CEPF FINAL PROJECT COMPLETION REPORT

I. BASIC DATA

Organization Legal Name: Armenian Assembly of America, Inc. (DBA – Armenia Tree Project)

Project Title (as stated in the grant agreement): Evaluation and Implementation of Sustainable Forestry Models in Northern Armenia

Implementation Partners for this Project:

1) **Armenia Tree Project**
2) **Global Institute of Sustainable Forestry**
3) **Yale School of Forestry and Environmental Studies**
4) **WWF Caucasus - Armenia**
5) **Conservation International**
6) **Margahovit village**
7) **Fioletovo village**

Project Dates (as stated in the grant agreement): 1 October 2006 – 31 December 2008

Date of Report (month/year): February 28, 2009

II. OPENING REMARKS

Provide any opening remarks that may assist in the review of this report.

Armenia Tree Project (ATP), a program of the Armenian Assembly of America, is immensely proud with the outcomes of our CEPF funded project "Evaluation and Implementation of Sustainable Forestry Models in Armenia." Our expectations were exceeded on several fronts – 1) the input and direction provided by the Yale School of Forestry has invigorated a healthy dialogue not only among ATP staff, but throughout the forestry sector in Armenia. Although initially met with resistance, the idea of learning about and incorporating sustainable forestry methods to Armenia has been met with increasing acceptance. The facts of diminished forest cover, loss of habitat and biodiversity are undeniable and this project allowed for cross-sectored discussion of these issues – 2) the opportunity to work closely with villagers, who are most dependent on the forest for survival provided invaluable lessons for how best to tailor sustainable forestry models specifically to account for their needs. These collaborations helped identify multivariable approaches to sustainable resource use that account for the different needs of villagers, NGOs, universities, local governments and state government agencies. These dialogues have just begun, but Armenia has taken a significant step towards applying both micro and macro solutions to the endemic problems associated with unsustainable resources extraction.

Through the CEPF funded project, ATP and the Global Institute of Sustainable Forestry have conducted one of the most in-depth studies of the forests in Northern Armenia (Site #117). This raw data was taken to Yale for analysis and brought back to Armenia for dissemination. This process helped clarify which methods to undertake for identifying sites and species that would thrive in Northern Armenia. This process led to planting two forestry plots (10 hectares and 4 hectares) with tens of thousands of indigenous trees. These plots serve as training sites for current and future foresters. As the trees grow, they will be monitored and the data from this will help identify particular techniques that encourage high survival rates along with sustainable extraction rates.

The project culminated with a sustainable forestry training manual that was produced by Yale's Global Institute of Sustainable Forestry and ATP. The manual went through several iterations and received significant peer review both at Yale and through several government ministries, academic institutions and local foresters in Armenia. A curriculum was developed for future seminars, which will be held throughout Armenia, to further discussion and application of sustainable forestry techniques. This work has been brought to the attention of several international and private donors. As a direct result of this CEPF funded project, Armenia Tree Project has been awarded $1 million+ from the Entwicklungsbank of Germany for the sustainable planting of more than 1.2 million trees. We have also received funding to construct the first ever sustainable forestry training center in the village of Margahovit. This center will serve as both a northern outpost for ATP's activities and as an international center for the study of sustainable resource use.

III. ACHIEVEMENT OF PROJECT PURPOSE

Project Purpose *Produce sustainable forestry training models that are replicable and adaptable to local conditions through the use of advanced analytical techniques and community capacity building.*

Planned vs. Actual Performance

Indicator	Actual at Completion
Purpose-level: Produce sustainable forestry training models that are replicable and adaptable to local conditions through the use of advanced analytical techniques and community capacity building.	Achieved. The two major outputs for this project were a sustainable forestry workbook for Armenia along with a training seminar curriculum and two sustainable forestry plots of 10 and 4 hectares respectively, which serve as the basis for future trainings on the implementation of forestry models for Armenia. ATP conducted an in-depth socio-economic study in the village of Margahovit that identified both the state of the local economy respective to the environment and the attitudes that villagers had towards the protection and use of their local forests. This work encouraged ATP to plant a local fruit orchard, introduce environmental education in the local school and hire many of the villagers for tree planting and care. We also worked closely with livestock owners and designed methods for limiting the damage caused by unregulated grazing.

1. Full technical evaluation of site #117 will be completed by the end of the project June, 2008.	1) Achieved. Under the guidance of Dr. Chadwick Oliver, Director of Yale University's Global Institute of Sustainable Forestry and a faculty member of the Yale School of Forestry and Environmental Studies, graduate student spent several months accumulating raw data on the forests, with the assistance of 7 international volunteers. This data was analyzed at Yale and disseminated in Armenia. This data served as the basis for how and where to plant the sustainable forestry plots and how best to design the sustainable forestry manual.
2. Model sustainable forestry demonstration plot of 10 hectares will be planted within 2 years.	2) Achieved and Exceeded. Armenia Tree Project secured rights to two planting sites, one in the village of Margahovit and the other in the neighboring village of Fioletovo. The first site in Margahovit was planted next to a forest planted by the Soviets 30 years ago. This site was chosen for its comparative value. Whereas the Soviet forest was a monoculture of pine trees planted at the rate of 8-10,000 trees per hectare, the ATP site was planted with a variety of indigenous species at a rate of 2500 trees per hectare. Our current survival rate is 92%.
3. Sustainable forestry training manual produced and published in English and Armenian by spring 2008. Core group of ATP reforestation and education staff trained in sustainable forestry techniques. Sustainable forestry training seminars to begin spring 2008.	3) Achieved and Exceeded. The "Sustainable Forestry Manual for Armenia" was produced and published in English and has been translated into Armenian. Not only was a core group of ATP staff trained in sustainable forestry techniques, they were also trained in rotational grazing and general natural resource conservation techniques. These trainings were also introduced to several government officials. Trainings with stakeholders will continue into the future, using the new manual. The manual also serves as the core of our education program at our newly built sustainable forestry school in the village of Margahovit.
4. Capacity built with local community through training and technical support to further sustainable	4) Partially Achieved.

forest and range management. Alternative income generation projects implemented with local populations, significantly increasing participant annual income within 2 years.	After consultation with CEPF, the original site for technical evaluation and the planting of a sustainable forest model was changed. This was due to the fact that ATP had opened a 15 acre reforestation nursery that provided the stock for the sustainable forestry plots. The monies set aside for alternative income education were directed towards the identification of non-timber resources, fencing for newly planted trees and sustainable grazing seminars.

Describe the success of the project in terms of achieving its intended impact objective and performance indicators.

In terms of the primary goals set out in the grant agreement between ATP and CEPF, the project has been a resounding success. Our project directly related to and furthered the objectives of CEPF's Investment Strategy 3.1 by examining and implementing sustainable forestry models in Northern Armenia. We achieved and exceeded almost all of our objectives and performance indicators.

Were there any unexpected impacts (positive or negative)? Our one shortcoming was not being able to adequately identify alternative income generation projects for the villagers of Margahovit. We did help identify non-timber resources that had market value, but our research indicated that they were at a supply too low for making a market impact and that the transportation necessary to get them to market was prohibitively expensive. We are still exploring ways to encourage economic activity in the area. Currently, we are working with several individuals who have indicated interest in eco-tourism. We believe that this maybe a reasonable solution.

IV. PROJECT OUTPUTS

Project Outputs*: Enter the project outputs from the Logical Framework for the project*

Planned vs. Actual Performance

Indicator	Actual at Completion
Output 1: The project is provided with human and technical resources.	
1.1 GISF provides the staff (1-2 graduate students, 2 faculty members, 1 software programming staff) and technical resources to fulfill commitments and goals throughout the project. (spring 2007-spring 2008)	1.1) Was achieved. Yale University's Global Institute of Sustainable Forestry provided 1 graduate student, 1 faculty member and 1 software programming staff member to help fulfill the technical and programmatic aspects of data collection, analysis and conceptual frameworks for accomplishing the goals set throughout the project. The project was extended

	until December 2008 to allow Yale the opportunity to incorporate recent changes in the forestry code of Armenia and to allow for peer review of the sustainable forestry manual.
1.2. ATP provides the staff (6 part time staff members) and technical resources to fulfill commitments and goals throughout the project. (fall 2006-spring 2008)	1.2) Was exceeded. Armenia Tree Project provided 6 part-time staff, several volunteers and brought forestry students from around Armenia to partake in various aspects of data collection, analysis, tree planting, and environmental education.
Output 2: Capacity built with local communities.	
2.1 ATP builds relationships with the leadership of site #117 to identify willing participants for establishment of a community orchard, Backyard Nursery program, and sustainable forestry and range management. (October 2006 - March 2007), (20 participants identified for Backyard Nursery spring 2007), (community orchard stewards identified through the establishment of environmental youth clubs at local schools with 12-15 students participating, spring 2007), (create list of livestock owners willing to participate in trainings.) (30-40 individuals, spring 2007).	2.1) Was amended according to changes made with CEPF. Because Armenia Tree Project changed sites slightly, we did not develop backyard nurseries and instead used tree stock from our 15 acre reforestation nursery. This money was allocated towards environmental education, fencing for newly planted trees, care of a recently planted fruit orchard and for the development of sustainable grazing curriculum.
2.2 ATP trains identified willing local participants (30-40 individuals) on implementation methodology and provide technical support in sustainable range management. (fall 2007 through spring 2008).	2.2) Was achieved. 30 community members in Margahovit received 3 separate trainings and support in sustainable range management. This is an ongoing process and the curriculum is being updated and altered to meet the dual needs of grazers and those dependent on the forests for wood and non-timber resources.
2.3 Identify site for community fruit orchard (fall 2006). Local community (12-15 environmental youth club members who have gone through ATP's Environmental Education Curriculum "Plant an Idea, Plant a Tree") receive training and support for care of community orchard. (support ongoing from spring 2007-spring 2008).	2.3) Was achieved A community orchard was planted and fenced in the village of Margahovit. The orchard is tended by local residents from Margahovit with assistance from ATP staff. Students from the local environmental youth club use the orchard as part of their ongoing environmental education training.
2.4 GISF and ATP trains and educates local community on the use of decision analysis tools and techniques in the spring of 2008.	2.4) Was achieved Youth club trainings were executed, and a k-12 version of the forest simulation software has been readied for use to match trainings. Local foresters helped collect data and were instrumental in processing the data for use in the sustainable forestry manual.

2.5 GISF and ATP works with local community (20 total families participating in Backyard Nursery program, 30-40 local livestock owners and 12-15 environmental youth club members) to identify areas of resource development, such as sustainable collection and marketing of forest herbs, value added in wood products, selling carbon credits and payment for the provision of other environmental sevices. (spring 2007-spring 2008)	2.5) Was partially achieved Backyard nurseries were not developed because we used a 15 acre reforestation nursery instead. 30 livestock owners received three trainings in rotational grazing. An environmental youth club was developed at the local school in Margahovit village. Non-timber products were identified and market outlets explored. Carbon credits were looked at, although not fully developed.
Output 3: Alternative income generation activities introduced to local communities.	
3.1 ATP's Backyard Nursery micro-enterprise program introduced to residents of site #117 with 20 families participating in spring 2007 through spring 2008.	3.1) N/A. This output was changed with approval from CEPF.
3.2 GISF and ATP work with local population (same as 2.1) to identify non-timber forest products for sustainable collection, marketing, and sale (2.6). (spring 2007-spring 2008)	3.2) Was achieved. Raspberry and mushroom collection, honey production, and eco-tourism were explored as options and integrated into the site analysis to provide assistance to future developments of these markets.
Output 4: Full evaluation of the ecosystem in region #117 (Dsegh-Hagharstin).	
4.1 GISF will complete a full evaluation of site #117 by fall 2007. Develop an inventory system and collect data with ATP and local resident assistance to understand present condition of the resources. Inventory system would include both the forest and rangeland condition. (summer 2007-spring 2008	4.1) Was achieved. Spatially explicit estimates of forest inventory have been derived based on ground measurements, multi-spectral satellite-flown imagery, and multi-polarity satellite-flown radar data. Corresponding estimates of biotic diversity and its relation to the forest state and potential changes in management have been solved. Efficiencies in inventory and data analysis for the purpose of forest and rangeland management planning and monitoring have been developed. Collaborative data collection and field trainings were executed for ATP staff, Armenian Agricultural Academy forestry students, and multiple employees of governmental agencies.
4.2 GISF will design, teach and help ATP staff to implement a combination of field sampling, remote sensing stratification, statistical techniques and modelling to evaluate site #117 (summer 2007-spring 2008)	4.2) Was achieved and exceeded. Training sessions in sampling design and inventory analysis using the developed statistical techniques were conducted for ATP staff, Armenian Agricultural Academy forestry students, and multiple employees of government.
4.3 Incorporate the forest and range inventories into	4.3) Was achieved.

a Geographic Information System and extrapolate inventories using satellite imagery to expand the inventory to the whole area of site #117. (summer 2007-fall 2007)	Geographically referenced inventory data has been expanded to include the extent of site #117 within acceptable levels of statistical confidence.
4.4 Data collected to provide information and analytic design for implementing, monitoring, and documenting sustainable forest and rangeland management plan. Documented in forestry training manual to be printed in spring 2008.	4.4) Was achieved. Adequate data and inventory analysis information has been collected and created to facilitate the generation of a comprehensive forest and rangeland management plan. The information in conjunction with the forestry training manual provides an appropriate means of assisting the community in site #117 with sustainable management plan creation.
4.5 Full data analysis shared with ATP, WWF, Armenian Agricultural Academy, AUA, Armenian State Forest Service and local population of site #117. (spring 2008)	4.5) Was achieved Data, analysis results, and analytical techniques were presented with all interested parties during a one day symposium. Additionally, data analysis results and methods are outlined in the site evaluation document.
Output 5: Comprehensive strategy for demonstrating and applying sustainable forestry practices in target corridor.	
5.1 Using data from Output 4, develop a strategy for demonstrating sustainable forestry and range management practices for site #117. (fall 2007)	5.1) Was achieved The combination of sustainable forestry training manual, site evaluation, and developed software tools represent the necessary tools to develop and demonstrate sustainable forestry and range management practices for site #117. Implementing them as ascribed in the training manual using a participatory process will result in a functional sustainable forest and range management plan.
5.2 Data from Output 4 will be incorporated into appropriate decision support tools that allow the user to project through multiple values (e.g. wood harvest volume, habitats, fire risk and others) under different scenarios. (fall 2007-spring 2008)	5.2) Was achieved Inventory and forest growth parameters have been incorporated into a Landscape Management System (LMS), allowing users to project through multiple values under different scenarios.
5.3 Outputs will include visualizations, graphs and tables that GISF will teach ATP, local participants from site #117, American University of Armenia, Armenian Agricultural Academy, and Armenian Forest Service to use and incorporate into decision making analysis. (fall 2007-spring 2008)	5.3) Was achieved Output visualizations, graphs, and tables were prepared and presented at the one-day instructional symposium. Their utility in management planning was demonstrated and copies of the software with sample data were distributed to interested parties.

5.4 Compile strategic objectives and publish findings and recommendations. (spring 2008)	5.4) Was achieved. Strategic objectives and findings are incorporated in the site evaluation document. Recommendations for developing management structures and plans are included in the training manual.
5.5 Collaborate with local population of site #117 to further and implement strategic findings. (spring 2008)	5.5) Was achieved ATP staff has developed ongoing collaborative relationships with the local population and will implement strategic findings as part of long term plans.
Output 6: Sustainable forestry-training manual designed and delivered.	
6.1 Global Institute of Sustainable Forestry and ATP will collaboratively work to develop a sustainable forestry training manual by the end of the project. (fall 2007- spring 2008)	6.1) Was achieved A sustainable forestry manual was drafted incorporating the most current and appropriate methods of social integration and basic technical training for community forest participants.
6.2 Manual translated into Armenian and published locally by the end of the project. (1,000 copies) (spring 2008)	6.2) Partially achieved The Manual has been translated into Armenian and is currently being printed and bound.
6.3 Manual distributed to interested parties, including the State Forestry Service, Agricultural Academy, American University of Armenia, and local residents at the conclusion of the project. (spring 2008)	6.3) Partially achieved Distribution of the manual to interested parties will be completed in March/April 2009.
Output 7: Planting of a small model forest for training in sustainable practice.	
7.1 Pilot demonstration plot of 10 hectares identified within the first year of the project. (spring 2007)	7.1) Was achieved and Exceeded. In addition to the first 10 hectare plot, a second plot of 4 hectares was also identified.
7.2 Seedlings from Backyard Nursery used to populate demonstration plot during the first and second year of the project. (fall 2007-spring 2008)	N/A. This output was amended with approval from CEPF.
7.3 Training, monitoring and evaluation techniques designed for current and future use. (fall 2007-spring 2008)	7.3) Was achieved ATP staff was directed in 3 separate half-day seminars on nursery stock preparation, planting, and monitoring.
Output 8: Training the trainer on sustainable forestry.	
8.1 Designated ATP staff trained in sustainable forestry analysis and implementation by the end of project. (spring 2007-spring 2008)	8.1) Was achieved ATP staff was trained in forest sampling design, inventory analysis, analytical techniques, strategies of implementation, and computerized decision support methods.
8.2 Sustainable forestry training seminars developed for current and future foresters and environmental	8.2) Was achieved

scientists by the end of the project. (fall 2007- spring 2008)	During the data collection and analysis stage, forestry students and graduates were instructed in methods of forest sampling design, inventory analysis, decision support tool implementation, and community involvement with sustainable forest management planning.
8.3 Begin conducting seminars by the end of the project (spring 2008) with local residents, AUA, Armenian Agricultural Academy, and Armenian State Forest Service.	8.3) Achieved and Exceeded. On December 11, 2008, ATP arranged a seminar on Sustainable Community Forest Management - Efficient and Effective Solutions for Armenia in the frame of CEPF Grant Project. It was the final presentation from results of research carried out in Armenia in 2007 in the Margahovit and surrounding forest areas and the new Sustainable Forest Management Community Training Manual. The training took place in Royal Armenia Palace Hotel-Restaurant.. The seminar was successfully conducted by Zachary Parisa (Yale School of Forestry and Environmental Studies) and impressed participants with well-organized and interesting presentations, which were on the following topics of Community Forest Management: 1. Sustainable Forest Management: Introduction and Initial Project Results 2. Sustainable Community Forestry: Advances in Inventory and Monitoring 3. "Sustainable Forest Management" Community Training Manual 4. Efficient Management Plan, Development and Implementation The main contents of the Community Forest Management Manual are the following: Preface Introduction How to use this manual Clarifying the common goal The social process Identifying participants

	Understanding Perspectives Participant Situations Base Values Interactions between Participants Typical Outcomes Observed effects Decision processes Information collection Promotion of ideas Prescription Implementation Application Appraisal Termination Problem Orientation Clarify Goals Describing Trends Analyzing Conditions Projecting Developments Understanding forest Capacity (ecological process) Forest Ecology Trees Stands Forests Dynamics Silviculture Harvesting Reforestation/Afforestation Species selection Site preparation There was a total of 30 participants including officials from Ministries of Agriculture and Environmental Protection, particularly, Ruben Petrosyan (Head Forester Hayantar Armenian State Forestry Service), Armen Gevorgyan, Rubik Shahazizyan (World Bank National Resource Management and Poverty Reduction Project (NRMPRP), Armen Galstyan, Ara Mejlumyan (State Forest Monitoring Centre), Artur Petrosyan (Ministry of Agriculture), Karen Manvelyan (WWF

	Armenia), Ayser Ghazaryan, Artur Alaverdyan (NRMPR PIU). After each presentation participants had the opportunity to ask questions and give their comments. Most of questions related to, first, the methods that were used to conduct forest inventory in Margahovit within the project (summer, 2007), second, the methods of implementation of community forest management for Armenia implied in the Manual, third, the practices of Community Forest Management in US and creation and implementation of community forest management plans .

Describe the success of the project in terms of delivering the intended outputs.

Output 1 – The project was provided with the human and technical resources to achieve its goals.
Output 2 – Capacity was built with local communities through environmental education, fruit orchard production, employment in tree planting and care, rotational grazing seminars and through ongoing dialogues on the best use of the local forests.
Output 3 – Alternative income generation was not achieved in the capacity we hoped. Part of this was due to the fact that we slightly moved sites to accommodate the use of our 15 acre reforestation nursery and that the non-timber resources were not produced a rate sufficient to justify transportation costs to market.
Output 4 –A full evaluation of the ecosystem in region #117 was completed and the information was shared.
Output 5 – A comprehensive strategy was developed for the demonstration and application of sustainable forestry practices in the target corridor.
Output 6 – A sustainable forestry training manual was designed printed and translated into Armenian.
Output 7 – ATP planted two small model forestry plots for training purposes in sustainable forestry.
Output 8 – A curriculum was developed and presented on how best to train trainers in sustainable forestry management.

Were any outputs unrealized? If so, how has this affected the overall impact of the project?

With the exception of backyard nurseries, all outputs were achieved.

V. SAFEGUARD POLICY ASSESSMENTS

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

NA

VI. LESSONS LEARNED FROM THE PROJECT

Describe any lessons learned during the various phases of the project. Consider lessons both for future projects, as well as for CEPF's future performance.

Initially, ATP thought that the idea of sustainable forestry studies would be of greater interest to the people of Armenia, but it took a couple of years for people to come to understand and openly discuss the ideas, including some members of our staff. It was a long road, but the process yielded great results, and now one can speak of sustainable forestry in Armenia without having people think you are imposing an ideology on them. Collaboration is the key for success in a project of this magnitude and we were very lucky to have the support of key members of the village of Margahovit, academics from several Armenian academic institutions and WWF and CEPF. These collaborations and subsequent successes initiated a process that has brought sustainable forestry concepts to the forefront of environmental policy discussions in Armenia. This would not have been possible without the support of CEPF.

Project Design Process: (aspects of the project design that contributed to its success/failure)

Overall the design of the project was very solid. We did make some changes to address modest alterations in sites and to account for changes in Armenia's forestry code.

Project Execution: (aspects of the project execution that contributed to its success/failure)

The success of this project was based on mutual benefits for ATP, Yale and the people of Armenia. Although it took some time, the key ideas behind engaging the people of Armenia and having them be part of the process of identifying the best methods for sustainable forestry practices was instrumental to our success.

The project ran a bit behind due to delays in data analysis and anticipated changes to Armenia's forestry code. This prolonged the project by six-months. Fortunately CEPF and WWF were very accommodating and understood the challenges that ATP faced.

VII. ADDITIONAL FUNDING

Provide details of any additional donors who supported this project and any funding secured for the project as a result of the CEPF grant or success of the project.

Donor	Type of Funding*	Amount in USD	Notes
Virginia Ohanian	C	$150,000	To be used for the establishment of a new Regional Center for Environmental Studies and Sustainable Forestry in Margahovit
German Government (KfW)	D	$1,300,000	As a direct result of our success with this project, ATP and WWF attracted the interest of the German government, which is providing funds for us to plant 1.3 million trees on deforested lands in 2009. The new manual will be used to train local communities.

Armenian Assembly of America, Inc. - Armenia Tree Project (Multiple Individual Donors)	B	$25,000	Donations were given to ATP for expansion and maintenance of the newly created model forest.

***Additional funding should be reported using the following categories:**

A *Project co-financing (Other donors contribute to the direct costs of this CEPF project)*

B *Complementary funding (Other donors contribute to partner organizations that are working on a project linked with this CEPF project)*

C *Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF project.)*

D *Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)*

Provide details of whether this project will continue in the future and if so, how any additional funding already secured or fundraising plans will help ensure its sustainability.

Currently, ATP is exploring the possibility of conducting several sustainable forestry training seminars throughout Armenia. We've recently constructed an educational center in the village of Margahovit for sustainable forestry training. We are working with Yale to identify the best methods for continuing our collaboration. We hope that CEPF will consider partnering with us again to help achieve these goals.

VIII. ADDITIONAL COMMENTS AND RECOMMENDATIONS

VIII. INFORMATION SHARING

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned and results. One way we do this is by making programmatic project documents available on our Web site, www.cepf.net, and by marketing these in our newsletter and other communications.

These documents are accessed frequently by other CEPF grantees, potential partners, and the wider conservation community.

Please include your full contact details below:

Name: Jeff Masarjian
Organization name: Armenia Tree Project
Mailing address: 65 Main St., Watertown, MA 02472
Tel: 617-926-8733
Fax:
E-mail: jeff@armeniatree.org