# PROGRESS EVALUATION REPORT

**Urban Environmental Health and Hygiene Behavior (EH) Activity**

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**CARE/Peru Cooperative Agreement**

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**Proyecto de Modelos Urbanos de Salud Ambiental (MUSA Project).**

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**May 20, 2003**

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## ATTACHMENTS

# PROGRESS EVALUATION REPORT

## Urban Environmental Health and Hygiene Behavior (EH) Activity

## Proyecto de Modelos Urbanos de Salud Ambiental (MUSA Project)

### I. Introduction.

This document reports major findings, conclusions and recommendations of the progress evaluation of the MUSA (Modelos Urbanos de Salud Ambiental) Project. MUSA was initiated on September 6, 2001 upon signing of Cooperative Agreement No.527-A-00-01-00197-00 between USAID/Peru and CARE, and is being implemented by CARE/Peru (assisted by other consortium members and collaborators). As the major sub-activity under the Urban Environmental Health and Hygiene Behavior (EH) Activity, MUSA is expected to make important contributions to achieving the intermediate results planned for Strategic Objective twelve (SO12): Strengthened Environmental Management to Address Priority Problems.

Attachment one to this report provides the historical setting for MUSA, along with a brief description of the project. Also included in Attachment one is a statement of the scope and purpose of this evaluation, and of the procedures used.

Major findings and conclusions of the evaluation are presented below, as well as related recommendations for consideration by the USAID/Peru SO12 team and EH partners to improve project implementation management and performance.

### II. Findings, Conclusions and Recommendations.

A. Overall Project.

1. Prospects for Successful Project Completion.

-Findings and Conclusions.

A number of unanticipated problems have conspired to delay project progress. Many of the more serious problems have been resolved, and others are well on the path to resolution. Specific findings and conclusions below identify some problems still to be resolved (at the end of the evaluation period), along with recommendations that suggest possible approaches to their resolution.

The LTGMU (CARE/ Peru Local Technical and Administrative Management Unit of the MUSA Project) and staff of other consortium member institutions were very cooperative throughout this evaluation, and demonstrated a thorough grasp of overall project objectives, implementation progress and problems requiring attention. With some exceptions noted in later sections of this report, past performance appears to have been

professional, technically sound and timely. Based on visits to all project implementation institutions[1] and to all seven pilot project sites,[2] this evaluation concludes that, despite past implementation delays, there are reasonable prospects for MUSA to achieve key planned results and to essentially achieve expected end-of-project status on time and on budget.

2. Progress Reporting.

-Findings and Conclusions.

Quarterly progress reports are intended to record and communicate significant highlights of implementation progress, ongoing and emerging problems and issues, and progress in their resolution. These reports also should indicate the highlights of action plans for the ensuing quarter. These reports complement ongoing coordination communications and meetings among the various institutions involved in MUSA management, implementation and financing. Additionally, these reports are an important part of the official record of the project, and also should serve as a major management decision and action tool for EH Activity partners, especially for USAID/Peru, DIGESA and CONAM.

Both the structure and content of MUSA quarterly progress reports could be improved to better fulfill intended purposes. Much of the information on progress in quarterly reports to date uses as a reference point the activities and timetables presented in the LOP and annual operating plans. Timetables for achieving inputs are presented in MUSA annual operating plans, but not timetables for achieving intermediate project results (or of milestones that indicate achievement of measurable progress towards planned results). This gap in the chronology of results achievement carries over to progress reporting. Thus, the MUSA quarterly reports provide timeline information primarily on achievement of inputs instead of on achievement of results milestones (indicators of achievement of intermediate results or of progress in achieving final results). Not only would information on achievement of results (or results milestones) be more helpful in understanding progress, it also would be more helpful in anticipating and detecting unresolved problems or implementation issues that should be communicated to EH partner management personnel.

In addition to the need to develop and report progress against timetables for results, the progress reporting format being used (i.e., by components that cut across pilot project lines)[3] does not lend itself well to problem/issue discussion. Now that the pilot projects have been approved and funded (pending funding approval in Puno), and are being implemented under the leadership of their respective sub-grantees (with oversight and backstopping by the MUSA consortium and other partners), most significant problems

[1] The LTGMU staff, MUSA Consortium partners, and all pilot project sub-grantees, as well as many of their respective collaborators.
[2] Collique, San Juan de Lurigancho, and Villa el Salvador in Metropolitan Lima/Callao, and four in-country sites in Arequipa, Iquitos, Puno and Tarapoto.
[3] The MUSA LOP plan is formatted according to these components, and the quarterly reports are simply following that format.

and issues relate directly to a particular pilot project, rather than to a cross-cutting component of the overall project. Although it may be appropriate and necessary to report progress by component, it is even more important for consolidated quarterly progress reports to summarize progress towards results, and to identify emerging problems, for each pilot project as well.

Finally, quarterly progress reports to date include a considerable amount of detailed documentary material that detracts from the core results progress information that should be reported. Additionally, even in the executive summaries, considerable detail about inputs detracts from the overall presentation of significant elements demonstrating satisfactory results progress (and problem resolution), and/or identification of key factors that may impede future progress, as the case may be. Again, this appears to flow from the emphasis in planning documents on timetables for inputs instead of for results milestones.

-Recommendations.

Improving the quality and mechanisms of communication about implementation progress among EH Activity partners and MUSA project implementers can energize collaboration in facilitating and accelerating problem and issue resolution, and strengthen support for corrective implementation actions during the remainder of the project period. To set the stage and to move forward in improving progress reporting and communication, it would be appropriate to organize a “stock-taking” workshop in Lima to review communication mechanisms (especially quarterly progress reporting), and to re-examine and/or refine MUSA results indicators, including indicator timelines for intermediate results and for milestones towards final results.

The workshop should seek a common understanding of a timetable for achieving intermediate results and milestones for final results (as distinguished from a timetable for inputs). The workshop also should discuss how tracking and reporting the timeliness of achieving results milestones will assist in anticipating potential problems and issues, in order to provide to all partners the opportunity to contribute to resolution before serious setbacks occur. Placing potential problems on partner agendas early on often can lead to resolution in time to avoid significant implementation delays.

Additionally, the workshop should revisit progress reporting formats and content, especially for quarterly reports, in order to assure relevance and conciseness that avoids diluting core information with information that is better transmitted through other channels (i.e., technical publications, administrative documents, etc.).

It may be appropriate to subsequently organize "mini-workshops" at the four in-country sites for the benefit of pilot project sub-grantee interaction on these themes with CIIMSA associates.

3. CDC Contributions to MUSA Planning and Implementation.

-Findings and Conclusions.

The CDC (US Center for Disease Control and Prevention), through its Environmental Health Services Branch, has made major contributions (at no cost to the project) to MUSA implementation strategy, plans and progress. The effectiveness of these contributions was enhanced by the prior collaboration between the National Center for Environmental Health Services of the CDC and CARE/Peru.[4]

Important contributions by the CDC to MUSA have included, 1) introduction (and technical assistance in its adaptation) of the PACE-EH local participation action model, 2) a model for networking (CIIMSA) to energize and channel local initiatives, 3) introduction and assistance in adaptation of the local environmental health risks monitoring system (SIMOLORSA), and, 4) other technical and organizational contributions. Their collaboration during the remainder of the implementation period can continue to backstop and motivate the various actors involved in implementation.

4. Budget and Finances.

-Findings and Conclusions.

The choice of terminology for MUSA budget categories has led to some misunderstanding about the proportion of total project expenditures that are for administrative costs. The Cooperative Agreement includes budget items for training, monitoring and evaluation, technical assistance and advocacy activities under the category of local administrative costs (administracion local). This is misleading because a significant proportion of these costs (perhaps 75%) are dedicated to direct project implementation activities, including training, institution-building and technical assistance for overall and pilot project implementation.

Allocations of funds for sub-grant projects appear to conform to planned amounts. The rate of expenditures for overall project implementation appears to be on target, while expenditures for sub-grant projects are behind planned expenditures. However, expenditures for the sub-projects most likely will accelerate over the next several months and can reasonably be expected to be nearly on schedule by the end of 2003. In some cases (e.g., the Puno project) no-cost extensions may be required to complete achievement of project results. Attachment Six to this report provides a breakdown of funds budgeted for the entire implementation period, and those expended through February, 2003, by overall project components. It also shows the level of funds allocated to each sub-project, by USAID/Peru funding, Americas Fund allocations, and other co-financing commitments.

-Recommendations.

[4] This collaboration was initiated in Peru in 1999 under the CARE/CDC Health Initiative (CCHI).

Several line items now lumped into the category of "Administracion Local" perhaps could be shifted to a new line item name that better reflects the purpose of these expenditures (e.g., "Implementation Support"). In lieu of this (or in addition to), expenditures for some line items (especially LGTMA personnel costs) could be further sub-divided into: 1) administrative and management costs, and, 2) technical assistance and training services costs, in a manner that reasonably reflects their time allocations for each of these.

Whether or not changes are made in the format for budgeting and expenditure reporting, it is important for all partners to be aware that although "administracion local" does include administrative/management costs, the majority of the costs in this category are substantive project implementation services costs.

As the pilot projects progress, there will be relatively greater expenditures for sub-grants as compared to overall project expenditures. Nevertheless, vigilance must be exercised to assure that LGTMU and overall project expenditures do not exceed budgeted amounts.

5. Implementation Coordination and Support.

-Findings and Conclusions.

MUSA was initiated under the SO4 SOAG. That SOAG designated DIGESA as the official GOP representative for all EH activity initiatives. Upon signing of the SO12 SOAG in September 2002 (replacing the SO4 SOAG), CONAM became the official GOP representative for the EH Activity. DIGESA was specified to continue to be responsible for technical and management aspects of EH Activity implementation under the terms of a sub-agreement to be entered into between DIGESA and CONAM. As a part of that agreement, funds for EH Activity management by DIGESA were to be disbursed by CONAM to PAAG (an organization attached to the MINSA Direccion General de Salud Publica that has authority to administer international technical cooperation funds). Under the sub-agreement, PAAG receives disbursements from CONAM. PAAG, in turn, is responsible for making expenditures to and on behalf of DIGESA to carry out its responsibilities under the EH Activity. This includes payment of personnel compensation and operating costs of the Unidad Coordinadora de la Actividad (UCA), the unit in DIGESA responsible for coordinating and facilitating implementation of EH activity projects and programs (i.e., MUSA). These coordinating and facilitating functions include coordination with DIGESA management and other public sector agencies as appropriate, facilitating and backstopping public health sector support and involvement in MUSA activities at national and pilot project levels, and facilitating DIGESA approvals of MUSA and pilot project implementation documents, including technical, planning and procedures documents.

Throughout the period of MUSA project implementation to date, frequent turnovers of DIGESA management leadership have occurred. This has led to failure to provide timely responses to issues formally raised by USAID/Peru concerning disbursement

arrangements. Because of this, USAID/Peru has been unable to authorize disbursement by CONAM of USAID funds to PAAG. There remain several months of pending payments for UCA personnel compensation and other related EH Activity costs. These problems have contributed to delays in MUSA project implementation. Additionally, considerable time of the MUSA project team (and of UCA staff) has been dedicated to briefing new DIGESA leadership and in achieving their cooperation to facilitate technical and administrative actions and approvals required.

During the period of the evaluation, there were indications that internal problems in MINSA/DIGESA/UCA mentioned above were being resolved. Nevertheless, it is not yet certain that these organizations will have the continuing stability and commitment needed to facilitate and assist in accelerating MUSA throughout the remainder of the implementation period. Effective collaboration by all public sector counterparts is critical to completing the pilot projects on schedule.

-Recommendations.

Timely GOP implementation coordination is a pre-condition to satisfactory MUSA project implementation. Not only must funds be disbursed in a timely fashion to allow DIGESA-UCA to support and facilitate MUSA implementation, both in Lima and at in-country project sites, timely technical approvals and administrative actions by DIGESA also are essential to maintain the MUSA implementation schedule. These externalities are largely beyond the purview of the LGTMU, the MUSA consortium and pilot project sub-grantees.

It is important for primary project partners to develop rapid response arrangements to not only brief new leadership when turnover occurs, but also to renew with them ongoing institutional agreements and commitments for continued support. When there is a turnover of leadership at a particular level in a particular institution, all other partners should collaborate in arranging and participating in early face-to-face briefings and "recommitment" meetings. Participants in such meetings should include persons from partner institutions that are at an equivalent hierarchical level to the new leadership being briefed. It is especially important that USAID (and CONAM) equivalent leaders participate in order to provide legitimacy and status to the presentation. Experience has shown that it is difficult to bring new leadership on board through briefings by technical and implementation level actors. Resolution of and/or reinforcement of the urgency of resolving pending problems/issues in this respect may require communications and meetings at vice-ministerial/ministerial levels.

Current arrangements for funds disbursement from SOAG funds for support to DIGESA (and UCA) appear to be unnecessarily complex. Nevertheless, with adequate commitment by MINSA and DIGESA leadership, the arrangements should be able to perform satisfactorily. If such commitment is not forthcoming in the short term (and if this is not demonstrated in terms of both timely funds disbursement and acceleration of administrative approvals), USAID and CONAM, as signatories to the SO12 SOAG, will need to arrange alternative mechanisms for funds disbursement, as well as for GOP-

supplied technical and administrative support and approvals required for timely MUSA and pilot project implementation.

6. Local Participation.

-Findings and Conclusions.

An essential dimension of the CDC PACE-EH model being adapted to pilot project areas is local participation. An important vehicle to facilitate local participation has been formation and motivation of CIIMSA's (Comites Inter-Institucional de Mejoramiento de Salud Ambiental) in each pilot project area. A CIIMSA is composed of local representatives of public sector institutions that have a local presence and that have an interest in EH, as well as of similarly interested local private sector groups. Another important vehicle to establish participation linkages of the CIIMSA to neighborhoods and families is through identification and training of voluntary neighborhood promoters, who dialogue with and inform their neighbors about EH concerns, and these also participate in the CIIMSA.

CIIMSA's and voluntary neighborhood promoters have been established in each pilot project area. Participants in CIIMSA's are trained and assisted to work towards development of long-term strategic and operational plans (i.e., EH targeted locality-based EMS plans), and these undertakings are enriched by and communicated to neighborhood families through voluntary EH promoters. This strategic planning process can be expected to help motivate CIIMSA members and promoters to continue to be active beyond the life of MUSA pilot project interventions.

Active participation in the CIIMSA by regional DESA's and by local municipalities facilitates incorporation of elements of CIIMSA-generated long-term strategic and operational plans (or compatible plans) into their respective institutional plans, which in turn becomes an important factor in sustaining the CIIMSA and neighborhood promoters as active networking elements.

As developed by CDC and adapted under MUSA to local conditions, CIIMSA's become sponsors of a process that begins with a participatory diagnostic to identify and prioritize local EH risks, and eventually leads to development and application of an ongoing local EH risk monitoring system (known as SIMOLORSA), to help understand and quantify over time the beneficial impacts of local initiatives to improve EH (and to stimulate continued dynamism of the CIIMSA process).

CIIMSA's and voluntary promoters are in place and operating at varying levels of consolidation and effectiveness in all pilot project areas. Although their long-term viability is not yet assured, the level of interest and participation demonstrated in all pilot project areas is highly encouraging. Successful pilot project completion should help assure that participants in this networking system will remain active in EH risk monitoring and in sponsoring other local EH improvement projects.

-Recommendation.

The experience under MUSA of applying the PACE-EH local participation model may provide valuable lessons learned that could be of utility in other USAID/Peru activities. It is suggested that opportunities be generated for interaction and information exchange between the MUSA project implementation team and implementers of democracy and alternative development activities that could or should mobilize local participation for achieving intended results.

7. MUSA Collaborating Institutions.

-Findings and Conclusions.

In addition to the three CARE/Peru consortium members, two collaborating institutions with regional headquarters offices in Lima were included in the MUSA proposal: the World Bank/UNDP Water and Sanitation Program (WSP), and the PAHO Center for Sanitary Engineering and Environmental Sciences (CEPIS). The WSP has provided engineering and social sciences expertise related to the so-called condominial system for community water and sewage systems (based on successful applications in Bolivia). Similarly, CEPIS has provided engineering expertise in appropriate technology for small water treatment and supply, and small sewage treatment systems. These have been important technical contributions to the design of the small water and sewage systems being implemented under two pilot projects (in Tarapoto and Iquitos).

8. Complementary Funding.

-Findings and Conclusions.

Approximately two-thirds of USAID funding for MUSA is budgeted to finance pilot projects, through sub-grants to competitively selected NGOs for six projects and through direct implementation by CARE/Peru for one project. In the LOP plan, it was anticipated that some complementary funding would be leveraged from local sources in pilot project areas.

In carrying out the competitive process for selection of sub-grantees for the special innovation pilot projects in metropolitan Lima, it became apparent that available USAID funds were inadequate for financing them. The choices were to reduce the number of projects or leverage additional funding. With USAID assistance, arrangements were made with the Americas Fund to co-finance these three projects. This co-financing arrangement required considerable mutual effort to adapt the competitive sub-grant award process to both USAID and Americas Fund procedures, causing some delays in selection and training of sub-grantees. However, not only did this co-financing arrangement result in leveraging approximately 40% of the total cost of these three projects, it also was the first experience by the America's Fund in co-financing. Thus, procedures now have been tested for possible future co-financing in replications of validated local project models resulting from MUSA pilot project experiences.

Additionally, the pilot project implemented directly by CARE/Peru was successful in leveraging nearly 75 % of total project costs. These funds come from a variety of sources, including the bi-national fund, the Municipality of Maynas, and the Programa A Trabajar Urbana.

These are valuable leveraging experiences that can be instructive for arranging financing for future local EH projects that replicate the models validated by MUSA.

9. Monitoring System.

-Findings and Conclusions.

During preparation of the MUSA LOP plan, a plan for monitoring pilot projects was developed and approved. DESCO, the MUSA consortium member responsible for applying this pilot project monitoring plan, has expended considerable effort in developing software for automation of the local monitoring system. Additionally, SIMOLORSA, mentioned above, is being incorporated into the local CIIMSA undertakings. Baseline surveys for SIMOLORSA have been completed in some pilot projects, and are nearly ready to be carried out in the others.

Because pilot projects are just now beginning to be implemented, the practicality and effectiveness of the automated monitoring system that has been developed by DESCO has not yet been validated. Monitoring plans are a mandatory component of all USAID financed projects. Yet practical successes in automating project monitoring systems are scarce. Without special attention, the MUSA automated pilot project monitoring system could encounter difficulties in terms of practical application and generation of meaningful results.

-Recommendation.

Automation of practical monitoring systems is a rather complex undertaking that requires specialized expertise. Likewise, evaluation of a planned system requires specialized expertise (that is not a part of this evaluation). Nevertheless, past experience suggests that the risk of achieving less than satisfactory results is rather high. For this reason, it is suggested that it may be appropriate for USAID to sponsor some type of workshop in which various partners responsible for developing and applying automated (or non-automated) monitoring systems in all USAID-financed activities can share experiences and progress. This may assist many participants in the workshop, including DESCO, to avoid pitfalls, and to achieve practical applications that serve their intended purposes within programmed time frames.

10. Direct Implementation of Pilot Project by CARE/Peru.

-Findings and Conclusions.

The Cooperative Agreement specified that CARE/Peru would directly implement the pilot project in Iquitos. This pilot project already had been designed and promoted with other funding by CARE/Peru in partnership with the CDC. There was a convincing logic to implement this project with USAID funding support in order to capitalize on progress already made and to provide the opportunity to transfer information on lessons learned therein to other pilot projects.

A number of factors related to local political instability and EH-related leadership changes in Iquitos caused unexpected delays in project implementation, and required a considerable amount of special effort and time of the LTGMU staff to resolve. Fortunately, as indicated below, those problems seem to have been resolved, and project implementation is proceeding at an encouraging pace.

Implementation of the EH education plan in this pilot project is worthy of special note. The approach and materials prepared appear to be quite successful in mobilizing interest and transferring knowledge, and voluntary EH promoters and block delegates appear to be active and effective in transferring their know-how.

The need to concentrate effort by LGTMU management and technical staff to get the Iquitos pilot project back on track may have absorbed backstopping assistance capability needed by the other pilot projects. Some of the problems that occurred to cause delays in other pilot projects (mentioned below) might have been resolved in a timelier manner if more LGTMU staff time had been dedicated to their resolution. Of course it is fully within the management purview of LGTMU to allocate staff time as it considers necessary. However, direct implementation of a pilot project presents pressures for (or appearances of) placing a higher priority on the needs of the directly implemented project at the expense of sub-granted projects. This is not to say that such is the case.

-Recommendation.

Special care should be taken by LGTMU management and by the USAID manager to assure that there is not an allocation of (or appearance of allocation of) LGTMU staff time to the directly implemented pilot project in disproportion to that dedicated to sub-grant pilot projects.

Additionally, from the MUSA experience, there should be lessons learned for transfer to other ongoing and future pilot projects and for future project design where sub-grants are involved. With respect to the first point, consideration should be given to transferring the lessons learned in carrying out the education program in Iquitos to Tarapoto (which is less advanced in implementation). An exchange of training personnel for this purpose could be quite effective in enhancing the effectiveness of the Tarapoto educational program.

B. Pilot Projects.

Each of the pilot projects is briefly summarized in Attachment One. Although timetables for implementation of all pilot projects are behind schedule, if lessons learned to date are incorporated into the implementation process (and in the absence of major unanticipated future setbacks), progress performance can be accelerated in order to "catch up". Thus, there are reasonable prospects for satisfactory completion of all pilot projects by the end of their respective implementation periods. Further, sufficient additional time remains in the overall MUSA project period to permit short no-cost extensions, if justified.

Major findings, conclusions and recommendations for each pilot project are summarized below.

1. FOVIDA: Management Model for Water Distribution with Tank Trucks in Villa El Salvador.

The NGO sub-grantee for this project has been working in the project area for several years, and was able to quickly establish rapport and to achieve widespread local participation. Additionally, the sub-grantee has an excellent grasp of the problem set being addressed by the project, and understands the changes required for solution. Additionally, key local actors have been incorporated as strategic partners in resolving the problems. Nevertheless, end-of-project results need to be revisited, especially since there are a number of levels of actors that must change behavior, and in some cases significant investments will be required that is not available from the sub-grant.

A mini-workshop (as suggested above) to revisit and refine project results and milestones could be a key input into satisfactory project completion.

2. INCAFAM: Management Model for Safe and Nutritious Food in Comunal Eateries in San Juan de Lurigancho.

The NGO sub-grantee in this case has several years of experience in working with families in the project area. It was able to quickly generate baseline information, achieve widespread local participation, and to form strategic alliances with key local actors.

There is every indication that this project should be able to proceed according to plan and show planned end-of-project results. Potential problems could arise if restricted current food distribution by PRONAA becomes even more restricted or less reliable if and when warehousing and distribution is turned over to municipalities, as apparently is planned.

Further, even though the safety of food handling most likely will be marginally improved in the model communal eateries, replicability without relatively intense NGO involvement may be problematic. Also, although outside the purview of the project, EH conditions can only improve marginally through these types of actions in the absence of improved economic conditions of the most marginalized of families that are the intended beneficiaries of the pilot project.

3. OACA: Management Model for Solid Waste from Health Providers-Centralized Treatment System in Collique (Comas).

The engineering aspects of this project appear to be well in hand, although some treatment plant capacity decisions are still pending (at the end of the evaluation period). The marketing study has only recently been completed and must still be reviewed by interested parties. A quick review indicates that it has at least touched the important aspects of a business plan for the treatment plant, and provides a meaningful basis for final decisions on an action and business plan for facility construction and operation.

The project is much more complex than it appears on the surface. Successful completion depends greatly on the ability of the host institution (Hospital Sergio Bernales) to fulfill its commitments, which are considerable, not only for project startup, but also for continued successful operation. This project well may need more time for completion, beyond the current June 2004 completion date.

A group dynamics mini-workshop (suggested in a previous section) that reviews and sets a timetable for results and reconfirms commitments could be an excellent vehicle to strengthen prospects for successful completion of this pilot project..

4. LABOR: Local Participation Model for Abatement of Air Pollution in the Cercado de Arequipa.

Many of the air pollution problems being addressed by this project lend themselves only marginally to local action for solution. The project does not pretend to be able to significantly abate local air pollution. Rather it seeks to create the conditions for initiating a process that results in cleaner air (and in other improved EH conditions) in the longer run. To achieve this, among other things, it seeks to demonstrate technological changes (e.g., vehicles that burn clean fuel; better mechanical adjustment of diesel engines) and local actions (planting trees and establishing green areas) that, when replicated on a massive scale, will result in significant abatement.

Of all the pilot projects, this project has the least expectation of actually significantly changing targeted EH conditions within its selected site. Nevertheless, it does hope to generate a demand for changes that, if and when implemented, can have a significant positive effect on air pollution within the cercado.

Local action committees in selected neighborhoods have been formed and are active, good will and cooperation have been developed among a number of actors through the CIIMSA that has been established, and strategic alliances have been formed and are initiating actions that demonstrate how to reduce toxic emissions (e.g., with a private bus company).

Nevertheless, the primary cause of air pollution, vehicle emissions, requires solutions that are not local in scope, decision capacity or resources. Local demand can help to motivate serious efforts to address air pollution at a more global level. A major option--rerouting of traffic--requires transportation planning on a much larger scale. Conversion of vehicles to less polluting fuels requires major investments by the public and private sectors, plus

enforceable regulation. These are far beyond the leveraging capacity of project funds or of the neighborhoods being mobilized. Even neighborhood level actions in the selected areas (increasing green areas, tree planting and other local initiatives) are of a scope that dwarfs limited project resources.

In important ways, this project seeks end results beyond the intended scope of the MUSA model for mobilizing local action to solve local problems. Rather, it can be expected to mobilize local action as an initial step to sway a much larger population and geographic area, and a much more diverse set of interest groups to insist on global investments and changes required to achieve the overall objective, i.e., major abatement of air pollution. This project does have an 18 month implementation period, whereas the other sub-grant projects have a 12 month implementation period. The additional time may permit additional progress in achieving formal commitments for the broader changes sought, such as rerouting of traffic, and conversion of a significant number of taxis to cleaner fuels.

A danger in local mobilization under the conditions in Arequipa, i.e., to address a set of problems far beyond local scope and capacities to significantly impact, is that expectations will be raised that cannot be met, and frustration (even backlash) can occur as results are not forthcoming.

Given that this project is well under way, and the preparatory stages appear to have been and are being successful in raising awareness and in sensitizing and educating the local public, as well as a broader coalition of actors, it should be pursued to completion. However, a preferred strategy may be to seek to focus the forces being mobilized on informational "lobbying", i.e., generating the analytical basis for arguments that resonate not only with municipal authorities, but also with regional and national authorities and with those institutions that can assist in obtaining major resources to invest in larger scale air pollution abatement solutions.

In this respect, a major potential benefit from abatement of air pollution in the cercado has not yet been researched nor have convincing arguments been marshaled, i.e., major economic benefits from significant abatement in air pollution within the cercado. For example, what are the positive effects on tourism levels of being able to advertise the cercado as a clean and healthy place to be (rather than having the Department of Arequipa declared to be in environmental crisis, as is now the case)? Additionally, the direct social and private savings from reduced respiratory and allergic illnesses, both in terms of reduced health care costs and in increased human resource productivity, should make major public and private sector investment more attractive.

5. CIED: Local Participation Model for Solid Waste Management in Puno.

This project has a scope that is within the capacities of local action, but nevertheless needs the strong support of the municipality to be successful. This support must be in terms of solid waste disposal facilities, as well as modernization and enforcement of littering ordinances and waste disposal regulations, (and probably of “wholesale” levels

of transport as well). Additionally, there are many dimensions of solid waste management requirements that affect the project sites, but are beyond the scope of the project. For example, serious actual contamination of the Titicaca bay with solid waste stimulates the growth of a plant called "lenteja de agua", which apparently assists in cleaning and purifying the water. There has been experience in other countries of establishing an animal feeds industry around the harvesting and processing of this plant. The project at best might encourage public authorities and private interest groups to pursue viable options of this kind by collecting and sharing information about this and other possible environmental improvement opportunities that contribute to increased employment and economic development.

The CIIMSA in Puno is quite active, the municipality strongly supports the project, and there is active local participation by several community groups. USAID/Peru has not yet approved this project for receiving USAID funds. That approval is subject to a redesign that conforms to the priorities set by the PIGARS that is being prepared and is scheduled for completion in June. It is not clear why preparation of the PIGARS is only now getting under way, since this always was a prerequisite for pilot project funds disbursement and implementation.

Assuming that the PIGARS is completed and adopted on schedule, and the Puno project is quickly adjusted as necessary to conform to its priorities, this project should be capable of rapid implementation. The LGTMU should provide all possible assistance to accelerate completion of the PIGARS, and to assure conformance of the pilot project to the approved PIGARS, in order that implementation can proceed. Some no-cost extension of the termination date may be in order.

6. CEPCO: Local Participation Model for Safe Water Supply and Sewerage Services in Tarapoto.

Pilot project implementation was delayed because after organizing and mobilizing initially selected target communities to participate in the project, it was learned that resolution of legal ownership issues related to the occupied land by the target community families could be indefinitely delayed. Eventually, another target area was selected. During the evaluation site visit, it was confirmed that the sub-grantee has a good grasp of the project and is providing effective leadership, local participation and mobilization is high (with a commitment by the communities to provide the unspecialized labor required for project construction), the CIIMSA is working well, the municipalities involved are quite supportive, and the regional DESA is actively participating in the local EH risk assessment (and desires to be involved in subsequent monitoring).

The engineering design for an innovative appropriate technology water treatment plant is complete. The DIGESA engineer who reviewed the engineering plan stated that it has been approved by DIGESA management, and assurances were made that the formal approval letter will be received by USAID momentarily.
From all appearances, this project has recovered lost time, and can be completed on time and on budget.

One aspect of the project that is not clear (which also needs clarification for the Iquitos project referenced below): How will the local water system be managed once the construction is complete? Apparently not much attention has been given to this aspect. It seems that the system will become the patrimony of the local state-owned water company and that the continuing role of the communities that made it happen will be minimal (i.e., a traditional client relationship to the state water company). If this occurs, it may be a missed opportunity to experiment with some form of mixed ownership, where the community (through a legal means to be explored) owns and operates the distribution system within the respective community, and the water company owns and operates the water supply facilities (i.e., it becomes the water wholesaler). This would permit the community to remain actively involved, but not be burdened with managing something that may be too technically, financially and administratively complex.

7. CARE: Local Participation Model to Provide Safe Water and Sewerage Utilizing the Condominial Approach in Iquitos.

As explained above, this project was being developed when MUSA was initiated. After a number of delays that appear to have been caused by local political and leadership changes, construction has started and should be completed by September 2003. Local participation is high, the DESA, and mayors (provincial and district) are supportive, and the provincial municipality is providing significant funding. CIIMSA is quite active, and the Programa A Trabajar Urbana is paying community laborers for their work.

In the absence of new unanticipated problems, there is no apparent reason why this project should not achieve the planned results within the time period specified. (Also see the comment in the previous section related to post-project facility management and operation options).

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**ATTACHMENT ONE TO PROGRESS EVALUATION REPORT**

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**USAID/Peru Urban Environmental Health and Hygiene Behavior (EH) Activity.**

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# BACKGROUND AND DESCRIPTION OF MUSA PROJECT

May 20, 2003

Lima, Peru

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## BACKGROUND AND DESCRIPTION OF MUSA PROJECT[5]

### I. Background.

A. Historical Perspective.

In 1995, USAID/Peru funded a comprehensive study from which a Mission Environmental Strategy (MES) was developed. This MES became the basis for formulation of the initial USAID/Peru Environmental Strategic Objective of "improved environmental management of targeted sectors", adopted in 1996 as SO4. That same year, the SENREM (Sustainable Environmental and Natural Resources Management) project was approved and funded. In 1997, a Comparative Risk Assessment (CRA) for health, funded under SENREM, identified and prioritized environmental health risks in metropolitan Lima, and subsequently analyzed additional environmental health problems with high-risk impacts in poor peri-urban populations of metropolitan Lima and other major cities of Peru. Based on these analyses, and drawing on worldwide experiences in addressing environmental health risks in poor neighborhoods, USAID/Peru, with technical assistance from the EHP, designed the Urban Environmental Health and Hygiene Behavior Activity (EH Activity) as one of three major activities (one being SENREM) under SO4. The EH Activity was approved for funding in FY1999. Initial funding for implementation became available in FY2001. The EH activity was incorporated into the new Strategic Objective Grant Agreement (SOAG) No. 527-A-00-01-00197-00, signed on September 6, 2002 to support achievement of the revised FY2002-2006 USAID/Peru Environmental Strategic Objective 12 (SO12).[6]

In response to CRA findings, the overall EH Activity purpose was to reduce health risks in selected poor peri-urban areas caused by exposure to locally generated contaminants and pathogens, and in the process, to test and validate appropriate urban environmental health local-participation models for replication throughout Peru. To achieve the Activity purpose, four categories of interventions were specified:

-Policy improvement assistance to Government of Peru (GOP) agencies responsible for environmental health;

-Site-based pilot projects to formulate, validate and demonstrate innovative ways to address priority environmental health needs in poor peri-urban communities;

-Technical assistance, training and institutional strengthening related to environmental health;

-Development of environmental health risk monitoring capacities based on community involvement.

[5] Information in this document is based on conditions as of May 20, 2003.
[6] SO12: "Strengthened Environmental Management to Address Priority Problems."

The SO12 SOAG designates CONAM (Comision Nacional del Ambiente) as the primary public sector partner to USAID/Peru for funds administration and oversight of GOP commitments there-under. This includes GOP commitments under the EH Activity. Additionally, DIGESA (Direccion General de Salud Ambiental of the Ministry of Public Health-MinSa), the national level GOP agency primarily responsible for environmental health, is designated as the public sector partner to provide technical support in implementation of the EH Activity.

EHP was selected to provide specialized technical assistance to backstop DIGESA and others in implementation of the EH Activity, especially as related to improving environmental health policies, and applications thereof to local problems. A Request For Application (RFA) No. 527-01-A-004 was issued in November 2000, to select an institutional contractor to establish a local grants training and management unit (LGTMU) to provide management leadership for developing and implementing the latter three interventions specified above. Under the RFA, $2,530,000 in grant funding was to be made available to the LGTMU for these purposes. A major portion of these funds were earmarked for small grants to local NGO's to plan and implement site-based pilot projects.

B. The MUSA Project.

A consortium led by CARE/Peru was selected from among three respondents to the RFA. USAID/Peru awarded a Cooperative Agreement to CARE on September 6, 2001 to implement the Urban Environmental Health Models Project (MUSA),[7] a three-year project planned for completion on September 30, 2004.

The CARE/Peru consortium includes two national-level Peruvian NGO's and one US public sector agency: INFORMET-Information and Methodologies for Organizational Development, DESCO-Center for Development Studies and Promotion, and the CDC-US Centers for Disease Control. Other designated collaborating organizations were DIGESA, World Bank/UNDP Water and Sanitation Program (WSP), and the Pan-American Health Organization's Center for Sanitary Engineering and Environmental Sciences (PAHO/CEPIS).

Upon signing of the Cooperative Agreement, CARE/Peru established the LGTMU to assume administrative, technical and management leadership of MUSA. INFORMET was assigned major responsibility for planning and implementing the overall MUSA training program, and DESCO was made responsible for designing, applying and validating the MUSA project monitoring plan (PMP) to monitor progress of local pilot projects and also to monitor local environmental risks before, during and after pilot project implementation. The CDC agreed to provide technical assistance related to 1) models for community action in addressing locally generated peri-urban environmental health problems, including local risk monitoring protocols, and, 2) innovative

[7] Modelos Urbanos de Salud Ambiental-MUSA

technologies, especially for pilot projects to address special high priority environmental problems in metropolitan Lima/Callao.

Preparation of the MUSA life-of-project (LOP) plan was completed and approved in December 2001. Adjustments to the EH Activity, the RFA and the Cooperative Agreement, were agreed upon in the approved LOP plan.

The LOP plan called for development and validation of practical citizen-based urban organizational and action models for improving environmental health conditions, through seven community-level pilot projects. These pilot projects are funded through the sub-grants program administered and managed by the CARE/Peru LGTMU. The pilot projects are implemented through competitively selected local NGO sub-grantees that develop strategic alliances with and networks of local organizations. Local municipalities are intended to be key actors and participants in these alliances/networks.

Capacities of the selected NGOs to lead implementation of these pilot projects were to be strengthened through comprehensive technical and management training by INFORMET and CARE/Peru. Additionally, DESCO was charged with taking the lead to develop and assure effective application of an integrated monitoring system to track pilot project progress, problems and solutions, and to monitor local environmental risks before, during and after pilot project implementation. The end purpose of the monitoring system is to validate processes, results and effectiveness of the various adaptations of organizational and action models applied.

Pilot projects receiving small sub-grants are expected to achieve improved environmental health conditions, and equally importantly, are intended to adapt and validate for replication practical models of organizational and operational arrangements that assure successful achievement and post-project sustainability of EH improvement undertakings in and by target communities. Thus, key products at the end of the activity are to be validated practical model variants for sustainable community organization and action in reducing locally generated and self-prioritized environmental health risks. These validated model variants, and the supporting action networks of public and NGO institutions established under MUSA, are to be incorporated into protocols and operations manuals that facilitate (provide roadmaps for) replications in poor peri-urban communities throughout Peru.

Five different environmental health problems were identified (based on the health CRA and follow-up studies and surveys) to be of highest priority in poor peri-urban communities. Each is addressed by at least one of the seven pilot projects:

1. Safe water supply;
2. Disposal of human waste;
3. Management of solid waste;
4. Safe food handling;
5. Abatement of air pollution.

Under the LOP plan, seven local community-participation pilot projects are to be implemented through NGO sub-grantees that form and provide leadership to action networks and alliances with local public and private sector institutions and organizations for pilot project design and implementation. Two types (or categories) of pilot projects are identified under the LOP Plan for sub-grant support:

1. Special (Technical Innovation) Projects. Three projects were designated by DIGESA, in consultation with the USAID/Peru SO12 team and the CARE/Peru consortium, as high priority to validate public health technological and regulatory (policy) innovations, to facilitate resolution of identified priority problems through local action initiatives. These were to be located in poor peri-urban areas of metropolitan Lima/Callao.

2. Integrated Local Management Projects. Four projects, one each in Iquitos, Tarapoto, Arequipa, and Puno, are identified in the LOP Plan, each to address a selected local priority EH problem. Each project is to be implemented within the framework of the so-called PACE-EH model (Protocol for Assessing Community Excellence in Environmental Health). The PACE-EH model was developed and applied in the US by the CDC (beginning in 1995), and the community environmental health assessment aspects of the model were adapted and field-tested by CDC and CARE/Peru in two Peruvian communities during 1999 and 2000. The integrated local management projects are intended to adapt and apply the overall PACE-EH model to their local conditions, and to generate know-how for replication.

The PACE-EH model consists of an iterative process that facilitates local identification of environmental health issues, determination of environmental health priorities by the affected community, development of plans for action by local-interest networks. Additionally, it provides a procedure to monitor progress and results of actions taken. It is an integrated management model centered on developing local understanding of local environmental health problems and priorities, stimulating local initiatives in addressing them, and, perhaps even more important to sustainability of local action, a system of continuous monitoring of EH risks so local leaders and citizens are aware of the community health benefits achieved as a result of their efforts. This model represents an application to environmental health problems of the "locality-based environmental management systems (EMS) approach", which is the central thrust of the SO12 strategy.[8]

The LOP plan calls for three pilot projects that adapt the PACE-EH model to local conditions and idiosyncrasies. These adapted models are to be applied under the leadership of competitively selected NGO sub-grantees. Sub-grantees are to identify, organize, motivate and provide such leadership to action alliances and interest-group networks of participating local organizations, institutions, and community groups (including municipalities) for addressing locally-prioritized EH problems. Additionally, sub-grantees are to incorporate and cause implementation of the local EH risk assessment and monitoring system which is an integral part of the PACE-EH model. Within MUSA, this system is known as SIMOLORSA (Sistema de Monitoreo Local de Riesgos de Salud Ambiental).

[8] Locality-based EMS is a central concept for application in achieving major intermediate results of SO12.

The fourth pilot project specified in the LOP plan is a project in Iquitos that already had been initiated under the leadership of CARE/Peru. The Iquitos project continues to be implemented directly by CARE/Peru, and also applies the PACE-EH model.

**II. Purpose of Progress Evaluation.**

This evaluation assesses general progress and performance at approximately 19 months after initiation of the 37 month LOP Plan implementation period. This is NOT a technical or financial performance audit. Rather, its purpose is to assist USAID, CARE/Peru and other partners to assess overall progress to date, to provide an overview of the current status of project implementation as compared to planned status, to identify major continuing problems if any that may impede future timely progress toward expected end-of-project results, and to suggest appropriate near-term actions and/or adjustments (if any) that may improve prospects for achieving planned results, including adjustments in expected results, if appropriate. The evaluation also discusses past and probable future impacts of other elements of the EH Activity (and other externalities) on MUSA implementation.

**III. Summary Description of Planned Overall Training, Institution-Building and Monitoring Components.**

A major share of human and financial resources of the MUSA consortium is targeted to training, institution building, and implementation monitoring activities. Relevant planning and progress reporting documents provide detailed information about these components of MUSA. Highlights are briefly summarized below.

The LOP plan proposes several workshops to train potential NGO sub-grantees and partners in the design and development of proposals for pilot projects. These are to take place prior to the call for proposals. Several more workshops were planned to enhance the management capacities of the NGO's that are competitively selected to implement pilot projects. Additionally, continuing training programs are planned to facilitate local advocacy for improving EH, generation and dissemination of EH information, and establishment and consolidation of action alliances and EH networks. These continuing training activities are planned over the period of pilot project implementation.

Within the consortium, INFORMET has assumed primary responsibility for training related to proposing, designing, organizing and implementing pilot projects. Training related to technical aspects of MUSA is the responsibility of CARE/Peru, and training related to monitoring aspects is the primary responsibility of DESCO.

**IV. Summary Description of Pilot Projects.**

All but one of the pilot projects are being implemented through sub-grants to competitively selected NGOs. Appropriate agencies of the Ministry of Public Health (Minsa) are committed to assist in project implementation within their respective areas of competence. At the national level, this includes the Direccion General de Salud Ambiental-DIGESA, which is an SO12 public sector partner receiving direct assistance under the EH Activity, and the Direccion General de Salud de Personas (for one pilot project), responsible for public hospitals, clinics and health posts (among other responsibilities).

At regional levels, the respective regional environmental health offices (DISAs), and public health offices (DESAs) are to be incorporated as active collaborators, and, in some cases, may receive limited support under the EH Activity in order to better participate. At the national level, CONAM is the implementation signatory to the SO12 SOAG, and, as such, is the initial recipient of USAID funds budgeted for direct support to GOP participating agencies. At regional levels, the respective CONAM regional offices and CARs (comites ambientales regionales), sponsored by CONAM, are providing backstop technical and management assistance to a greater or lesser degree, as described under each pilot project summary.

A. Special Projects in Poor Peri-Urban Areas of Metropolitan Lima.

Three pilot projects intended to test and validate technological and organizational innovations for addressing selected priority problems in peri-urban areas of Metropolitan Lima were competitively selected for sub-grant funding. These projects respond to three priority problem areas designated by DIGESA, and endorsed by the USAID/Peru SO12 management team. Sub-grantees for each pilot project have been competitively selected for developing, testing and validating appropriate management models.

1. Management Model for Supply of Water for Human Consumption by Tank Trucks.

a. Sub-Grant NGO: Fomento de La Vida (FOVIDA).

b. Other Partners/Alliances: Municipal Government of Villa El Salvador ; asentimientos humanos (peri-urban settlements) of Victor Chero, Aires de Pachacamac, Max Uhle, and Quebrada Horizonte;

c. Pilot Project Area and Coverage: The four participating peri-urban settlements include over 1,000 families. Participation is organized around 18 neighborhood "block leaders" elected by participating families.

d. Summary Project Purpose: Study, develop and apply a management model for assuring safe water consumption by poor peri-urban families using tank truck services in the absence of availability of connection to the metropolitan water supply utility (SEDAPAL). The project is to address water quality protection throughout the entire

marketing chain from the supply source, through tank truck distribution services, and storage and use by communities and families. Results are to include development and application of a workable regulatory framework (for municipal application through ordnances), a validated tank truck water supply management model, and a proposal for a national program to assure safe water supplies for families and communities dependent on tank truck water supply services.

e. Summary Project Status: The general work plan has been completed and approved. The diagnostic of the current situation has been completed. Based on this diagnostic, and using an approach that involves continuing participation by local interest groups and stakeholders, development of several implementation plans and programs is well under way: e.g., management models for assuring safe water distributed by tank trucks, plans to monitor water quality, and safe hygiene and EH practices training program plans. Training activities already have been initiated.

f. Funding: Sub-Grant: $70,839; Americas Fund: $70,839; local participation: $7,084.

2. Management Model for Safe Food Handling in "Comedores Populares (communal eateries)."

a. Sub-Grant NGO: INCAFAM-Instituto de Investigacion y Capacitacion de la Familia.

b. Other Partners/Alliances: Municipal Government of San Juan de Lurigancho, Central, District and Zonal levels of the Asociacion de Comedores Populares, Clubes de Madres and other members (socias) of comedores populares selected for application of the model, and DIGESA, DISA, PRONAA.

c. Pilot Project Area and Coverage: Four communities in the high zones of San Juan de Lurigancho. 40 comedores are selected for application of the model. The communities and number () of comedores in each are: 10 de Octubre (14), Jose Carlos Mariategui (5), Mariscal Caceres (13), and Cruz de Motupe (8). On average, each of these comedores prepares approximately 100 noon meals (raciones) per day.

d. Summary Project Purpose: Study, develop and apply a management model that establishes standards and practical guidance for safe and nutritious food preparation and consumption through application of self-help measures. Design and validate standards, and prepare appropriate didactic and operational materials for a national replication program.

e. Summary of project status: Three diagnostic studies related to food handling and hygiene in comedores populares have been completed-cultural, epidemiological, and organizational. Operational strategies for carrying out the project have been prepared and are being discussed with DIGESA and other participants. The training program plan is being developed, and modules for model comedores are being developed.

f. Funding: Sub-Grant: $76,342; Americas Fund: $50,720; Local: $5,214.

3. Management Model for a Centralized Treatment System for Solid Wastes Generated by Health Care Establishments.

a. Sub-Grant NGO: OACA-Oficina de Asesoria y Consultoria Ambiental.

b. Other Partners/Alliances: Hospital Sergio Enrique Bernales, an NGO to be competitively selected to operate the treatment system, other health care providers in the Distrito de Comas (as clients of the treatment system).

c. Pilot Area and Coverage: District of Comas with a population estimated at more than 500,000, and other areas of the so-called "Cono Norte" of metropolitan Lima, most living in conditions of poverty or extreme poverty. In the area, there are a number of public sector health care providers (in addition to the partner hospital), and several private clinics that are potential clients of the treatment system to be established by the project.

d. Summary Project Purpose: Study, develop and apply an integrated management model for safe handling of solid waste bio-contaminants generated by health care facilities in poor peri-urban areas. The project will result in a validated model for management of solid waste bio-contaminants based on a centralized collection, treatment and disposal system. It will generate and apply technical norms for each of these steps in the system, and includes the design and construction of an appropriate treatment plant. Additionally, the project will develop and apply a business and organizational model for operating the system.

e. Summary Project Status: The diagnostic and market studies have been completed. The market study is under review. Technical design and feasibility studies are essentially completed, subject to resolution of a few outstanding issues now being discussed among actors and stakeholders. Technical specifications for equipment procurement are essentially complete, awaiting final adjustments based on market study and business plan approvals.

f. Funding: Sub-Grant: $148,819; Americas Fund: $98,696; local: $19,346.

B. Integrated Local Management Projects.

1. Abatement of Air Pollution in the Cercado of Arequipa.

a. Sub-Grant NGO: Asociacion Civil LABOR

b. Other Partners/Alliances: ICIGA, Instituto para la Investigacion Pedagogica Yachay Wasi

c. Project Area and Coverage: The Central District (Distrito Cercado) of Arequipa comprises 2.8 square kilometers, with an estimated population of approximately 93,500. Much of the area is dedicated to commerce, but there also are several residential neighborhoods that currently are blighted and impoverished. Green areas have steadily

diminished as informal commerce has invaded, and as neighborhoods have decayed and been abandoned by nearly all except the extremely impoverished.

d. Summary Project Purpose: Contribute to institutionalization of a participatory model for managing environmental health in the city center (cercado) of Arequipa, focused especially on air pollution abatement, and based on mobilization of local technical and institutional capacities. More specifically, the project is intended to improve urban environmental conditions in at least three poor residential neighborhoods in the cercado: San Lazaro, Nicolas de Pierola, and Goyeneche y La Salle.

e. Summary Project Status: Problem diagnosis on a participative basis and dissemination of the results is well advanced. A CIIMSA has been established and is actively discussing issues related to preparation of a long term redevelopment plan. Neighborhood discussions are under way for improved solid waste management, as an integral aspect of safe water supplies. Meetings and dialogue are proceeding among CIIMSA members and with selected transportation companies about strategies for reducing the impact of vehicle emissions on air quality in the city center. Progress is being made in implementing an initial program of communal air pollution monitoring. An EH education program in schools and among residents has been designed and implementation is being initiated.

f. Funding: Sub-Grant: $316,350; local counterpart: $15,818.

2. Solid Waste Management in Puno.

a. Sub-Grant NGO: CIED-Centro de Investigacion, Educacion y Desarrollo

b. Other Partners/Alliances: Provincial Municipality of Puno, Local Mothers' Clubs, local business association, regional DESA, local CIIMSA, Universidad del Altiplano.

c. Project Area and Coverage: The entire provincial solid waste management and disposal system will be assisted through information generation and transfer, appropriate training and organizational assistance, and assistance in repair and maintenance of related equipment. An estimated 200 families in selected poor peri-urban neighborhoods will have organized and be effectively operating a solid waste cleanup and management program.

d. Summary Project Purpose: The project purpose is to reduce environmental contamination by solid wastes. This will be achieved by implementation of an integrated plan for solid waste management for Puno, which in turn requires strengthening of local capacities to formulate and manage solutions. The PACE-EH local participation model will be applied to mobilize citizen support and municipal commitment to achieve the purpose, and to apply the model to selected poor neighborhoods.

e. Current Status: The local CIIMSA has been organized and is actively participating in preparation of the PIGARS. Local participation has been organized and trained, and selected local groups are ready to act when approvals are completed.

f. Funding: Sub-Grant: $243,748; local counterpart: $12,187.

3. Safe Water Supply and Sewerage Services in Tarapoto.

a. Sub-Grant NGO: CEPCO

b. Other Partners/Alliances: Project HOPE (in consortium), neighborhood association of Vista Hermosa and parts of other bordering neighborhood associations (Las Flores, Venecia, La Florida), District Municipality of Banda de Shilcayo; San Martin Municipal Water and Sanitation Company (EMAPA San Martin).

c. Project Area and Coverage: Approximately 400 families in and around the poor settlement of Vista Hermosa. This settlement is less than 2 years old, and surrounding areas are 2-4 years old.

d. Summary Project Purpose: Apply the PACE-EH model to organize and train the local population of Vista Hermosa and surrounding areas in appropriate EH and hygiene practices; mobilize local participation in a self-help program to provide a safe water source and piped distribution system for the area of Vista Hermosa and some surrounding areas; provide communal latrines and bath facilities (and related sewage disposal facilities), organize, mobilize and institutionalize the local CIIMSA to provide leadership in improving EH conditions in the rest of the municipal district and in the province of Tarapoto.

e. Current Status: After a false start with another poor community (that was unable to resolve legal problems related to the land occupied), Vista Hermosa is now organized and trained in self-help EH opportunities, legal status to install water supply and communal sewage is virtually finalized (final registration of titles and related documentation is being completed by a notaria publica), CIIMSA has endorsed the project, DIGESA technical approval is complete, and formal administrative approval is in process. Construction, with self-help community labor, is expected to begin within a month.

f. Funding: Sub-Grant: $235,056; local participation: $11,753.

4. Provision of Safe Water and Sewerage Utilizing the Condominial Approach in Iquitos.

a. Direct Implementation: CARE/Peru.

b. Other Partners/Alliances: Maynas Provincial Municipality, SEDALORETO, Consorcio Loreto, Programa A Trabajar Urbano, and others.

c. Project Area and Coverage: Peri-urban neighborhood of Manuel Cardozo, and bordering areas of at least three other neighborhoods: Jessica Inchaustegui, Oscar Ivan, and Kuwait. Approximately 1400 poor families will benefit.

d. Summary Project Purpose: Through application of the local participation model, design, develop and implement a condominial water and sewerage system (an appropriate technology system developed by the World Bank WSP Program). This includes involving beneficiary communities in planning and implementing construction and installation. It also includes environmental health and hygiene education for residents through a local participation approach that utilizes voluntary neighborhood promoters (block delegates), understanding about how to operate, maintain and manage installations, and application and operation of a local EH risk monitoring system.

e. Summary Project Status: Project operating plans has been approved and installation of the water distribution system is under way (scheduled for completion in August/September). The CIIMSA has been established and is actively taking initiatives in supporting and facilitating all aspects of the project. An educational plan has been approved and is under way. Key elements for implementation, the neighborhood board, block delegates, and voluntary neighborhood EH promoters are organized and active, and their education in EH matters is well advanced. Teachers in local schools have been trained, and material developed and distributed for initial EH education. Indicators and materials for local EH risk monitoring have been validated locally.

f. Funding: MUSA: $218,619; other local and national sources: $624,719.

**V. Evaluation Procedure.**

This progress evaluation was carried out from April 22, 2003 to May 20, 2003. An outside evaluator reviewed relevant documentation and was briefed by the USAID/Peru/ENR EH Activity manager and other members of the SO12 management team. The outside evaluator, accompanied by the USAID/Peru EH Activity manager and/or other members of the USAID/Peru SO12 management team, was briefed on progress in meetings with management and technical staff of the CARE/Peru consortium institutions, and all pilot project sites were visited (see above descriptions). These site visits provided the opportunity to interact with community leaders, staff of the respective sub-grant recipient NGO's (and their partners), and with other participating/collaborating organizations, including municipal authorities and regional public health staff (of DISA's and DESA's) providing assistance and/or support to the respective local pilot project.

Additionally, the outside evaluator had the opportunity to meet briefly with selected management and technical staff of DIGESA, and with the CONAM coordinator for the EH Activity. Continuing consultations with the USAID/Peru EH Activity manager and other SO12 management team members contributed valuable additional information for formulation of evaluation findings, conclusions and recommendations. Any errors or omissions in this report are the sole responsibility of the outside evaluator.

File: Fplima001/ENR/FMann/Attachment One to MUSA Progress Evaluation Report

**ATTACHMENT TWO TO PROGRESS EVALUATION REPORT**

**PROYECTO DE MODELOS URBANOS DE SALUD AMBIENTAL (MUSA PROJECT)**

# LIST OF ACRONYMS

**USAID/Peru Urban Environmental Health and Hygiene Behavior (EH) Activity.**

## LIST OF ACRONYMS

CARE: Signatory to the MUSA Project Cooperative Agreement
CARE/Peru: Lead institution of the consortium implementing the MUSA Project
CARs: Regional environmental committees established by CONAM
CDC: United States Centers for Disease Control
CEPCO: sub-grantee NGO
CIED: Centro de Investigacion, Educacion y Desarrollo (sub-grantee NGO)
CIIMSA: Local Inter-Institutional Committee for Management of Environmental Health
CONAM: National Environmental Commission of Peru
CRA: Comparative Risk Assessment for Lima
DESCO: Center for Development Studies and Promotion
DESA: Regional Public Health Office of MINSA
DIGESA: General Directorate of Environmental Health of MINSA
DISA: Regional Environmental Health Office of MINSA
EH: USAID/Peru Urban Environmental Health and Hygiene Behavior Activity
EHP: USAID centrally funded Environmental Health Program
EMAPA: Public Water and Sewer Company for the Department of San Martin
EMS: Environmental Management Systems approach
ENR: USAID/Peru Office of Environment and Natural Resources
FOVIDA: Fomento de La Vida (sub-grantee NGO)
GOP: Government of Peru
HOPE: Project HOPE, a US NGO (partner to sub-grantee CEPCO)
ICIGA: Instituto para la Investigacion Pedagogica Yachay Wasi (partner with LABOR)
INCAFAM: Instituto de Investigacion y Capacitacion de la Familia (sub-grantee NGO)
INFORMET: Information and Methodologies for Organizational Development (CARE/Peru consortium member)
LABOR: Asociacion Civil LABOR (sub-grantee NGO)
LGTMU: Local Grants Training and Management Unit of MUSA
LOP: life of project
MES: USAID/Peru Mission Environmental Strategy
MINSA: GOP Ministry of Public Health
MUSA: CARE/Peru Consortium Urban Environmental Health Models Project
NGO: non-governmental organization
OACA: Oficina de Asesoria y Consultoria Ambiental (sub-grantee NGO)
PAAG: MINSA General Directorate of Public Health program administration unit
PACE-EH: Protocol for Assessing Community Excellence in Environmental Health
PAHO-CEPIS: Pan-American Health Organization, regional Center for Sanitary Engineering and Environmental Sciences
PIGARS: Plan Integral para la Gestion Ambiental de Residuos Solidos
PMP: Project Monitoring Plan
PRONAA: Programa Nacional de Asistencia Alimentaria
RFA: Request for Application
SEDALORETO: Loreto Municipal Water and Sanitation Company

SEDAPAL: Metropolitan Lima Public Water and Sewer Company
SENREM: Sustainable Environmental & Natural Resources Management Activity.
SIMOLORSA: local environmental health risks monitoring system
SOAG: Strategic Objective Grant Agreement
SO4: USAID/Peru Environment and Natural Resources Strategic Objective (now SO12)
SO12: USAID/Peru Environment and Natural Resources Strategic Objective
UCA: Coordination Unit in DIGESA for EH Activity
UNDP: United Nations Development Program
USAID/Peru: United States Agency for International Development Office in Peru
WSP: World Bank/UNDP Regional Water and Sanitation Program

**ATTACHMENT THREE TO PROGRESS EVALUATION REPORT**

**PROYECTO DE MODELOS URBANOS DE SALUD AMBIENTAL**

**USAID/Peru Urban Environmental Health and Hygiene Behavior (EH) Activity.**

**(MUSA PROJECT)**

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Cuadros, Carlos, MUSA, CARE/Peru
Cuentas A., Martha: Directora Ejecutiva, FOVIDA
Del Aguila Rodriguez, Luis: Director de Programas y Proyectos, INFORMET
del Aguila, Luis: capacitacion, INFORMET
Dyer Estrella, Jaime: Gerente General, OACA
Espinoza, Leonor, Director de proyecto, INCAFAM
Estrella, Carmen Carlos: MUSA sub-grant project, FOVIDA
Gil Ruiz, Juan: Executive Secretary, The Americas Fund in Peru
Goyzueta Camacho, Gilmar: Docente Universidad Nacional del Altiplano (UNA), Puno
Guzman, Edwin: Director, Asociacion Civica LABOR
Haak, Roelfien, Presidente, FOVIDA
Hidalgo, Jorge: presidente, Comite Local de Administracion de Salud (CLAS), Tarapoto
Injanto Uchuya, Julio: Director, Direccion de Desarrollo Humano, Municipalidad de Villa El Salvador
La Rosa, Miguel, MUSA Project technical staff, CARE/Peru
Larico Fernandez, Felipe: Jefe Division de Saneamiento Ambiental, Puno
Llanos Fernandez, Lucila: Profesora de colegio, Puno
Lopez Gonzalez, Jorwerd: Asociacion de Desarrollo Integral Sostenible del Barrio de San Lorenzo (ADIS)
Lopez, Anita; Ing. Sanitaria, Dpto. De Produccion, EMAPA, Tarapoto
Lopez, Jose Luis: presidente, LABOR
Maman, Paulino: Villa El Salvador
Mamani Damian, Manuela: Presidenta Club de Madres Chejona, Puno
Matute Pinedo, Jaime: Secretario Ejecutivo Regional Loreto-San Martin, CONAM

Monasi Franco, Dr. Jorge: Alcalde, Municipalidad Distrital San Juan Bautista, Loreto
Moreno Terrazas, Edmundo: Docente UNA, Puno
Noriega D., Jorge: principal investigator, DESCO
Noriega, Jorge: DESCO
Nunez Prado, Candida: Presidenta Club de Madres La Pampilla, Puno
Olero, Freddy" Economista, LABOR
Palomino, Luis: promoter PELPEMA, Villa El Salvador
Pantoja Mori, Juan Martin: Presidente del presupuesto participativo, Villa El Salvador
Pilares, Jorge: Medico, Arequipa regional office, MINSA
Rios, Ines: MUSA sub-grantee project, LABOR
Rodriguez B., Hugo Alfredo: Director-Puno, CIED
Rottler Hassinger, Norma: Directora Liderazgo Ciudadania, MUSA sub-grant project, FOVIDA
Ruiz Rios, Albina: Directora del Proyecto Manejo Sostenible de Residuos Solidos en Carhuaz, Sociedad Peruana de Derecho Ambiental (SPDA)
Salas Aguilar, Rosa Virginia: Director of STEM-SENREM in CONAM
Sandoval Alvarado, Leandro: Asesor en Residuos Solidos Urbanos dePAHO-CEPIS
Suasaca Barrera, Julia: member, Club de Madres Senor de Huanca, Puno
Talavera Ampuero, Eduardo: Secretario Ejecutivo Regional Arequipa-Moquegua-Tacna, CONAM
Tallada, Ana: Directora Ejecutiva, INCAFAM
Vargas Vargas, Edgar, Ingeniero Sanitario, INCAFAM
Vargas, Edgar: Ingeniero Sanitario de TECNHIDRAM
Vasquez, Francisco: Gerente General, EMAPA, Tarapoto
Vigil Barreda, Lic. Saul: nutricionista, INCAFAM
Villalta Flores, Luis: Director, Direccion Ejecutiva de Salud Ambiental, Municipalidad Provincial de Puno
Vivar, Aldo: consultor in infection control, PRISMA
Zaira de Ticona, Ayde: Secretaria Club de Madres 28 de Julio, Puno
Zea Usca, Jaime A.: Alcalde, Municipalidad Villa El Salvador
Zevallos Pacheco, Jose E.: Gerente Administrativo, FOVIDA

**ATTACHMENT FOUR TO PROGRESS EVALUATION REPORT**

**PROYECTO DE MODELOS URBANOS DE SALUD AMBIENTAL (MUSA PROJECT)**

**USAID/Peru Urban Environmental Health and Hygiene Behavior (EH) Activity.**

## PARTIAL LIST OF REFERENCE DOCUMENTS


CARE, Technical Proposal and annexes for MUSA
CEPCO, Proyecto modelo de gestion de agua segura y saneamiento en zonas marginales
CIED, Proyecto de Manejo Integral de RRSS en la Ciudad de Puno
Fondo de las Americas/CARE, Plan Operativo de Co-financiamiento INCAFAM-FOVIDA-OACA
FOVIDA, Modelo de Gestionpara el Astecimiento de Agua de Consumo Humano Mediante Camiones Cisterna en Zonas Marginales
INCAFAM, Modelo de Gestion para la Obtencion de Alimentos Seguros en Comedores Populares
LABOR, Gestion de Salud Ambiental y Descontaminacion Atmosferica en la Ciudad de Arequipa
MUSA, Bases de Concurso de seleccion the Sub-donantes
MUSA, El Modelo PACE-EH
MUSA, Informes Trimestrales (Numeros 1, 2, 3, 4, 5 and 6).
MUSA, Plan Operativo Anual (POA) Set. 2002 - Set. 2003
MUSA, Plan de Monitero y Evaluacion
MUSA, Plan General de Implementacion Set. 2001-Set. 2004
MUSA, POA 2002-2003
MUSA, Proyecto Sistema Condominial de Agua Potable en Cardozo
MUSA, Proyecto Sistema Condominial de Alcantarillado en Cardozo
Narciso Chavez, Juan, Elementos para el Diagnostico de la Contaminacion del Aire de una Localidad.
OACA, Modelo de Gestion para Residuos Solidos de Establecimientos de Atencion de Salud
USAID/Peru, EH Activity Paper
USAID/Peru, RFA No. 527-01-A-004

**ATTACHMENT FIVE TO PROGRESS EVALUATION REPORT**

**PROYECTO DE MODELOS URBANOS DE SALUD AMBIENTAL**
**(MUSA PROJECT)**

**USAID/Peru Urban Environmental Health and Hygiene Behavior (EH) Activity.**

## SCHEDULE OF EVALUATION ACTIVITIES

April 21: Travel from US to Peru

April 22-24: General Briefing by USAID/Peru/ENR, and CARE/Peru Consortium; documents review

April 25: Briefings by CEPIS, Americas Fund; documents review

April 28: Meetings with FOVIDA; sub-grant project site visit to Villa El Salvador

April 29: Meetings with INCAFAM; sub-grant project site visit to San Juan de Lurigancho

April 30: Meetings with OACA; sub-grant project site visit to Hospital Sergio Bernales, Collique

May 1-2: Discussions with USAID/Peru/ENR; documents review

May 5-7: Sub-grant project site visits to Arequipa and Puno

May 8-9: Sub-grant project site visit to Tarapoto

May12-13: Sub-grant project site visit to Iquitos

May 14-16: Write report; present draft report to USAID/Peru/ENR for comments

May 19-20: Incorporate ENR comments and finalize report; exit briefings with USAID/Peru/ENR and Mission Director

May 21: Leave Peru for US

**ATTACHMENT SIX TO PROGRESS EVALUATION REPORT**

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**PROYECTO DE MODELOS URBANOS DE SALUD AMBIENTAL**
**(MUSA PROJECT)**

**USAID/Peru Urban Environmental Health and Hygiene Behavior (EH) Activity.**

## MUSA BUDGET AND EXPENDITURES BY PURPOSE

| Rubros | Presupuesto | % Presupuesto | Ejecutado a 02/03 | % de Ejecucion |
|---|---|---|---|---|
| **MUSA/LGTMU** | **1,123,527.00** | 44.41 | 428,074 | 38.1 |
| -Capacitacion | 107,124.00 | 4.23 | 47,947 | 44.8 |
| -Gestion Tecnica | 601,576.00 | 23.78 | 269,802 | 43.4 |
| *Monitoreo* | *54,294.00* | 2.15 | 10,170 | 18.7 |
| *Advocacy* | *21,600.00* | 0.85 | 12,445 | 57.6 |
| *Personal** | *478,651.00* | 18.92 | 238,187 | 49.8 |
| --Componente Administrativo | *(124,449.00)* | 4.92 | 61,929 | 49.8 |
| --Componente Tecnico | *(354,202.00)* | 14.00 | 176,258 | 49.8 |
| *Asistencia Tecnica* | *25,000.00* | 0.99 | 7,129 | 28.5 |
| *Bienes y Servicios* | *22,031.00* | 0.87 | 15,195 | 69.0 |
| -Auditoria financiera | 70,000.00 | 2.77 | 0 | 0.0 |
| -NICRA y Gastos Generales Administrativos | 344,827.00 | 13.63 | 119,325 | 34.6 |
| **SUB-PROYECTOS** | **1,406,473.00** | 55.59 | 158,061 | 11.2 |
| -Iquitos | 218,619.00 | 8.64 | 59,325 | 27.1 |
| -Proyectos de sub-donacion | 1,091,154.00 | 43.13 | 82,730 | 7.6 |
| -SIMOLORSA | 96,700.00 | 3.82 | 16,006 | 16.6 |
| **Total Aporte USAID** | **2,530,000.00** | 100.00 | 586,135 | 23.2 |
| Cost-Sharing | 843,333.00 | | 227,248 | 27.0 |
| **Gran Totales (USAID y CARE)** | **3,373.333.00** | | 835,698 | 24.8 |

| *** % de Dedicacion** | **% Tecnico** | **% Administrativo** |
|---|---|---|
| **A tiempo Completo** | | |
| Coordinadora | 80 | 20 |
| Responsable Capacitacion, edu y social | 100 | |
| Responsable Salud Ambiental | 100 | |
| Administrador | 25 | 75 |
| Asistente Administrativo | | 100 |
| **A Tiempo Parcial** | | |
| Gerente de Salud (8%) | 100 | |
| Asesor Ambiental (5%) | 100 | |
| Asesor agua y saneamiento (5%) | 100 | |
| Asesor en monitoreo y evaluacion (5%) | 100 | |

## SUB-PROJECT FUNDING SOURCES AND AMOUNTS

| SUB-PROYECTO | FONDAM | USAID/CARE | OTROS | TOTAL |
|---|---|---|---|---|
| **Especializados** | | | | |
| -Camiones Cisterna (Villa El Salvador) | 70,839 | 70,839 | 7,084 | 148,762 |
| -Comedores Populares (S. J. de Lurigancho) | 50,720 | 76,342 | 5,214 | 132,276 |
| -RR. SS. de Centros de Salud (Collique) | 98,696 | 148,819 | 19,346 | 266,861 |
| **sub-total** | **220,255** | **296,000** | **31,644** | **547,899** |
| **Porcentaje** | (40.2%) | (54.0%) | (5.8%) | (100%) |
| **PACE-EH** | | | | |
| -CEPCO (Tarapoto) | 0 | 235,056 | 11,753 | 246,809 |
| -CIED (Puno) | 0 | 243,748 | 12,187 | 255,935 |
| -LABOR (Arequipa) | 0 | 316,350 | 15,818 | 332,168 |
| **sub-total** | **0** | **795,154** | **39,758** | **834,912** |
| **Porcentaje** | (0%) | ((95.2%) | (4.8%) | (100%) |
| **CARE/Peru Implementacion Directa** | | | | |
| -Iquitos | 0 | 218,619 | 624,719 | 843,338 |
| **Porcentaje** | (0%) | (25.9%) | (74.1%) | (100%) |
| **GRAN TOTAL** | | | | |
| **-MONTO** | **220,255** | **1,309,773** | **696,121** | **2,226,149** |
| **-%** | **(9.9%)** | **(58.8%)** | **(31.3%)** | **(100%)** |

**CO-FINANCIAMIENTO**

- **FONDAM** **220,255 (19.5%)**
- **OTROS** **696,120 (61.5%)**
- **ADMIN. LOCAL (CARE/Peru)** **215,000 (19.0%)**

**TOTAL** **1, 131,375 (100%)**

**(Como % de la Inversion Total en Sub-Proyectos)** **46.4%**