.

[8] Note that the situation has now improved with average interest rates lowered compared to the crisis and immediate aftermath of the post-crisis period.
[9] Expected Results follow the definition from the Project funding documents

Interviews indicated that the direct beneficiaries of the project are increasingly aware of the benefits of using EE technologies and fuel switching. The 4 ESCO representatives interviewed cited examples which indicate that the information about the benefits spread from the direct beneficiaries of CEEP to their peers through observation of the successful projects. All the industry experts interviewed, however, were skeptical about the extent to which the project could have resulted in significantly increased consumer awareness of the benefits of EE technologies due to rather limited scope of the public awareness campaign. They were, also, of an opinion that public awareness work by the project should have been much more active and visible. Note that this observation was made in reference to the goals of the project, with no reference to the funding available under the project. Examples cited were the public awareness campaigns implemented by USAID for the Municipal Heating Program in Ukraine and the IFC EE programs in Russia and Ukraine. It could be argued whether with the available funding of$25K, a more effective campaign could have been implemented (even that amount was not fully utilized for raising awareness: most of that funding was diverted to Task 3): interviewed experts' opinion varied in this regard.

Conclusion:

Consumer awareness has increased primarily at the level of direct beneficiaries of the project and some trickle up effects of spreading the information. Due to the rather limited scope of the public awareness campaign, the project could not have resulted in significant increase in consumer awareness of EE technologies at large. Note: this observation is made with regards to CEEP *per se*: under the previous USAID funding the component on public awareness was larger, involving production and airing of a PSA.

II.3 Did the program result in ESCOs' performing with improved business models?

ER: ESCOs performing effectively in the market and with improved business models

All the ESCOs interviewed mentioned that their capacity has increased, most notably with regard to the application of new technologies and in the concept of energy audits. As for the adoption of improved business models, ESCOs still operate using basic/common form(s) of contracts prevailing in the construction industry. All 4 ESCOs said that they are not prepared to work on the basis of Performance Based Contracts (PBC) because they could not be held responsible for how the constructed objects/systems are maintained after the completion of the construction stage, and the existing legislation/regulations do not protect their interests. The contractor supports that view. However all the interviewed industry experts were unanimous in saying that a more proactive approach was/is needed in order to put the developed business models into practice. In particular, all of them thought that it is high time for the ESCOs to start working on the basis of PBCs. The approach taken by the R2E2 Fund, in particular, for the implementation of the new EE Program funded by the WB, envisions introduction of certain elements of PBC.

Conclusion:

The capacities of ESCOs have increased substantially, most notably with regards to the application of new technologies, and basics of energy audits. Raising them to the next level of operation, i.e. based on Performance Based Contracts, was not contemplated by the Program.

II.4 Has the project resulted in improved access to finance for EE projects? Will lending to the sector continue upon completion of the project?

ER: Increased private sector lending for EE projects through participation of LFIs and improved access to finance for ECSOs.

The project was expected to bring up increased access to financing for the companies for EE projects by the banks through the TA provided to the banks, experience gained by the banks in working through CEEP team on the bankable projects in which CEEP played the facilitation role, increased awareness in benefits of EE projects, increased skills of companies in developing bankable EE proposals, etc. The evaluation question is about the funding by the banks beyond the 10 projects with immediate CEEP facilitation (which, to repeat, was hailed by most interviewees as remarkable achievement given the state of the development of the sector and the financial crisis at the time). Only one out of four *interviewed* bank representatives mentioned that the lending to EE increased as a result of cooperation with CEEP, stating that the loans extended to the companies with the facilitation of the CEEP increased from around 20 million AMD to 50 million AMD on EE projects. This interviewee credited the training and TA from CEEP for such in an increase. The representative of the same bank mentioned that CEEP helped them to kick start their leasing portfolio (for EE Projects). The other three bank representatives responded that the levels for lending for EE projects did not change or that the projects facilitated by CEEP targeted small hydropower plants, which is an area where the bank already operated actively and continues to do so.

All the interviewees, however, both from the banks as well as from other IFIs, donor agencies, and industry experts, were unanimous in their opinion that it was hardly realistic to expect that a significant increase in lending would have occurred without special credit clines from IFIs for onlending - with more attractive lending terms than the average lending terms of the banks from their own sources.

Conclusion:

Beyond the very positive achievement of facilitating ten bank funded EE projects, the project resulted in only a marginal increase in funding by the LFIs for EE projects. The reasons for that include: the fact the project started at a time when there were no specialized credit lines targeting EE lending; the recent financial crisis which resulted in a significant contraction in lending by the LFIs with the terms of lending getting more stringent; and, potentially, the abolition of the DCA component from the project.

II.5 Are banks more capable in lending for EE projects?

All the bank representatives interviewed testified that the banks are more capable and more interested in lending for EE projects - more so, if they get engaged in on-lending programs by IFIs. The on-the job training, consultations and study tour helped to deepen their understanding of such lending and to develop ideas on the potential mechanisms for funding EE projects (as a result of the study tour), and certainly left them more prepared for the two upcoming funding programs targeting EE, namely:

EBRD. In July 2007 EBRD started the Caucasus Energy Efficiency Programme, a dedicated credit line facility for EE and RE projects in Georgia, Armenia and Azerbaijan, aimed at end-users in the industrial sector, RE sources developers and end-users in the residential sector. Under this Programme, the EBRD launched the US$35 million Georgia Energy Efficiency Programme at the end of 2007 and plans to launch a similar USD 20 million programme in Armenia: the Armenian Sustainable Energy Finance Facility (“ArmSEFF”) for industrial EE

(IEE) and renewable EE (REE). An additional US$5 million, in local currency may be extended for residential EE, subject to local currency funding availability.
IFC. The main goal of the Armenia Sustainable Energy Finance Project is to facilitate at least US$35 million of EE and RE investments, decreasing greenhouse-gas emissions, improving the EE of SMEs, and increasing the share of RE resources in Armenia's energy generation portfolio. The conclusion of this program is expected in the coming months.

Conclusion:

Banks are more *capable* in lending for EE projects, since the project contributed to the increase in the knowledge base in EE funding concepts and specialized banking products. Key bank personnel, who worked with CEEP, are also more aware of more sophisticated financial instruments and funding schemes for EE projects due to the exposure to the experience in Russia and other countries, and hence- more capable of applying these in Armenia, in case the business and legislative environment becomes more enabling. The banks are however only marginally more active in lending for EE projects, due to the lack of an enabling environment. The banks are certainly more prepared to engage in the upcoming credit programs of IFC and EBRD for EE projects.

II.6 Has the program resulted in replication of socially –oriented projects?

ER: replication of socially-oriented projects

The primary objective of requiring substantial leveraging of the USG funding was to encourage replication of socially-oriented projects *by other organizations.* While no examples of replication of similar projects without USAID funding, by other organizations were found by this evaluation, in a number of cases CEEP projects:

- prompted other/same LGBs to offer funds from their budgets to leverage the USG funding through CEEP for similar projects.
- were leveraged by other donor agencies. For example the funding for the Summer Camp in Tsakhkadzor was leveraged through a funding from the Open Society Institute.
- resulted in the beneficiaries sought more funds to expand projects within the same institution (such as the case with the Our Lady of Armenia Camp) or onto other organizations under their supervision (the Center for Social Assistance of the Our Lady of Armenia Convent).

Conclusion:

No examples of replication of socially oriented projects without USG funding were found. There were several cases, when the same or other LGBs approached CEEP for conducting similar projects- ready to contribute up to 50% of the costs, having seen the results of the already completed projects. This casts doubts about the effectiveness of the chosen design of this project component as a stimulus for such replication to happen and/or the ineffectiveness of the outreach/public awareness campaign by the project, which could have stimulated such replication.

II. 7 What was the impact of the project in regard to increased gas prices for commercial, residential, industrial, and municipal energy consumers on of socially –oriented projects?

ER: Prepare the consumers for the anticipated gas prices increases

The gas price increases were much too steep as was expected, and while there is still gain in fuel switching from electricity to gas, gains are 20% less now compared to the situation at the start of the project. As our interviews indicate, consumers are aware that using gas instead of electricity is less attractive now. For example, the R2E2 Fund was having difficulties in its UHP recently due to the reduction of households wanting to have gas-based heating supply systems. Our interviews indicate that the direct beneficiaries of the projects and their close peers are aware of the potential savings, even though these are not as large as before.

Conclusion:

Due to the larger than expected increase in gas prices, the potential savings from electricity to gas switching have declined by 20%. Consumers are aware that using gas instead of electricity is less attractive now. There are still substantial savings in fuel switching when EE technologies are used, however. While the beneficiaries of the project, and to some extent, their peers, are more aware of these benefits, whether the consumers at large in all segments are aware about this is a different question and is related to the discussion about the effectiveness of public awareness campaign.

II.7 How efficient was the overall performance management?

The main project (without extensions) was completed on time and on budget and has achieved (and overachieved) most of the targets for outputs - immediate deliverables as measured by the results indicators agreed upon with USAID. The component on bankers training started in the second year only (with a delay) and less people than planned were trained.

Conclusion:

The project achieving most of its output targets on time and on budget. All the interviewed bank and ESCO representatives praised the efficiency of the project staff in responding to their queries, and requests for advice, and their hands-on attitude.

II.8 Are the processes, innovations, institutions, partnerships, linkages introduced sustainable?

Under CEEP the support to ESCO Association for association building per se (e.g. in terms of support to develop the concepts of its sustainability), was limited (as mentioned before, US$15K allocated in the CEEP budget for strengthening of the ESCO Association was eventually reallocated for one of the social projects). All the industry experts interviewed agreed on the need to develop and strengthen the Association, as the legacy institution of the project to carry on part of its activities.

The project did not actively pursue and build sustainable linkages with consumers', business and banks' associations, as envisioned by the program SOW.

While CEEP collaborated with a number of consulting companies with experience in business planning such as Development Projects Ltd, VGM Partners Ltd, DHD Contact Ltd, IED Engineers Ltd, and Corporate Governance Center, their task was only to assist CEEP in the preparation of bankable business proposals for CEEP's customers. Lacking was a CEEP vision to develop a constituency of EE consultants who would pick up and continue the work of CEEP after the project is over.

Conclusions:

The know-how transferred to the key bank staff with whom the project worked and to the ESCOs, is an invaluable intangible asset which will stay with these companies and banks and help their future progress whether in expanding their EE funding business or development as true ESCOs. This is an important factor to support the sustainability of the project. However, the sustainability of the processes, innovations, institutions, partnerships and linkages introduced by the project was hampered primarily by the: the lack of substantial support to ESCO Association for (for association building activities *per se*); and the lack of more institutionalized partnerships with business associations (e.g. UMBA, Chamber of Commerce, Association of Banks, Consumers' Unions, etc).

II.9 Is there gender equity in project activities? Is the impact on gender considered in project implementation and management?

Efforts were in place at CEEP to ensure active participation of women in training events. However currently there are no ESCOs which would have women CEOs (there was one ESCO in the former program, which no longer exists). The impact of the socially oriented projects are more pronounced for women, given the nature of the projects, in particular with regards to kindergartens (allowing more women to take up employment, if they have well functioning kindergartens to look after the children), hospitals (women giving birth in the maternity wards or the nursing staff in generic wards), schools (where most of the teachers are women), etc. As for gender equity, due to the nature of the ESCOs, all of the key personnel of ESCOs are currently male.

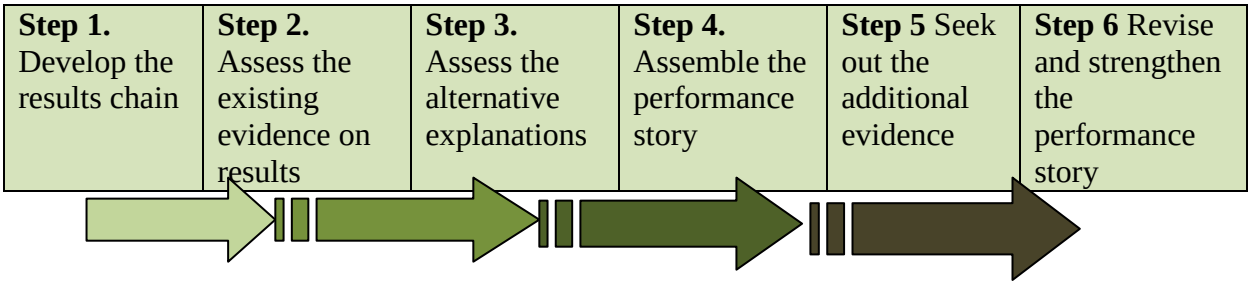
Conclusion:

The project has taken measures to ensure that there is a positive impact for both women and men in project implementation and management.

II.10 What has been the impact of the project on social well-being of the targeted populations and communities?

We were not able to show in an analytically rigorous way "attribution" of the outcomes and impacts we observed to USG's interventions (less so with regards to socially oriented projects, where the impacts could be directly attributed to CEEP). Hence we used contribution (vs. attribution) analysis, where appropriate.[10] Figure 2 describes the steps in contribution Analysis.

Figure 2: Steps in Contribution Analysis



[10] John Mayne, "Addressing Attribution Through Contribution Analysis: Using Performance Measures Sensibly', The Canadian Journal of Program Evaluation Vol. 16 No. 1 Canadian Evaluation Society, 2001

a. Socially oriented projects

Interviews with the project beneficiaries, project staff and ESCO representatives indicate that these objects (kindergartens, schools, hospitals) used either inefficient boilers, inherited from the Soviet times, or electric heaters during the winter months. Rather cold winters in Armenia and dilapidated buildings/doors/windows are the other compounding factors, which made indoors conditions quite challenging for the staff and customers of these institutions (children and patients). Often, where possible, in the schools and kindergartens, the children were moved into one-two rooms during the winter months to save electricity costs. Extended holidays were common, causing problems for the working parents of the children and affecting learning. Patients at hospitals incurred additional costs, contributing to the costs of the heating at the health centers, where moving patients to one-two wards was hardly possible. The site visits indicated that savings in terms of costs at the schools and kindergartens were not recorded due to the fact that after the project more rooms are heated. Hence the impact was observed more in terms of improved living and working conditions, and increased numbers of children attending these in the winter months. At the hospitals, the situation varied. While at Arabkir medical center 200.000 AMD is being saved per month on the electricity/heating bills, at the Maternity hospital, the Deputy Director said that no significant monetary savings were recorded after the project, but that now the indoors temperature is more even in the corridors and across the wards[11].

b. Bank funded projects

For this evaluation two bank funded projects were visited: Vitamax- E and Moussaler Printing House. Both are medium sized companies, which have experienced significant growth in the recent years. While VITAMAX-E expanded its geographical coverage of exports, Musaler expanded its operations in Armenia, satisfying the demand of the local spirits' production industry in labels and boxes, which previously were being met in Turkey. Both companies expanded their local employment, and sales figures. Both companies could have perhaps obtained loans from the banks without CEEP assistance, but with CEEP mediation they managed to negotiate better terms of the deals with the banks, which allowed them to save resources which were directed to further expansion of their businesses. VITAMAX-E stated that the added benefit from cooperating with CEEP was that they obtained the necessary skills in terms of presenting their business ideas to the banks, and making the case for the profitability of upgrading the existing equipment with more EE technologies. VITAMAX-E has also benefited from the marketing assistance provided to them under the CAPS program funded by USAID Armenia, thus presenting an interesting case of synergies achieved between the two projects. Additionally the bank which provided the second loan to VITAMAX-E, ABB, benefited from USG funded Financial Services Deepening (FSD) project, whereby leasing component was introduced at ABB by FSD and further supported by CEEP.

[11] Site visits covered the following social objects: (a) Children Summer Camp in Tskahkadzor. Here interviewed also the Assistant to the Director of the "Our Lady of Armenia", which runs Gyumri Social Center, another project by CEEP; (b) School after Ganyan, and Art school after Mkhitar Sebastatsi; (c) Local gas fire heating system a Maternity Hospital in Kanaker-Zeitun Medical center; and (d) CHP system at Arabkir Medical Center in Yerevan.

Conclusions:

The impact on social well-being of the targeted population is very positive, and in particular, for socially oriented projects where the projects: helped to improve the quality of life and day-to-day work for the customers and personnel, contributed to increased attendance of children in schools in winter months, contributed to the expansion of the services provided by these institutions, and in hospitals, often resulted in significant costs savings, thus allowing them to use the freed up resources to service larger number of socially vulnerable population; etc. For the bank –funded projects, the impact was also positive, resulting in sales growth and expansion of exports, and, ultimately- increase in employment.

II. 11 What has been the impact of the project on changes in energy policies or energy market?

The project did not have a policy component. One of the reasons cited by USAID for this was that it relied on other (including USAID funded) projects to cover the EE policy within their program of work. Therefore it did not have a direct impact on changes in energy polices. One interviewee, a representative of a donor agency, stated that although the project did not have a policy component, it found its niche in setting *benchmarks* for the sector.

Conclusion:

Since the project did not have a policy component, it did not have a direct impact on the changes in the energy polices. The impact, if any, was indirect, in the form of demonstrated examples. As for the impact on the changes of the energy market, the directly observable ones are (a) better informed and trained ESCOs, which are now more prepared to move to the next phase along their development path of becoming true ESCOs; and (b) better informed banks, with staff trained in assessment of EE project proposals, and ready to engage in the upcoming large scale funding schemes for EE by such IFIs as IFC an EBRD. In particular, the project's contribution to introducing the concept of energy audits both to the banks and ESCOs was specifically appreciated by all the beneficiaries.

II.12 Has the project contributed to the use of clean, safe & affordable EE technologies by residential, commercial, industrial and municipal energy?

As with the increased *awareness* about the benefits of the use of clean, safe and affordable EE technologies, the project contributed to increased *use* of these primarily at the level of direct beneficiaries and their close peers, and only in the segments targeted by the project (i.e. not in residential and municipal segments).

Conclusion:

While the awareness might have spread to some extent among the non-direct beneficiaries, it would be highly speculative to assess whether this awareness has transformed into increased *use* among them, given the: existing barriers in financing and legislation/regulations, lack of large scale public outreach campaign and lack of survey data among the households.

III Lessons Learned

Close interaction with bank staff, on-the job-training are effective tools in facilitating bank lending to EE projects and increasing bankers' understanding of EE lending. CEEP experience proved that this approach is productive even in the harsh environment of financial

crisis. ***Training should include more exposure to the advanced experiences in the promotion of EE from countries at similar stages of***

Greater emphasis on Public awareness: More visible, large scale and innovative public awareness campaigns are needed to achieve the goals of increased awareness and use of EE technologies, policies and practices. To support this, more funding needs to be allocated within project budgets.

Continued and quality TA and coaching of ESCOs could bring to significant improvement in their capacities, knowledge and practices. CEEP (as a logical continuation of its predecessor projects) have demonstrated the effectiveness of this approach. However,

- ***Challenges in developing ESCOs must be recognized and addressed:*** While it is widely understood that ESCOs need to be developed and supported on their path of becoming true ESCOs and operating with internationally recognized practices, the challenges of doing so should be explicitly recognized, analyzed, and solutions sought to support the journey in a stepwise fashion. In particular, introduction of performance based contracting is needed, supported with a pilot, specifically designed schemes, etc**.**
- ***Importance of developing the supply side:*** Future projects should specifically address the need to develop the supply side of EE promotion.

A Sustainability and an exit plan (sustainable legacy institutions and partnerships) are both required: Future projects will need to develop a sustainability plan and exit strategy at the beginning, and steps taken to implement them.

Including socially oriented programs in the EE commercialization projects can result in very positive social impacts on the targeted segments. CEEP results are very impressive in this regard and significant cost sharing by the project beneficiaries, local authorities and other donors.

Policy component: It is important to include a policy component in the project design in future undertakings of a similar nature or ensure that the respective (and *specific*) needed improvements in the policy/legal frameworks/regulations are being pursued. Alternatively, close cooperation needs to be ensured with other (IFI and/or government funded) programs to pursue these objectives. Policy level work is very important for the promotion of EE, especially so, if the goal of such an undertaking is to reduce barriers for the promotion of EE technologies, as was the case with CEEP. This is important both in terms of achieving the expected results of the project beyond the immediate deliverables and to ensure their sustainability. Maintaining close dialogue with the respective government bodies and sharing the results/learning from the project is also essential, so that the government could utilize the lessons learnt from the project in its policy/programs/projects[12].

Monitoring & evaluation of results: Pre- and post implementation household and business surveys are needed to assess the effectiveness of certain components of future programs, e.g. public awareness campaigns. Outcome level indicators should be specified, and baseline and ongoing data collected to assist in conducting more rigorous outcome and impact evaluations

IV Recommendations

USAID Armenia does not plan to continue the CEEP program. However, the Mission has requested recommendations for potential areas of projects aimed at promotion of EE

[12] The interview with the Ministry of Energy indicated that the analysis of the results of the CEEP, e.g. monitoring of the energy efficiency of the socially oriented or bank funded projects, was not shared with them so far.

technologies in Armenia in case funding for this becomes available. Current/upcoming IFI funded projects, targeting EE include:

- EBRD funded ArmSEFF (branch of Caucasus EEP) and IFC "Armenia Sustainable Energy Finance Project", are bringing US$75 million in total for onlending for EE projects.
- UNDP GEF will continue to work on increasing access to sustainable energy services aiming to: (i) improve legislative frameworks to increase EE in new construction and (ii) assist rehabilitation of municipal heat and water supply systems in selected places.
- INOGATE has started a regional project on "Energy Saving in the construction sector in Eastern Europe and Central Asia" (ESIB)[13] which will last until 2014.
- WB has started the implementation of a new loan "Energy Supply Reliability and Energy Efficiency Project", through which it will target EE in public buildings, worth about US$10-12 million in loans and a grant amount of US$90K (to cover, *inter alia*, designing an EE entity to coordinate, implement and oversee EE reforms).

Policy level work and public awareness campaigns will be supported by all the projects listed above.

It is likely that the needs of EE promotion in the country are larger than the assistance already committed. Energy policy agenda in Armenia is dominated by the necessity to decommission the nuclear power plant by 2016 and to develop a strategy for a mix of energy generating sources. It is increasingly recognized that significant improvements can be made in the efficiency of energy use as part of a strategy to reduce energy vulnerability. A recent IFC survey[14] of private companies showed that their majority see EE as an important issue for their business, and they plan to increase their investments in EE improvements over the next three years by eight times as compared to 2006-08. Additionally, Armenia is a signatory to such international agreements as the Copenhagen Accord, under which the country has committed to increasing energy production based on renewable energy sources and improving EE in all sectors of the economy, as well as in buildings and construction. Therefore there will still be major unmet needs in the promotion of EE in Armenia such as:

- Stimulating the supply side of local EE market: production and testing.
- Promotion of EE in the existing housing stock.
- Conducting innovative projects, which might be risky for bank lending: this would allow piloting/ adapting new EE technologies and testing of new funding and implementation schemes.
- Continuing capacity building of ESCOs. While IFC intends to improve the expertise of the local design companies in the application of modern design solutions and new technologies, the assistance started by USAID in developing ESCOs will require more in-depth work with them individually, as well supporting the ESCO Association. The latter, with further support, has the potential to become: (a) a resource center for ESCOs, e.g. with testing equipment for the use by members (potentially having a lab for that); and (b) a training

[13] Beneficiary countries include: Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. The total budget of the project is: €4.449.650. Project duration: 01/10- 01/14.
[14] IFC, Energy Efficiency: A New Resource for Sustainable Growth: researching EE practices among companies in Armenia, Azerbaijan, Belarus, Georgia, Russia and Ukraine

center for the future ESCO professionals (possibly together the EE Technologies' Department at the Polytechnic University).

- While the World Bank, through the R2E2 fund will implement EE measures in the public sector buildings, the needs are very large and there would be room to continue the implementation of socially oriented projects. In case this is contemplated, more innovative funding schemes for socially oriented projects should be designed partially with soft loans (e.g. through a revolving fund).
- Using the DCA mechanism for one or more components of the program, and in particular for the residential sector.

ANNEXES

MAAC EVALUATION

Annex 1: Documents Reviewed

MAAC Documents
The MAAC Contract, dated 7/12/2007, with Modification #4
MAAC Annual Work Plans, Years 1, 2 and 3
MAAC Quarterly Progress Reports, Nos. 1 through 11
MAAC - "Review of the Anti-Corruption Strategy Report Paper" by Jean Pierre Bueb, Jan 2009
MAAC – "Detection of Corruption and Bribery Awareness Training for the Armenia State Revenue Commission" by Bueb, January 2008
MAAC – "Review of the World Bank PSMP Reports within an Anti-Corruption Framework for the Chamber of Control of Armenia" by Jacques M. R. Van Kempen, May 2008
MAAC - "Armenia: Corruption Survey of Households 2008, Yerevan 2009
MAAC - "2009 Armenia: Corruption Surveys of Households and Enterprises, DRAFT 2010
MAAC - "AAC Network Plan: What will the AAC Network Look Like in Years 4 and 5" Discussion paper, April 2010
MAAC – "Consultancy Report" by Erich de la Fuente, October 2008
MAAC – "Communications Consultancy Report" by de la Fuente, February 2008
MAAC - "Anti-Corruption Communications Assessment" February 2008
MAAC - "Building Good Governance in Health and Education: Report on Workshops and Technical Assistance, September-October 2008
MAAC - "Bulgaria Study Tour Program for Armenia Chamber of Control," July 2008
MAAC - "Report on Technical Assistance to the Chamber of Control for the Republic of Armenia," May 2008
MAAC - "Reports on the 4th, 5th, 6th and 7th MAAC Anti-Corruption Forums, Jul 2009 - Mar 2010.
MAAC - "Forum on International Obligations of Armenia in the Fight Against Corruption," July 2008
MAAC - "2009 NGO Marketplace Report," June 2009
MAAC -"Technical Assistance and Training on Design and Implementation of Reform Advocacy Strategies," by Igor Baradachev, December 2009
MAAC -- "Report on Anti-Corruption Education Consultancy Report" July-November 2009
MAAC -- "Advocacy and Assistance Centers: Striving for a Corruption Free Armenia" booklet/CD
MAAC -- "Measurement of Corruption in Armenia" July 2008
MAAC – Internal appraisals of the AACs, and Grantee monitoring reports
MAAC – Activity Newsletter Vol. 3 Issue 2
MAAC – website (www.maac.am)

Other Documents
USAID, Lessons Learned Fighting Corruption in MCC Threshold Countries, the USAID Experience, Nov. 13, 2009
USAID, DCHA/DG Activities, October 2009
USAID, Anti-Corruption Strategy, 2005
USAID, Anti-Corruption Assessment Handbook, February 28, 2009

USAID, Anti-Corruption Program Brief Series:
Combating Corruption in the Judiciary, 2009
Access to Information, 2009
USAID's Democracy and Governance Publications (webpage)
Republic of Armenia - "Anti-Corruption Strategy and Implementation Action Plan"
Armenian Center for National and International Studies, "Corruption in Armenia," Sept 2004
AYLA-OSCE – "Report of Public Monitoring Conducted within the Framework of the Multi-Component Monitoring in the RA Notary Offices Project," December 2009
AYLA newsletters February, March & April 2010
AYLA internal report on statistics of legal advice centers in Yerevan, Gyumri, Gavar and Kapan
GRECO Compliance Report on Armenia, dated June 13, 2008
GRECO report dated June 11, 2010 "Addendum to the Compliance Report on Armenia"
Chamber of Control draft "Strategic Development Plan" (undated)
ABA CEELI quarterly reports (dated Jan. & April 2010) and reports on legal clinics in Gyumri and Gavar
Caucasus Research Resource Center – Brochure
Transparency International - News, "South Caucasus must face up to anti-corruption challenge," May 2010
Armenia Now website article – "Awareness of anti-corruption programs in Armenia still low," June 1, 2010
OCHCR - Statement of the Special Rapporteur dated June 18, 2010
Spector, Bertram, ed., Fighting Corruption in Developing Countries: Strategies and Analysis, Kumarian Press, Bloomfield CT, 2005
World Bank's Control of Corruption Index (website)

Annex 2: MAAC Meetings Held

Date	Time	Organization	Person(s) met
June 14	10am	USAID	Tim Alexander Dr Simon Sargsyan Mariam Gevorgyan Diana Avetyan Bella Markarian
	4.30pm	USAID	Dr Jatinder Cheema Dr Simon Sargsyan Mariam Gevorgyan
June 15	10am	MAAC project office	Francois Vezina Eduardo Flores-Trejo
	2pm	Yerevan AAC	Sona Ayvazyan Eduardo Flores-Trejo (MAAC) Sergei (MAAC)
	4pm	Aragatsotn AAC (Ashtarak)	Lyudvik Davtyan Manush Hepoyan Karen Zadoyan (AYLA head office) Marat Atovmyan (Kotayk AAC)
June 16	2.30pm 3.30pm 4pm 5pm	MAAC project office	Garik Khachikyan Arik Brutyan Eduardo Flores-Trejo Sergey Sargsyan Kristine Grigoryan Philip Hovhannisyan Irina
June 17	11am	MAAC project office – focus group with AAC representatives	Manush Hepoyan (Aragatsotn) Tigran Tadevosyan (Ararat) Marat Atovmyan (Kotayk) Vahagn Tamrazyan (Tavush) Emin Beglaryan (Vayots Dzor) Suzi (AYLA head office) Sona Ayvazyan (Yerevan) Levon Barseghyan (Shirak) Arthur Sakunts (Lori)
June 18	10.30am	MAAC project office	Francois Vezina
	11am	MAAC project office – focus group with grantee CSOs	Karen Vardanyan (UITE) Abgar Yeghoyan (Protection of Consumers' Rights) Anahit Gevorgyan (Martuni Women's Community Council) Heghine Manasyan (CRRC) Artashes Torosyan (Partnership and Teaching)

			Eduard Hovhannisyan (Achiles) Tamara Sargsyan (Support to Communities) Narine Sargsyan (The Future is Yours) Shushan Doydoyan (FOICA) ? (Formula LLC) Arpine Hakobyan ('NGO Centre' Civil Society Development) Kristine Grigoryan (MAAC)
	3pm	Chamber of Control	Karen Arustamyan
June 21	10am	OSCE	Carel Hofstra Naira Gyulnazaryan
	1pm	Presidential office	Gevorg Kostanyan
	2.30pm	MAAC office	Francois Vezina Eduardo Flores-Trejo Garik Khachikyan
	4pm	AYLA head office	Karen Zadoyan
June 22	4pm	USAID	Dr Jatinder Cheema
June 23	9am	Ani Plaza – meeting with anti-corruption strategy monitoring and evaluation experts	Armen Khudaverdyan Samvel Manukyan Vahan Asatryan
	11am	HRD office	Rustam Makhmudyan
	1pm	Karma restaurant – meeting with ABA ROLI	Kregg Halsted Vache & Naz (interns)
	4.30pm	State Revenue Committee	Naira Avanesyan
June 24	11am	Counterpart International	Alex Sardar
	2pm	USAID	Tim Alexander Bella Markarian Dr Marina Vardanyan Anahit Khachatryan Mariam Gevorgyan Diana Avetyan + 2 others joined in

CAPS and GDA with SUN Microsystems Evaluations

Annex 1: Documents Reviewed

CAPS Reports
111-C-00-05-00059-00 - Quarterly Report Competitive Armenian.pdf
CAPS Quarterly Report - 1st Quarter 2010 - FINAL.docx
CAPS Quarterly Report Oct Dec 2009.docx
CAPS Quarterly Report Jul Sep 2009.doc
CAPS Quarterly Report_April-June 2009.doc
CAPS_Quarterly_Report_Jan-Apr 2009.doc
CAPS_Quarterly_Report_Oct-Dec 2008.doc
CAPS_Quarterly_Report_Oct-Dec 2008_A
CAPS_Quarterly_Report_July-Sep 2008.doc
CAPS Quarterly Report_Apr-June 2008.doc
CAPS Quarterly Report_Jan-Mar 2008.doc
CAPS Quarterly Report Oct-Dec 2007.doc
CAPS Quarterly Report Jul-Sep 2007.doc
CAPS Quarterly Report_Apr-Jun 2007.doc
CAPS Quarterly Report Jan-Mar 2007.doc
CAPS_Quarterly Report_2nd Qtr 2006.doc
CAPS_Quarterly_Report_3rd Qtr 2006.doc
CAPS_Quarterly_Report_4th_Qtr 2006.doc
CAPS M&E Annual Reporting Memo Nov 2006.doc
111-C-00-05-00059-00 - CAPS Quarterly Report December 2006.pdf
CAPS Work Plans
CAPS 2009 Workplan & Resource Est_19June.xls
CAPS 2010-11 Work Plan Master File_Final.xlsx
CAPS 2010-11 Work Plan Master File_Final_REVISED.xlsx
CAPS 2010-11 Work Plan Master File_Final_USAID COmments.xlsx
CAPS SOW 081004.doc
CAPS Work Plan (Final).DOC
CAPS Work Plan _6 MONTH_Sep 2008-Feb 2009.doc
CAPS Work Plan _FY2007.doc
CAPS Work Plan Institut Sppt FY09-10.doc
CAPS Work Plan Narrative FY09-10.doc
CAPS Work Plan Policy Actions FY09-10.doc
CAPS Work Plan Status_Jan2010.doc
CAPS Work Plan_FY2008_10 Oct.doc
CAPS Work Plan_FY2008_Status.doc
CAPS Workplan Tables FY09-10.xls
CAPS Workplan Tables FY09-10_w-telecom_1Apr 2009.xls
CAPS_SOW_081004.doc
CAPS Operational Plan Indicators.xls
Final_Annual_workplan_for_CAPS Appendix A.XLS
Final_Annual_workplan_for_CAPS.DOC
Indicative Work Plan Task Schedule_Final.xls
Indicative Work Plan Task Schedule_Final_REVISED.xls
NATHAN-#231539-v1-CAPS_2010-11Workplan_Final.DOC
NATHAN-#231539-v1-CAPS_2010-11Workplan_Final_REVISED.DOC

Notes CAPS Operational Plan Indicators.xls
FY2008 Work Plan Progress March-June 2008.doc
FY2008 Work Plan Progress Jan-March 2008.doc
FY2007 Work Plan_Sept 2007 Progress.doc
FY2007 Work Plan _June 2007 Progress.doc
FY2007 Work Plan _March 2007 Progress.doc
CAPS FY2007 Work Plan_Dec 2006 Progress.doc
Progress Against Workplan September 2006.xls
CAPS PAR Indicators FY2006.xls
WorkPlanUpdate.xls

CAPS Activity Summaries

Activity Summary Cumulative through June2007.xls
Activity Summary Cumulative through March2007.xls
Activity Summary Cumulative through Sep2007.xls
Activity Tracking for Qtr 3.xls
CAPS Activity Summary April-June 2008.xls
CAPS Activity Summary April-June 2009.xls
CAPS Activity Summary Apr-June2007.xls
CAPS Activity Summary Cumulative Calendar Year 2006.xls
CAPS Activity Summary Cummulative.xls
CAPS Activity Summary Jan-2010.xls
CAPS Activity Summary Jan-Mar 2009.xls
CAPS Activity Summary Jan-Mar2007A.xls
CAPS Activity Summary July-Sep 2009 Final 2.xls
CAPS Activity Summary July-Sept 2008.xls
CAPS Activity Summary July-September 2006.xls
CAPS Activity Summary July-September.xls
CAPS Activity Summary Oct-Dec 2006.xls
CAPS Activity Summary Oct-Dec 2008.xls
CAPS Activity Summary Oct-Dec 2009.xls
CAPS Activity Summary Year1.xls
CAPS Activity Summary Cumulative through June 2008.xls
CAPS Activity Summary Cumulative through March 2008.xls
CAPS Activity Summary January-March 2008.xls

CAPS M&E

Association M&E September 2006.xls
CAPS M&E Plan Indicator Table Proposed_Sept2006.XLS
CAPS M&E Plan_Sept2006.doc
CAPS M&EFullYearReporting_FY2006.XLS
CAPS ME Data forUSAID_11Oct.doc
CAPS ME Data forUSAID_2008.doc
CAPS M&E_AnnualReport09Plan10_Final.doc
CAPS M&E_AnnualReport09Plan10_Final_REVISED.doc
CAPS M&E ResultsFY07&PlanFY08.XLS
CAPS M E Annual Report 2007 & Plan 2008.doc
First_M_E_plan_for_CAPS.doc
First_M_E_plan_for_CAPS_Table_B-1.XLS
M&E Results 2006 Mem.doc
M&E Associations Qtr June 2006.xls
M&EReportingYear1.XLS

CAPS M&E Plan Add Year2 Targets.XLS
Association M&E September 2006.xls
CAPS M&E Plan Indicator Table Proposed_Sept2006.XLS
CAPS M&E Plan_Sept2006.doc
CAPS M&EFullYearReporting_FY2006.XLS
CAPS ME Data forUSAID_11Oct.doc
CAPS ME Data forUSAID_2008.doc
CAPS M&E_AnnualReport09Plan10_Final.doc
CAPS M&E_AnnualReport09Plan10_Final_REVISED.doc
CAPS M&E ResultsFY07&PlanFY08.XLS
CAPS M&E AnnualReport07&Plan08.doc
First_M_E_plan_for_CAPS.doc
First_M_E_plan_for_CAPS_Table_B-1.XLS
M&E Results 2006 Mem.doc
M&E Associations Qtr June 2006.xls
M&E ReportingYear1.XLS
CAPS M&E Plan Add Year2 Targets.XLS

Sun Microsystems Documents

SOW.doc
EIF-Sun-USAID-Progress Report-Jan-Mar 2008
EIF-Sun-USAID-Progress Report-Jan-Mar 2008-Annex
EIF-Sun-USAID-Progress Report-Apr-Jun 2009
EIF-Sun-USAID-Progress Report-Jul-Sep 2008
EIF-Sun-USAID-Progress Report-Oct-Dec 2008
EIF-Sun-USAID-Progress Report-Jan-Mar 2008
EIF-Sun-USAID-Progress Report-Apr-Jun 2009
EIF-Sun-USAID-Progress Report-Jul-Sep 2009
Sun final Report - short

Other Documents

Pharmaceutical Sector Development Council, Concept Paper 2009
The Impact of Targeted Promotion of Armenia as a Tourism Destination to the Italian Travel Trade & Public
Transparency International Global Corruption Barometer 2009
U.S. Ambassador’s Speech at the American University of Armenian 2010
Global Integrity Scorecard Armenia 2007
Establishment of Advanced Educational and Technology Resources in Armenia - USAID 2010

Annex 2: List of Interviews for CAPS and SUN GDA Evaluations

General Interviews – June 14 to June 24, 2010		
Name	**Title**	**Organization**
Jatinder Cheema, Ph.D	Mission Director	USAID
Timothy Alexander	Director, Program Office	USAID
Simon Sargsyan, Ph.D	Project Management Specialist, Economic Growth Office	USAID
Diana Avetyan	Economic Growth Office, Private-Sector Specialist	USAID
Dr. Marina Vardamyan	Office of Economic Growth, Energy, Water and Environmental Officer	USAID
Mariam Gevorgyan	Monitoring and Evaluation Specialist	USAID
Artak Ghazaryan	Director	CAPS
Armen Abrahamyan	IT Cluster Coordinator	CAPS
Lala Margaryants	Pharmaceutical Cluster Coordinator	CAPS
Gera Voskanyan	Tourism Cluster Coordinator	CAPS
Armen Shahbazyan	Business Associations Specialist	CAPS
Timothy Moore	Associate, Enterprise and Industry Development	Nathan Associates, Inc.
Sophia Muradyan	Senior Analyst	Enterprise Incubator Foundation (EIF)
Norayr Vardanyan	Project Manager	Sun Incubator Project
Hrayr Ter-Nikoghosyan	Project Manager	Sun Solution Lab
Vladimir Yeghiazaryan	Head of Applied Math in Informatics Department	Slavonic University (Russian-Armenian University)
Eduard Philiposyan	Sun Campus Ambassador	Russian Armenian University
Karen Vardanyan	Executive Director	Union of Information Technology Enterprises
Davit Sandukhchyan	Chief Legal Officer	Beeline
Andrew Hovhannisyan	Deputy General Manager	Synopsis
Gurgen Paronyan	Executive Director President	Gyumri IT Center 3-D Modeling Union
Davit Kocharyan	Executive Director	developWay CJSC
Davit Grigoryan	Director	Flexible Applications CJSC
Arman Atoyan	Founder, Creative Director	X-TECH
Sofi Baroyan	Director	Vericel Service
Emil Gabrielyan M.D.	Director President	Drug Agency Pharmacological Society of Armenia
Gevorg Yaghjyan, M.D., PhD	Vice-Rector	Yerevan State Medical University

Gevorg Safaryan	Director	LimeTech
Frans Stobbelaar	Pharmaceutical Expert	Pharin International
Robert Harutyunyan, PhD	Director-General	Armenian Development Agency
Mekhak Apresyan	Head of Tourism Department	Ministry of Economy
Pegor Papazian	Chief Executive Officer	Competitiveness Foundation of Armenia
Varoozhan Harikian	Dean of Extension Programs	American University of Armenia
Hayk Chobanyan	Director	Ministry of Labor and Social Issues, "Nork" Information-Analytical Center
Alex Sardar	Country Team Representative	Counterpart
Karine Avetisyan	Head of Actuarial Mathematics Department	Yerevan State University, Sun Training Laboratory
Syuzanna Azoyan	Marketing Director	Competitive Foundation of Armenia, Armenian Tourism Development Agency (former)
Noubar Tatarian	President	Armenian Hotel Association
Amalia Stepanyan	Executive Director	Armenian Hotel Association
Yeghishe Tanashyan	President, Armenia Chapter, Managing Partner	American Society of Travel Agents Five Stars Travel
Pharmaceutical Focus Group Participants – June 18, 2010		
Name	**Title**	**Organization**
Vardan Mkrtchyan	Marketing and Sales Manager	Liqvor CJSC
Sona Khachatryan	Quality Assurance Manager	Esculap Ltd.
Shahe Kassis	Director	Medical Horizon
Gevorg Yaghjyan, M.D., PhD	Vice-Rector	Yerevan State Medical University
Samuel Zakarian	Director	Medicine Producers and Importers Union of Armenia
Azam Ghazaryan	Director	GXP Center of Excellence
Tourism Focus Group Participants – June 18, 2010		
Name	**Title**	**Organization**
Naira Sukiasyan	President	AGG
Luisa Khalatyan		AGG
Varoozhan Harikian	Dean of Extension Programs	American University of Armenia
Shushan Khachatryan		Fairyland Travel Agency
Amalia Stepanyan	Executive Director	Armenian Hotel Association
Yeghishe Tanashyan	President, Armenia Chapter, Managing Partner	American Society of Travel Agents Five Stars Travel

Mekhak Apresyan	Head of Tourism Department	Ministry of Economy
Lusine Martirosyan		Sima Tours
Hovhannes Morgovyan		Armenian travel Bureau
IT Focus Group Participants – June 18, 2010		
Name	**Title**	**Organization**
Hayk Chobanyan	Director	Ministry of Labor and Social Issues, "Nork" Information-Analytical Center
Arman Atoyan	Founder, Creative Director	X-TECH
Gevorg Safaryan	Director	LimeTech
Davit Kocharyan	Executive Director	developWay CJSC
Grigor Barseghyan	Country Manager	Microsoft
Sofi Baroyan	Director	Vericel Service
Davit Grigoryan	Director	Flexible Applications CJSC
Tatevik Sakradyan	Marketing Specialist	Flexible Applications CJSC

Annex 1: List of Interviews

Anna Kirakosyan, Marketing, Public Outreach and Training Manager, CEEP Program, 11 Proshyan street, 0019, Yerevan, Armenia, tel.: (37410) 58 89 83; 54 76 57 email: akirakosyan@aeai.am

Aram Karapetyan, Private Equity and Merchant Banking Director, Ameria Bank/Member of the Board of Directors of "Ameria" Group Companies, 9 Grigor Lusavorich str., Yerevan 0015, Armenia, tel.: (374 10) 56 11 11, mobile: 091 4257 32

Alex Sardar, Chief of Party, Civic Advocacy Support Program, USAID Implementing Partner, USAID Armenia/Counterpart, 35 Jrashat Street, Yerevan, Armenia, 375009, tel.: 00 374 589535, email: alex@counterpart.am

Astghine Passoyan, Senior Energy Efficiency Planner, Alliance to Save Energy, mobile: 00 374 93 611619, email: apasoyan@ase.org; astghine@gmail.com

Artashes Martirossyan, Head of Corporate Lending Department, Ardshininvestbank, 13 Grigor Lusavorich, 0015 Yerevan, Republic of Armenia, tel: (+37410) 54 04 04, E-mail: office@ashib.am, mobile: 00 374 93 402003

Artur Minassyan, Director, Artstrom OJSC, 2a Gevorg Chaush St., Yerevan, Republic of Armenia, tel.: (374 10) 34 59 44, 35 06 30, email: artgroup1@yahoo.com

Diana Harutyunayn, UNDP Energy efficiency and Atmoshpere Protection Annual Workplan Manager, Government Building 3, Yerevan, Republic of Armenia, tel.: 00 374 10 583920/14; mobile: 00 374 91 240082, email: Diana@nature.am

Eduard Dilanyan, President, VITAMAX-E LLC, Rubinyants 27/55 Street, Yerevan, tel.: 00 374 93 100900, email: vitamaxe@mail.com

Grigor Hovhannissyan, Director of Lending Department, Management board member, ArmsSwissBank, 10 V. Sargsyan Str., Yerevan, Republic of Armenia, 0010, tel.: 00 37410 529593/584419; mobile: 00 374 99 99 9779, email: grigor.hovhannissyan@armswissbank.am

Gohar Avagyan, Senior Specialist, Corporate Lending department, Armenian Business Bank (ABB), 48 Nalbandyan str., 0010, Yerevan, Armenia, Phone: (37410) 59 20 00/59 20 20, email: info@armbusinessbank.am

Hovhannes Kantuni, Chief of Party, Commercialization of Energy Efficiency Program, USAID Implementing Partner, USAID Armenia/AEIA, , 11 Proshyan street, 0019, Yerevan, Armenia, tel.: (37410) 58 89 83; 54 76 57, mobile 091 41 6244, email: hkantuni@aeai.am

Jatinder Cheema, Mission director, USAID Armenia, 1 American Avenue, Yerevan 0082, Armenia, tel.: 0037410 464700, ext. 4496, email: jcheema@usaid.gov

Levon Kocharyan, CEM, Deputy Director, CESCO Ltd., 11 A. Admiral Isakov Avenue, Yerevan 0082, Republic of Armenia, Tel.: 00 374 10 567697, mobile: 00 374 93 305090, email: cesco@arminco.com

Levon Dalyan, Armenian Social Investment Fund (ASIF), tel.: 00 374 10 297123/247142,

Levon Vardanyan, Head of Development, Ministry of Energy of the Government of Armenia, tel.: 00 374 10 527980

Marina Vardanyan, Energy, Water and Environmental Officer, Office of Economic Growth, USAID Armenia, 1 American Avenue, Yerevan 0082, Armenia, tel.: 0037410 464700, email: mvardanyan@usaid.gov

Mariam Gevorgyan, Monitoring and Evaluation Specialist, USAID Armenia, 1 American Avenue, Yerevan 0082, Armenia, tel.: 0037410 494271, mobile: 00 374 91 423762, email: davetyan@usaid.gov

Mikhayil Martirosyan, President of the Association of Energy Service Companies (ESCO) of Armenia, Yerevan, 39/2 Israelyan Street, Yerevan Republic of Armenia, email: info@armesco.am; **President of TECHNOKOM Ltd.,** 2 Alikhanyan Yeghbairneri Street. tel/: 00 374 10 344255/535945, 00 374 10 35 0143, email: technokom@web.am, M.Martirosyan@technokom.am; mobile: 374 91 41 5925, 374 93 415925

Ruben Papikyan, Head of the Department on Operations in International Markets, "Inecobank", 17 Tumanyan Street, Yerevan, tel.: (374 10) 510-510, mobile: 00 374 91 46 5325

Ruben K. Harutyunyan, CEO, Moussaler, Moussaler Tpagratun, LLC, Moussaler, Armavir marz, 378352, RÀ, Tel.: + (374 10) 59 83 76, Fax: + (374 10) 58 46 86, E-mail: info@moussaler.com

Ruben Gevorgyan, Mutual Funds Unit Manager, Ameria Bank, 9 Grigor Lusavorich str., Yerevan 0015, Armenia, tel/: (374 10) 56 11 11, mobile: 374 91 411724

Simon Sargssyan, Project Management Specialist, Economic Growth office, USAID Armenia, 1 American Avenue, Yerevan 0082, Armenia, tel.: 0037410 494290, mobile 00 374 91419637, email: sargsyan@usaid.gov

Sargis Grigoryan, Director, Termoservice LLC, 25/1 Gyurjyan St., Yerevan, Armenia, Tel.: (374 10) 36 92 46 (374 91) 48 11 43, mobile: 00 374 91 432981, email: termoservice@list.ru

Tigran Parvanyan, Project Manager, Armenia Sustainable Energy Finance project, IFC Europe and Central Asia, 9 G. Lusavorich str., Yerevan 0015, Armenia, tel.: 00 374 10 542541, 542542, ext. 290; mobile: 00 374 99 189 862, email: Tparvanyan@ifc.org

Tamara Babayan, Director, Renewable Energy and Energy Efficiency (R2E2) Fund, Proshyan 1st lane, 32 apt., Yerevan, RA Tel.: (374-10) 588011, 545121

Vahe Dalyan, Chief of Investment Development Division, Converse Bank, Yerevan, 26/1, Vazgen Sargsyan, tel.: (374 10) 511200, 511211, mobile: 094 403994

Vahan Babajanyan, Senior Finance Specialist, CEEP Program, 11 Proshyan street, 0019, Yerevan, Armenia, tel.: (37410) 58 89 83; 54 76 57, mobile: 00 374 91 401388, email: vbabajanyan@aeai.am

Vartuhi Baloyan, Assistant to Director, Our Lady of Armenia Center, 6 Charents Street, Ani District Gyumri, Armenia, Phone: +374 (0312) 34338; e-mail: diramer@o2one.am; diramer@web.am

Annex 2: LIST OF DOCUMENTS REVIEWED

APPLICATION OF BUSINESS MODELS FOR COMMERCIALIZATION OF ENERGY SERVICE COMPANIES AND SMALL AND MEDIUM SIZED ENTERPRISES FOR ENERGY SECTOR OF ARMENIA, June 2008

CONCEPT PAPER, Development Credit Authority (DCA) Loan Portfolio Guarantee to Support Commercial Bank Financing for Energy Efficiency Process Improvements In the Small and Medium Enterprise Sector in Armenia

CEEP First Annual Workplan, June 2007

CEEP Second Annual Workplan, June 2008

CEEP Third Annual Workplan, June 2009

CEEP Annual Report, Year 1, June 2008

CEEP Annual Report, Year 2, June 2009

CEEP Quarterly Report January- March 2009, April 2009

CEEP Quarterly Report June-August 2009, September 2009

CEEP Quarterly Report September-November 2009, December 2009

CEEP Quarterly Report December 2009- February 2010, March 2010

CEEP Outreach Plan, 2008

DCA Portable Guarantee to Centralized Heat Supply System for Sevan Micro Districts Project

Concept Paper, draft

DCA Loan Portfolio Guarantee (for syndicated portfolio of energy efficiency loans), draft

EBRD Sustainable Energy Initiative: Scaling-up finance for climate change mitigation, May 2010

STATEMENT OF WORK, Commercialization of Energy Efficiency Program (CEEP), February 2007

IFC, Energy Efficiency: A New Resource for Sustainable Growth: researching EE practices among companies in Armenia, Azerbaijan, Belarus, Georgia, Russia and Ukraine

IFC, IFC Armenia Sustainable Energy Finance Project, program brochure

INOGATE REGIONAL EE PROGRAM IN BUILDINGS AND CONSTRUCTION: www.inogate.org

Memorandum of cooperation between CEEP and Converse Bank on the Development of EE Financing, February 2009

STATEMENT OF WORK (for extension) Commercialization of Energy Efficiency Program (CEEP), March 2009

STATEMENT OF WORK for extension, Commercialization of Energy Efficiency Program (CEEP), April 2010

TOR, Caucasus energy efficiency Program, Georgia, Armenia, Azerbaijan, Consultancy Services to support the launch and implementation of the Armenian Sustainable Energy Finance Initiative,

USAID Armenia, National Program on Energy Saving and Renewable Energy of ROA, Yerevan 2007

USAID Armenia/MUNEE, Success Story, Building EE Revolving Fund Program, in Gyumri, Vanadzor and Maralik

United Nations Development Programme, Armenia, Multiyear Work Plan, 2010-2015, Environment and sustainable development

World Bank. Country Assistance Strategy Armenia 2009-2012