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LIBERIA COMMUNITY INFRASTRUCTURE PROGRAM I

MARCH 2006–MARCH 2008

PHASE II FINAL REPORT

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ACRONYMS AND ABBREVIATIONS

A&E	architecture and engineering
DFID	Department for International Development (U.K.)
EC	European Commission
ESR	Economic and Social Reintegration (Component of LCIP I Phase II)
IR	Intermediate Results
KRTTI	Kakata Rural Teacher Training Institute
LAC	Liberian Agricultural Company
LCIP I	Liberia Community Infrastructure Program I
LD	Liberian dollar
LEC	Liberia Electricity Corporation
M&E	monitoring and evaluation
M&R	Milton & Richards
NGO	nongovernmental organization
OTC	Oriental Timber Corporation
PDE	person-days of employment
RAP	Rebuilding Artisans Program
RPAL	Rubber Planters Association of Liberia
RSSP	Road Sensitization and Support Program
UN	United Nations
USAID	United States Agency for International Development
USD	United States dollar
ZRTTI	Zorzor Rural Teacher Training Institute

FINAL REPORT: LIBERIA COMMUNITY INFRASTRUCTURE PROGRAM PHASE I

The accomplishments of the Liberia Community Infrastructure Program I (LCIP I) Phase I were summarized in a report submitted to the U.S. Agency for International Development (USAID) in the fall of 2006 titled “LCIP I Phase I Final Quarterly Report.” Phase I began with project award in March 2004, and ended in June 2006. Discussions in 2008 with USAID resulted in agreement that the final report for LCIP I would focus exclusively on Phase II implementation accomplishments and lessons learned.

BACKGROUND: LCIP I PHASE I

At the start of the project, all stakeholders agreed that LCIP I would work in the counties where the greatest numbers of ex-combatants were most likely to be or to which they wished to return.¹ Therefore, LCIP I implemented projects in eight of Liberia's 15 counties—Grand Gedeh, Nimba, Bong, Lofa, Gbarpolu, Bomi, Grand Cape Mount, and Montserrado. (Minimal inputs were also carried out in Margibi and Grand Bassa, but these were not areas of focus.) The project's outputs fell within three key Intermediate Result (IR) categories under Liberia's Special Objective of Community Revitalization and Reintegration:

- IR1: Peace process and good governance enhanced
- IR2: Economic and social conditions exist at the community level to facilitate reintegration and rehabilitation of infrastructure
- IR3: Increased formal and non-formal learning opportunities

LCIP I translated the three IR categories into three associated project components:

- **Psychosocial counseling and reconciliation**— LCIP I activities included community-based counseling and reconciliation, implemented in conjunction with employment programs, and public awareness and reconciliation services. A sports program—in particular, soccer—was a key psychosocial activity for engaging communities and building peace between ex-combatants and war-affected persons.
- **Employment generation**—LCIP I's central effort was to create jobs and employment opportunities through reconstruction activities for ex-combatants and war-affected persons.
- **Formal and nonformal education**—LCIP I used its reconstruction component to create or enhance access to formal school and accelerated learning programs, associated on-the-job training opportunities, and vocational and skills training.

Over time, the project implemented a crosscutting strategic decision to work exclusively with Liberian organizations. The key rationale was to include these organizations directly in the rebuilding process underway in their country while also building their capacities as contractors and organizations. Aggregate LCIP I statistics illustrate the project's breadth and reach. Overall, with USAID funding, LCIP I disbursed more than 400 grants worth \$20 million to multiple nongovernmental organizations (NGOs) and local implementing partners. Of the 37,700 individuals who participated in vocational training, received social counseling, and/or worked to rebuild infrastructure, 16,000 delivered more than 4.4 million person-days of work, 8,000 benefited from psychosocial programs and counseling, and 14,000 benefited from vocational, literacy, or apprenticeship training. Illustratively, 90 participants became conflict resolution specialists who have assisted an estimated 12,000 rural citizens. Across all USAID-funded LCIP I activities, roughly one-third of the participants were women. Non-labor LCIP I

¹ LCIP's key stakeholders are the National Commission for Disarmament, Demobilization, Rehabilitation and Reintegration and the United Nations Mission in Liberia.

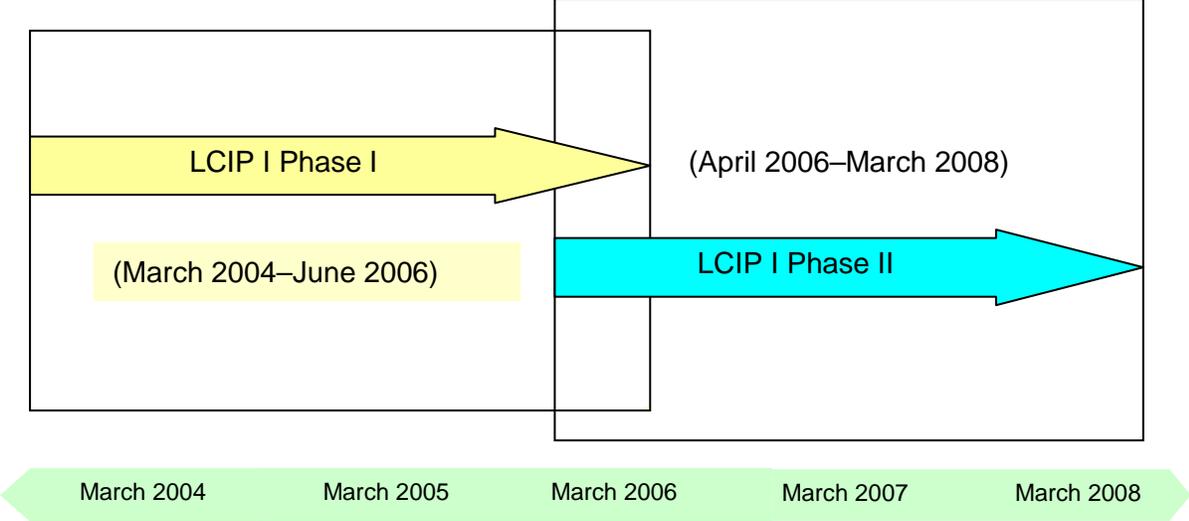
contributions include the rehabilitation of 20 schools, 5 administration buildings, 4 clinics, and 26 roads in 5 counties spanning 549 kilometers, as well as the provision of financing and technical assistance to 1,100 community reconciliation groups and 24 local NGOs that focused on using sports as a reconciliation tool.

OVERVIEW: LCIP I PHASE II

The accomplishments of LCIP I Phase II are indelibly written on the landscape of Liberia—roads have been rehabilitated and are now busy with traffic and commerce, public buildings have been restored and government officials are performing their duties, and students are in schools and learning. As well, communities are now producing agricultural commodities such as rubber, vegetables, and rice, and rural populations are participating in local and regional markets and returning to “normal.” Nonetheless, these and other accomplishments remind us of the extent of the damage to the fabric of Liberian society due to the conflict. The transition from war to peace is not over. As with LCIP I, these damages will affect development accomplishments for years to come.

While Phase I of LCIP I was focused on meeting the urgent needs of ex-combatants and other war-affected populations, the objective of the program’s implementation was to expand physical security by keeping potential “spoilers” of the transition and nascent peace occupied. The DAI program team’s core strategy for Phase I was to develop a Liberian workforce by providing temporary and short-term jobs to this vulnerable population, and the key metrics for measuring success were person-days of employment (PDE) and number of beneficiaries. In fact, LCIP I met and/or exceeded all targets by implementing activities that occupied the target beneficiary group through rehabilitating basic community infrastructure: agricultural fields, community housing, cultural centers, schools, clinics, feeder roads, small bridges, and a few smaller public buildings (including five county administration buildings).² The program approach was to integrate psychosocial activities into the rehabilitation effort, by providing counseling, literacy and numeracy training, and conflict mitigation training at set periods throughout the participants’ daily work efforts. This integrated approach was also used for vocational training, apprenticeships, and other program efforts. As implementation of Phase II began in the spring of 2006, however, LCIP I experienced a fundamental shift in direction (see Figure 1).

FIGURE 1: LCIP I PHASED IMPLEMENTATION



² For a summary of accomplishments and lessons learned from Phase I, please see the report titled “LCIP I Phase I Final Quarterly Report” Submitted to USAID in the fall of 2006.

Phase II of LCIP I inverted the implementation of Phase I: instead of the focus on keeping ex-combatants and other war-affected populations occupied through work projects, this new phase was focused on completing public works projects as part of the Government of Liberia’s strategy for rebuilding the country, in the context of a newly elected presidential administration. Although the same metrics were kept throughout all phases of LCIP I’s implementation, a new indicator was added that demonstrated this shift clearly: percentage of public infrastructure rehabilitation completed. Indeed, USAID funding focused exclusively on completing public works activities, in order to help jump-start Liberian capacity to provide public (and private) service delivery to rural populations throughout the country. LCIP I community-focused programming had to rely on U.K. Department for International Development (DFID) funding,³ which was strategically linked to USAID activities by geographically co-locating most activities. Since the location of the public infrastructure selected was unmovable, LCIP I management selected communities near or alongside public infrastructure projects for DFID-funded activity implementation.

This shift significantly reduced the program’s emphasis on integrating community-based and psychosocial counseling approaches into all LCIP I activities—which seems to have resulted in unintended consequences. At times, infrastructure activities that lacked real integration with community-based, local government officials, and other stakeholders to the public infrastructure efforts, sometimes leading to poor communication of objectives, lack of consensus on expectations, and in a few cases “stop-work” demands from local officials or outright discouragement by local communities.

Although LCIP I’s focus shifted dramatically between Phase I and Phase II, senior management of the project (both internal to DAI and external to USAID and other stakeholders) did not initially fully understand the implications of this shift. To deliver the new results required, LCIP I implementation had to now identify Liberian partners that could assess, design, bid, award, and construct large-scale public infrastructure. In other words, implementation required skills, knowledge, and access to resources that were several levels of degree more sophisticated than during the first phase of LCIP I.

The shift toward “infrastructure for infrastructure’s sake” (instead of as a means to achieve other project objectives) also resulted in new requirements to adhere to U.S. and international standards for rehabilitating public infrastructure, including issues related to manufacturing culverts, maintenance, reinforced concrete, and the functional needs of public buildings (such as technology and communications requirements). In response, LCIP I senior management was able, to a large degree, to address some of these new requirements by bringing on additional engineering talent (locally, from third countries, and internationally) and by focusing considerable management attention on implementing the infrastructure activities. Thus, as the country was itself moving from the immediate post-conflict phase of transition toward a new phase of building the foundation for development, LCIP I too had to shift its own implementation strategy away from urgent actions toward efficiency and more durable and long-term solutions.

As the country continues its transition process with the support of the international community, fractures in the fabric of society become more and more apparent at every level. The political pressures from both the U.S. and the Liberian Governments—alongside the high expectation of the Liberian people—has

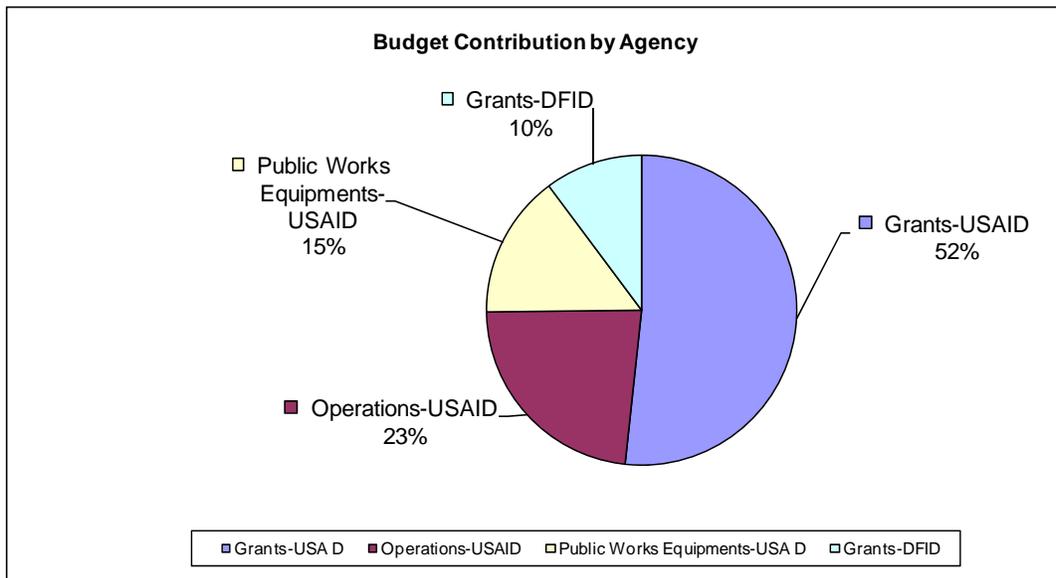
³ DFID provided funds for LCIP activities through a memorandum of understanding signed between USAID and DFID. This meant that the DFID funds were transferred to the project through USAID, and, in effect, adopted USAID’s implementation requirements.

meant that LCIP I ran at a high pace to deliver results since its inception in 2004. LCIP, despite its shift in focus, achieved the objectives and results expected.

LCIP I PHASE II BUDGET CONTRIBUTIONS BY DONOR

The work of USAID and DFID through LCIP I (see Figure 2) has been critical for Liberia’s recovery both in terms of its support to the peace process and rebuilding damaged infrastructure. LCIP I has worked through a very difficult period in Liberia’s history and has adapted to the rapidly changing environment—both economically and politically.

FIGURE 2: LCIP I PHASE II BUDGET CONTRIBUTION BY DONOR



INFRASTRUCTURE (USAID-FUNDED)

Between 2006 and 2008 LCIP I completed five vertical structures with USAID funding of more than \$7 million. During Phase II the project completed 170 miles, while the fifth functions only partially (the Executive Mansion was damaged by a fire in July 2006). LCIP I completed 170 miles of road and kept road access open to the Southeast throughout the 2007 rainy season for just over \$4 million of USAID funding. I completed 170 miles of road and kept road access open to the Southeast throughout the 2007 rainy season for just over \$4 million of USAID funding. A total of 220,965 person days of employment was generated, and 2,198 people were directly employed through the program's infrastructure activities. All of this work was conducted in a post-conflict environment and with climate conditions that are not favorable for construction work.

Infrastructure accomplishments during Phase II include:

- Enhancement of the Executive Mansion (\$186,457): 122 people employed, 10,568 PDE;
- Renovation of the Capitol Building (\$2,180,187): 385 people employed, 51,619 PDE;
- Rehabilitation of Zwedru Multilateral High School (\$368,116): 109 people employed, 8,808 PDE;

- Rehabilitation of Buchanan Administration Building (\$197,245): 69 people employed, 5,810 PDE;
- Rehabilitation of Tubmanburg Administration Building (\$220,965): 55 people employed, 3,148 PDE;
- Drilling of boreholes and wells at educational and training facilities (\$115,000): 34 people employed, 2,131 PDE;
- Monrovia construction programs (Peace Island Vehicular Bridge and Culverts Project; Soul Clinic Road Rehabilitation Project; Police Academy Road Rehabilitation Project; Neezoe One Vehicular Bridge Rehabilitation Project; Coca-Cola Factory Road and Footbridge Rehabilitation Project) (\$36,186): 49 people employed, 978 PDE;
- Rehabilitation of Ganta to Sanniquellie Road (\$520,766): 244 people employed, 24,233 PDE;
- Rehabilitation of Buchanan–Cestos–Greenville Road (\$3,337,737): 1,131 people employed, 75,906 PDE;
- Assessment of Kakata Rural Teacher Training Institute, Zorzor Rural Teacher Training Institute and Ministry of Public Works (\$152,890): number of people employed and PDE data not required;
- Assessment of Five Administration Buildings (Bomi, Grand Bassa, Lofa, Sinoe, and Maryland) and Todee Road (\$77,792): number of people employed and PDE data not required; and
- Procurement and provision of heavy-duty road equipment to the Ministry of Public Works (\$2,100,000).

ECONOMIC AND SOCIAL REINTEGRATION (DFID-FUNDED)

The LCIP I Phase II Economic and Social Reintegration (ESR) activities were designed at the community level to support, geographically, the USAID-funded infrastructure rehabilitation interventions. The DFID-funded component of LCIP I sought to expand and leverage the gains made under LCIP I Phase I to further increase economic opportunities, consolidate social stability, and contribute to a lasting peace for Liberia. Overall, with DFID funding, LCIP I disbursed 13 grants worth \$1.4 million to 10 local implementing partners, which generated a total of 208,757 person days of employment and 1,130 people were directly employed through ESR activities. DFID grant activities included 7,176⁴ direct participants and an estimated 25,000 indirect beneficiaries from conflict mitigation activities.

The DFID program interventions focused on four key areas:

- Development of lowland rice and seed multiplication;
- The smallholder rubber industry;
- Business support and apprenticeships; and
- Conflict mitigation.⁵

⁴ Not including the road sensitisation activities, which, through radio programs and community meetings, had much larger direct participation, but this participation was of short duration compared with the other DFID-funded grant activities.

⁵ In some of the LCIP correspondence with DFID, this area is called “psychosocial healing.”

Agriculture and small business training benefited 1,367 Liberians, 685 of whom received certificates from the Government of Liberia in crafts such as metalwork, carpentry, fishery, masonry, cosmetology, baking, goldsmithing, tailoring, and two-stroke engine repair. Across all DFID-funded programs, roughly 40 percent of participants were women. Non-labor activities of the DFID contributions include the rehabilitation of 600 acres of rubber and rice fields, renovation of 43 businesses and 26 rubber-processing units, and supply/equipping of four local NGOs dedicated to sensitizing and providing conflict mitigation support to communities along the USAID-funded road projects.

ESR accomplishments during Phase II include:

- Small Rubber Farm Support (\$65,080): 104 people employed, 5,200 PDE;
- Rubber Rehabilitation and Development (\$65,001): 104 people employed, 3,120 PDE;
- Grand Bassa and River Cess Rehabilitation of Artisans Programs (\$395,694): 281 people employed, 73,782 PDE;
- Sinoe and Grand Gedeh Rehabilitation of Artisans Programs (\$449,942): 302 people employed, 77,971 PDE;
- Ganta to Sannique Road Sensitization (\$28,550): there were no employment targets established for this activity;
- Buchanan to ITI (Rivercess) Road Sensitization (\$43,797): there were no employment targets established for this activity;
- Yarpa Town to Cestos City Road Sensitization (\$37,478): there were no employment targets established for this activity;
- ITI (Rivercess) to Greenville Road Sensitization (\$37,071): there were no employment targets established for this activity;
- Zleh Town Swamp Rehabilitation Project (\$150,480): 250 people employed, 34,320 PDE;
- Rural Seed Multiplication Program (\$60,654): 89 people employed, 14,364 PDE; and
- Rice Processing Machines (\$7,658): there was no employment targets established for this activity.

KEY LESSONS LEARNED

ABSORPTIVE CAPACITY: GOVERNMENT OF LIBERIA

Throughout LCIP I implementation, the program worked closely with the Government of Liberia, particularly with the Ministry of Public Works, but also the Ministries of Youth and Sport, Ministry of Education, local and county government officials, and others. Despite the high priority placed on rehabilitating public infrastructure by the Government of Liberia, most donor efforts took (and continue to take) the capacity of the Ministry of Public Works for granted. In response, LCIP I staff focused, for the most part, **indirectly** on building the capacity of the Ministry of Public Works. For example, Ministry of Public Works staff participated in all LCIP I reconstruction bid decisions, and played an active role in monitoring and supporting the implementation of the infrastructure activities. Indeed, the Ministry of Public Works seconded staff to various LCIP I project activities, which has enhanced project efforts to

model professional behavior and improve project results. However, this indirect approach toward capacity building had its limitations, and a more concentrated focus on providing training and technical assistance to the Ministry of Public Works would have improved the management, planning, and effectiveness of this important public institution—which would then have potentially resulted in greater impact of USAID’s rehabilitation efforts.

The following lessons learned are focused on the planning environment during the immediate post-conflict period—both toward the donor level of planning and LCIP I specifically:

- **Newly reconstructed or rehabilitated public infrastructure quickly deteriorates without sufficient maintenance.** Many of the public buildings and roads rehabilitated or reconstructed through donor efforts have maintenance, management, and use issues. Government departments do not have the skills and resources to maintain the buildings and roads renovated by LCIP I. The Liberian Government needs to be encouraged to invest in the maintenance of its public infrastructure, or many of the buildings and roads will quickly return to their former dilapidated state. Additionally, high levels of maintenance will be required on recently rehabilitated public buildings and roads due to the often-reduced quality of workmanship and the poor quality of construction material available. Much of the work conducted by Liberian contractors does not meet international standards or specifications, because the skills and materials are still not available in Liberia. Because the standards of workmanship and attention to detail are lower, maintenance should be a high priority for all the public structures and roads completed as part of the donor and Government of Liberia effort to rebuild the country’s infrastructure.
- **Expectations for the use of public infrastructure are often based on out-of-date knowledge.** The objective for repairing and reconstructing buildings and roads in Liberia has been focused on returning structures to their pre-war standards. In many instances, this has meant bringing them back to how they were in the 1970s or 1980s, or even the 1960s. Due to the urgency of recovery, very little planning has been done on how an institution or government department needs to operate in 2008 (much less in 2018 and beyond). Not only have there been huge changes in communications and information technologies in the years since many buildings and roads were originally constructed, but also, the years of war and instability have often “re-worked” social, commercial, and political networks. For example, the former location of a border post may no longer make sense, given changes in cross-border movements of people and goods. As well, the size and function of the original border post may no longer meet today’s needs, much less the Government’s needs in 10 and 20 years.

Recommendation Number 1: Include maintenance plans as a key part of any public rehabilitation activity.

Recommendation Number 2: Base public rehabilitation and reconstruction plans on current and future use and needs assessments. Before making a decision to reconstruct a building or road, an assessment of the current and future use and functionality of the public infrastructure is required. Often, a Ministry or government institution has undergone significant changes since the war began, including changes in numbers of staff, in duties and responsibilities, in technology and communications needs, or even in governance (such as requirements to deal with constituencies). An assessment of the government entities current and future needs and functions should be conducted before the government staff and officials reoccupy a building that proves to be insufficient to their needs and capability to function. Likewise, before a road or bridge is repaired or reconstructed, assessments of who is currently using the roads and who would use the roads in the future should be conducted before a decision on whether to

rehabilitate the road is made. It could turn out that the road should not be rehabilitated because an important market has moved to a new location. Alternatively, information on current and future demand may demonstrate that the road will be used by extremely heavy or overloaded logging trucks, which would require entirely different reconstruction plans.

ABSORPTIVE CAPACITY: LIBERIAN NGOS

Throughout the project implementation, LCIP I consistently partnered with and supported the Liberian construction sector and other local organizations—as part of a deliberate effort to begin building the capacity of Liberian organizations during the more “relief” stages of post-conflict implementation. The project’s capacity building effort followed two main themes: building capacity by modeling good behavior (such as public bidding of grants and subcontracts, and award processes that were open and transparent) and through close partnerships with Liberian entities, including participating in key decisions and close monitoring. LCIP I kept the demand on its subcontractors and grantees extremely high throughout project implementation, although the supply of needed resources (skills, knowledge, material, management capacity, cash flow management, etc.) frequently was insufficient.

ABSORPTIVE CAPACITY: LIBERIAN CONSTRUCTION FIRMS

- **Skilled local engineers and architects are often not available in the quantities required to meet the demands of reconstruction.** Many of the skilled human resources that were available during the construction boom of the 1970s in Liberia are no longer available. Liberians that had these skills either moved to another country and have not returned, or were lost in the war. In addition, during the 1970s many of the skilled technicians and engineers active in Liberia were from the region, and were not locally sourced. The majority of these expatriate engineers were Ghanaians who came to Liberia to make money from the booming economy. The current growth in the economy in Ghana means that Liberia cannot compete for these experts and skilled laborers. Technicians and engineers get higher wages, and better living conditions, living and working in Ghana. This loss of midlevel skills and management is affecting Liberian contractors’ and architecture and engineering (A&E) firms’ ability to perform on large-scale or multiple projects.
- **Qualified expatriate engineers and architects are also not readily available in quantities to meet the demands of reconstruction.** The global demand for engineering skills in post-conflict environments has significantly increased over the last decades. With the rebuilding of Iraq and Afghanistan, in particular, expatriate human resources have been difficult to obtain for Liberia. Often, qualified expatriate technical experts would rather work on projects where they receive higher compensation than is available through donor-supported projects in Liberia, or such experts would rather work in more stable countries. Adding to the problem of recruitment of expatriate talent is the devalued U.S. dollar compared to the euro and Sterling. It is no longer attractive for expatriates coming from Europe and other areas outside the United States to be paid working in U.S. dollars.
- **Management capacity of local construction partners is often lacking.** Almost all of the Liberian construction contractors lack the ability or capacity to plan and schedule correctly. Although local management may understand an individual construction task or contract, they seem to have considerable difficulty incorporating all of their contracted construction work into an integrated, wider schedule and plan. These firms have difficulty anticipating costs until after the fact, and projects suffer multiple cost changes (if the client approves).

- **Better monitoring by objective experts was required.** The work of LCIP I has been demand driven and result orientated. On occasion, when contractors or A&E firms have not performed, LCIP I issued penalties or required management changes to be made. As a result, contractors and A&E firms were often reluctant to inform LCIP I that they lacked critical capacity and required help to finish their scope of work. Similarly, capacity deficiencies in the A&E firms could result in a failure to monitor the progress of the construction firms properly. For example, if an A&E firm staff lacked specific experience with reinforced concrete, it might not be able to identify improperly designed concrete walls. Capacity deficiencies in the construction firms could result in cost overruns and time delays. For example, if a construction firm lacked logistics skills, it might underestimate the time it would take to move heavy equipment from one job site to another. The LCIP I reliance on Liberian A&E firms to monitor the progress of the construction firms—an approach that worked well during LCIP I Phase I implementation—compounded delays and misunderstandings in Phase II. Currently, the LCIP II team has taken over the monitoring of several types of reconstruction activities in which the Liberian A&E firms lack the knowledge and skills that are necessary for proper reporting.
- **Rehabilitating public infrastructure does not automatically link the central government to the people.** Throughout LCIP I Phase II, the community-based approaches used to such good effect in Phase I were dropped as part of the implementation of the infrastructure activities. Although the DFID-funded ESR programming was mostly co-located near the public infrastructure work activities funded by USAID, the requirement to complete the public works activities on time overshadowed the need for community participation. Even when the reconstruction activities were completed, the economic, social, and political benefits were slow to be demonstrated at the grassroots level. In particular, without significant participation by central government officials (whether through the Ministry, the Legislature, or the Office of the President), the communities alongside the newly rehabilitated public infrastructure understand that they are benefiting from donor assistance alone, rather than from a partnership between the Government of Liberia and the donor(s).

Recommendation Number 3: Assess the donor plans for construction early in the post-conflict phase.

After the Comprehensive Peace Agreement was signed in 2003, United Nations Office for the Coordination of Humanitarian Affairs (or another United Nations [UN] agency) should have coordinated with the UN agencies, the donor sector, the Ministry of Public Works, and other interested Government of Liberia agencies and assessed of the needs for construction versus local capacity to implement construction work. Even now, these requirements for construction (new or rehabilitation of old) are unclear; it is critical to integrate these requirements into the Poverty Reduction Strategy Paper for Liberia.

Recommendation Number 4: Assess the capacity of the local construction industry early in the post-conflict phase.

A comprehensive understanding of the capacity of the Liberian construction industry remains unclear in 2008—other than it is extremely weak. The demands on the local construction sector are ever increasing as more donor and private sector infrastructure activities are initiated in the country, putting even further stresses on an already limited resource. The Ministry of Public Works needs support in conducting a full assessment of the whole sector—from supply and availability of materials, to construction sector capacity, to current and envisaged need. Without this knowledge, the local construction industry will continue to be stretched to the breaking point and projects will suffer in terms of quality and timeliness.

Recommendation Number 5: Assess and plan for the availability of and demand for construction materials and equipment early in the post-conflict phase.

Construction materials are in high demand in Liberia, and the local market cannot supply that demand. This is most critically the case for cement, fuel,

heavy-duty equipment, steel rods, electrical equipment, and cured/dried wood products, such as doors. Sourcing these products and equipment causes the majority of delays in construction, in terms of material supply. To compound the situation, there is no Government of Liberia coordination, prioritization of need, or control over supply. Therefore, materials are subject to price hikes and high levels of corruption in the construction supply chain.

Recommendation Number 6: Incorporate capacity building into any rehabilitation project where local construction firms will be used. LCIP I was not specifically designed to provide a capacity-building component for the Liberian construction sector; its focus was on meeting approved contract and workplan deliverables. Consequently, this lack of local capacity had a negative impact in program implementation. A capacity-building component for A&E firms and construction contractors is essential for economic growth, and should be an integral component of all post-conflict rehabilitation work. Some of this work is already underway as part of LCIP II, but consideration of serious support to the private construction sector needs is required.

ABSORPTIVE CAPACITY: GRANTEE PARTNERS

- **The shift in management approach for ESR activities from grants-in-kind during Phase I to fixed obligation grants during Phase II put additional burdens on already stretched Liberian NGOs.** Because of a sharp reduction in staffing, and the relatively small funding available through USAID from DFID to support community-based approaches, the shift from grants-in-kind to fixed obligation grants made sense from the internal project management point-of-view. Throughout the implementation of the DFID-funded activities, however, the LCIP I team overestimated the absorptive capacity of Liberian NGOs to handle the larger grants amounts (the average size of grants increased from \$60,000 during Phase I to \$103,000 during Phase II). As well, because the Liberian NGOs were required to do their own procurement and logistics during Phase II, it often took longer for the Liberian NGO grantees to accomplish their grant objectives.

Recommendation Number 7: When the USAID program objective priority is to accomplish the completion of public infrastructure, or when the scale of the program increases significantly, the pool of potential subcontractors and grantees should include international, regional, and local organizations. The reliance on Liberian partners during Phase I should have been relaxed during implementation of Phase II; or the timeframe for accomplishing the project goals should have been extended. The internal project approach of relying exclusively on Liberian partners for both infrastructure and ESR implementation constrained the project's ability to achieve results on time and/or on budget. Sourcing partners internationally might have helped in the achievement of Phase II's workplan; however, such a partnership would have required careful management of the Government of Liberia by USAID, as President Johnson Sirleaf was pleased to be able to commend Liberian organizations for their accomplishments on behalf of the Liberian people, through its partnership with the United States.

SEASONAL LIMITATIONS: DEALING WITH THE RAINY SEASON

- **The onset of the rainy season limited LCIP I's ability to deliver results on time, for both the infrastructure and ESR activities.** Project monitoring and delivery of materials were challenging because of adverse road conditions during the rainy season. Additionally, due to the seasonal nature of most agricultural activities, Phase II work planning required adjustments in order to accommodate the rainy season. Thus, delays in funding and uncertainty during contract modifications had an

unanticipated impact on the ability of the project to accomplish objectives on time. Frequently, project management attention was required simply to maintain good working relationships with key stakeholders during work stops or delays caused by the rains. The road sensitization activities were important to communicating results and activities during the reconstruction of the roads, but similar community sensitization activities would have been helpful for the other infrastructure activities, as well as for the rest of the ESR program.

Recommendation Number 8: Ensure adequate allowances for the impact of the rainy season on all activities in work planning efforts in Liberia.

PROCUREMENT LIMITATIONS: DOMESTIC VERSUS INTERNATIONAL SOURCING

- **Local procurement of quality construction and other materials was challenging.** Often, locally available products did not meet the minimum quality specifications expected for a USAID-funded project—this ranged from internationally rated electrical cables, zinc sheeting, and washed sand for pouring concrete to grades of aluminum and steel bars. Lesser quality products could result in quicker degradation of completed projects in the absence of good maintenance. Smaller items such as footballs and hand tools were also often locally available, but their poor quality—frequently breaking or deflating—proved to be a demotivating and embarrassing situation for all parties.

INTEGRATING PSYCHOSOCIAL COUNSELING AND COMMUNITY PARTICIPATION INTO ALL LCIP I PROJECTS

- **Community sensitization and participation should be integrated into all future infrastructure and non-infrastructure activities.** A key lesson learned from LCIP I Phase I was that the integration of psychosocial healing and community sensitization into all program activities contributed hugely to the impact that was achieved. The shift in implementation approach to completing infrastructure rehabilitation and the division of USAID-funding and the relatively small funding from DFID resulted removing this integration out of most LCIP I Phase II activities. This resulted in delays and interruptions of the completion of the public works activities, as community stakeholders (such as senators) lacked critical information to share with the public (or had the wrong information). As well, because communities were not actively or consistently engaged or informed about the rationale and/or the progress of the work activities, they reported feeling even more disengaged from their central government institutions. This is a wider issue that the Government of Liberia and USAID need to address to bring government closer to the people, especially the poor and people in the rural areas.

Recommendation Number 9: Integrate community-based approaches and participation into any infrastructure rehabilitation projects, whether at the local, county, district, or national level.

LCIP I PHASE II INFRASTRUCTURE ACTIVITIES: BACKGROUND, SCOPE, AND APPROACH

BACKGROUND

In June 2006, LCIP I completed the major component of the first phase of the project, which focused on the reintegration and rehabilitation of ex-combatants and other war-affected persons. Under this effort, LCIP I had conducted several small to medium-sized infrastructure programs using ex-combatants and private Liberian contractors. Because of the success of these programs, USAID requested LCIP I to investigate the possibility of renovating several key infrastructure components in Liberia, with additional funding of \$13.2 million. This additional funding was issued to LCIP I under two modifications to the contract. Modification number five was issued in March 2006 (for \$5,999,500) and modification number six was issued in September 2006 (for \$7,243,944). Both of these contract modifications included similar objectives for infrastructure assessments and rehabilitation work.

Specifically, contract modification five expanded LCIP I to include activities to support accelerated recovery following the inauguration of the new President, Ellen Johnson Sirleaf. The key areas of assistance were:

- Support to government administrative structures to enable a functioning administration;
- Support to critical education systems; and
- Improve access to the Southeast of Liberia that has been neglected by previous administrations.

This expanded LCIP I objective included the following project activities: Executive Mansion Security Enhancements; Capitol Building Rehabilitation; Zwedru Multi Lateral High School Rehabilitation; and Basic Grading of three road sections (Ganta to Sanniquellie, Buchanan to Rivercess, and Rivercess to Greenville). At the time of the contract modification approval, the amount of damage to these important public buildings and roads was unknown. As a result, the workplans and discussion with USAID and the GOL for these new project activities had to rely on estimates. Once the workplans were approved, all tasks had to be assessed, and then a determination had to be made on what could be done on each task in terms of reconstruction and the available funding.

Under contract modification number six, USAID requested LCIP I to investigate the possibilities of renovating three key infrastructure facilities in Liberia, and supporting the Ministry of Public Works with heavy-duty road equipment that was greatly lacking in the country at the time. The key areas of assistance were:

- Improve access to teacher training;

- Strengthen the Ministry of Public Works in the repair of vital infrastructure; and
- Stimulate employment and improve the skills of youth employed.

Four projects were selected by USAID and the Government of Liberia to assist in achieving these objectives:

- Repair and renovation of the Kakata Rural Teacher Training Institute, Margibi County;
- Repair and renovation of the Zorzor Rural Teacher Training Institute, Lofa County;
- Repair and renovation of the Ministry of Public Works, Monrovia; and
- Procurement of heavy-duty road equipment for the Ministry of Public Works, Monrovia, Montserrado County.

After the initial assessments of the costs to rehabilitate the two rural teacher-training institutes and the Ministry of Public Works compound, it was determined that funding under LCIP I Phase II was insufficient to conduct these tasks. In April 2007, DAI was awarded the follow-on contract to LCIP I, called LCIP II. Both projects had similar objectives and scopes of work, and discussions with (and subsequent approval from) USAID resulted in determining that the remaining grants funding under LCIP I Phase II would be used to complete the following additional projects:

- Assessment of rehabilitation of five county administration buildings;
- Assessment of the rehabilitation of the Todee Road, Montserrado County;
- Rehabilitation of Buchanan Administration Building, Grand Bassa County; and
- Rehabilitation of Tubmanburg Administration Building, Bomi County.

TABLE 1: SUMMARY OF USAID LCIP I PHASE II ACTIVITIES: INFRASTRUCTURE

Grant No.	Name of Activity	Grantee Name	Total Disbursed Amount	Activity Period	Activity Location	Beneficiaries		PDE
						Male	Female	
LCIP/INF/001	Rehabilitation of Executive Mansion	Ministry of Public Works	\$186,457	5/04/06–9/30/06	Montserrado	117	5	10,568
LCIP/INF/002(B)*	Rehabilitation of Capitol Building	Ministry of Public Works	\$2,180,187	11/01/06–12/15/07	Montserrado	350	35	51,619
LCIP/INF/003(A) *	Boreholes	Living Water International	\$115,000	8/14/06–1/14/07	Montserrado	28	6	2,131
LCIP/INF/004*	Rehabilitation Zwedru Multilateral High School	Ministry of Education	\$368,116	8/16/06–1/15/07	Grand Gedeh	98	11	8,808
LCIP/INF/005(B)*	Cross Drainage Structures Ganta Sanniquellie Road	Ministry of Public Works	\$520,766	9/12/06–1/08	Nimba	216	28	24,233
LCIP/INF/006(B)*	Rehabilitation of Cross Drainage Structures Buchanan Greenville Road	Ministry of Public Works	\$3,337,737	12/11/06–4/09/07	Grand Bassa, Sinoe, River Cess	1,074	57	75,906
LCIP/INF/011(B)*	Assessments for Ministry of Public Works, KRTTI, ZRTTI	Ministry of Public Works	\$152,890	12/01/06–2/15/07	NA	N/A	N/A	N/A
LCIP/INF/012*	Assessments for Todee, 5 Admins	Ministry of Public Works	\$77,792	6/29/07–1/09/08	NA	N/A	N/A	N/A
LCIP/INF/013*	Balance of Monrovia Small Roads	Ministry of Public Works	\$36,186	2/23/07–3/23/07	Montserado	49	0	978
LCIP/INF/015	Rehabilitation of Buchanan Administrative Bldg	Ministry of Internal Affairs	\$197,245	8/01/07–10/31/07	Grand Bassa	65	4	5,810
LCIP/INF/016	Rehabilitation of Tubmanburg Administrative Building	Ministry of Internal Affairs	\$182,451	11/15/07–1/18/08	Bomi	45	10	3,148
LCIP/INF/017*	Fence for Buchanan Administration Building.	Ministry of Internal Affairs	\$23,720	2/25/08–3/15/08	Grand Bassa	N/A	N/A	N/A
Total	12 grants total	4 grantees total	\$7,280,602	3/2006–3/2008	7 counties	2,198 total beneficiaries		220,965 PDE total

* Specific target numbers were not included in the grant/subcontract agreement.

GEOGRAPHIC SCOPE OF THE INFRASTRUCTURE PROGRAMMING

The Phase II infrastructure activities LCIP undertook between March 2006 and March 2008 focused on 11 counties mostly in the Southeast: Nimba, Grand Bassa, River Cess, Sinoe, Grand Gedeh, Montserrado, Margibi, Lofa, Maryland, Bomi, and Grand Cape Mount. The aim was to try to cover key critical areas of the country and ensure that all regions participated in the “peace dividend” after the elections. Ten of these countries were new Phase II implementation (activities in Grand Gedeh county were implemented as part of both Phase I and Phase II). Because of the perceived low number of ex-combatants in coastal regions of the Southeast, this region of Liberia had not received significant prior LCIP I attention. Many other donors and agencies were also not working in the Southeast; overall aid efforts had slightly neglected the area. Therefore, it was the desire of the new President to ensure that there was a significant effort to improve the livelihoods of the population there.

DISCUSSION OF MANAGEMENT APPROACH

In June 2006, LCIP I completed the implementation of the ex-combatant integration program (Phase I), and focused exclusively on implementing community-based programming (funded through USAID by DFID) that was geographically located near or alongside the road and other infrastructure work. At this stage, LCIP I had significantly reduced staffing (both expatriate and local) and several field offices had been closed. A three-person expatriate team consisting of the Acting Chief of Party/Deputy Chief of Party, Finance Manager, and Operations Manager coordinated the program with a local staff of around 30 people and one field office in Zwedru, Grand Gedeh County.

Engineering support to the program was provided by three Liberian engineers and an expatriate engineering manager (Acting Chief of Party /Deputy Chief of Party) who was directly employed by LCIP I. The majority of engineering design and assessment work on the program continued to rely on the services of Milton & Richards (M&R), a Liberian A&E firm based in Monrovia. During 2004, the capacity of A&E firms was limited, and M&R was the only local company that had any capacity to partner with LCIP I. The USAID program worked consistently with M&R throughout the ex-combatant phase of the program, and because their performance was adequate to the needs of the program, the range of their architectural and engineering capacity was never fully assessed. Although capacity gaps were observed by LCIP I staff during this phase of implementation, these gaps were typically overcome with the collaboration and support of LCIP I staff.

As the number of large infrastructure projects were added to LCIP I’s portfolio, M&R was engaged to provide additional A&E services. LCIP tasked them with assessing the extent of damage for work at:

- The Executive Mansion;
- The Capitol Building;
- The Zwedru Multilateral High School;
- The Ganta to Sanniquellie road; and
- The Buchanan to Greenville road.

M&R conducted surveys and developed bills of quantities that could be tendered to Liberian contractors for work to be implemented. Ministry of Public Works staff participated actively in both the surveying

activities and the development of bills of quantity and drawings. Indeed, the Ministry of Public Works seconded an engineer to support both M&R and LCIP I engineers. Many of these projects were tendered and started in the later part of 2006.

By September 2006, though, when three large-scale construction projects were added to the LCIP I portfolio, it was determined that M&R did not have the capacity to undertake the additional A&E services required. In conjunction with the Ministry of Public Works, LCIP I tendered these additional A&E services to local firms in October 2006, and engaged the services of three firms in December 2006.

During late October 2006, LCIP I recruited a new Chief of Party, shortly followed by a new ESR Team Leader, and then a new Deputy Chief of Party in January 2007. The former Acting Chief of Party took a revised role as engineering team leader until the end of February 2007. Given a new, expanded management team, DAI reorganized its management structure, with the two technical Team Leaders (for Infrastructure and a new team called Economic and Social Reintegration or “ESR”) reporting to the Chief of Party, while operations, grants and subcontracts, administration, and procurement were delegated to the Deputy Chief of Party. Recruitment for a replacement Engineering Team Leader took several months, and included a temporary assignment by a consultant.

In July 2007, a new Engineering Team Leader was mobilized, soon followed by a third country national Building Engineer and third-country national Road Engineer, both of whom were engaged under the LCIP II contract. Further expansion of LCIP’s in-house engineering capacity continued through January 2008, increasing from 5 staff in July 2007 to 18 in February 2008. Although all of these new positions were recruited and approved under LCIP I follow-on project (LCIP II, Task Order 10), the newfound capacity relieved burdens on LCIP I activities that were still being implemented. As LCIP II activities began, which was a double-burden on an already under-resourced Engineering Team.

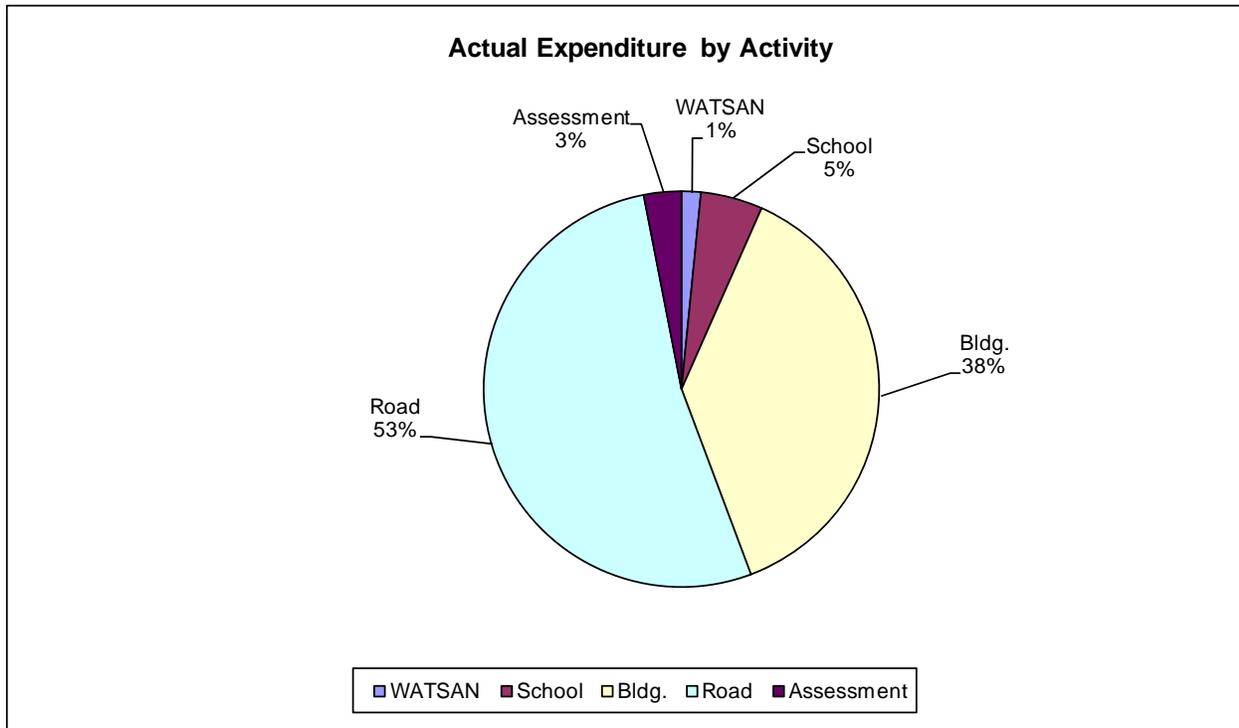
With adequate capacity, management, and staffing for the ESR Team, management focused on the Engineering Portfolio, including resolving the delays and vetting needs and budgets for proposed additional work at the Capitol Building, the Ganta to Sanniquielle Road, and the Greenville to Buchanan Road.

Figures 3 and 4 demonstrate that while the road rehabilitation efforts required just over 50 percent of the USAID funding during Phase II, these activities generated approximately 55 percent of the PDE. Similarly, the rehabilitation of buildings activities cost approximately 38 percent of the funding and generated 39 percent of the PDE. Thus, for the most part, the infrastructure rehabilitation efforts—as a whole—returned slightly higher employment impacts than the activities cost (as well as resulting in the rehabilitation of 5 vertical structures and more than 170 miles of roads).⁶

⁶ In addition to the rehabilitation of infrastructure activities, USAID approved and funded a single ESR grant to support a trade fair in Buchanan in April 2007 (all other ESR grants were funded through DFID). The objective of the trade fair was to provide a venue for 43 small businesses in Zwedru, Greenville, Cestos City, and Buchanan that were active participants in the LCIP Rehabilitation of Artisans Program (RAP). The idea originated after the success and lessons learned from a smaller, city-wide RAP trade fair held in Buchanan in March 2007 (funded through DFID), which demonstrated the benefits of business competition and market awareness. The total grant was just under \$20,000. In the end, 52 RAP businesses participated in the fair, representing 12 trade sectors from 7 counties. Most businesses sold fairly well, including a goldsmith shop from the Greenville RAP that sold more than 20,000 Liberian dollars (more than \$340 USD) at the two-day fair by selling jewelry designed by the apprentices.

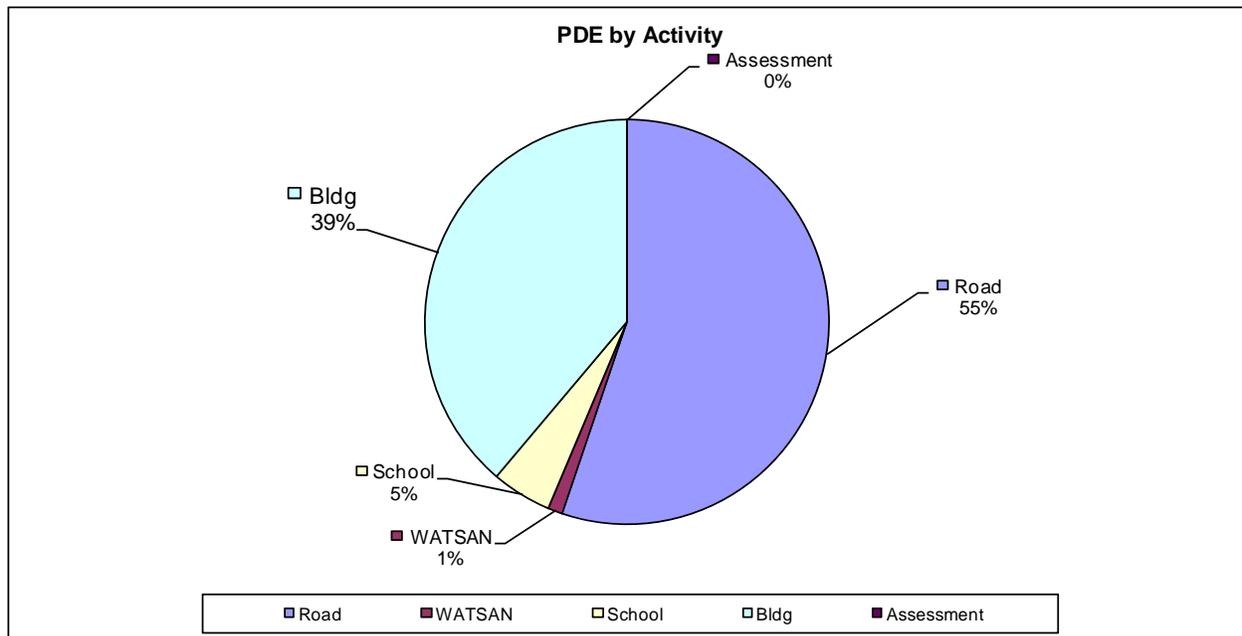
INFRASTRUCTURE COST-BENEFIT ANALYSIS

FIGURE 3: ACTUAL EXPENDITURE BY INFRASTRUCTURE ACTIVITY TYPE



* WATSAN = Water and Sanitation

FIGURE 4: PERSON-DAYS OF EMPLOYMENT BY INFRASTRUCTURE ACTIVITY TYPE



* WATSAN = Water and Sanitation

LCIP I PHASE II INFRASTRUCTURE ACTIVITIES: IMPACT AND ACCOMPLISHMENTS

Democratic elections took place in Liberia for the first time in nearly 10 years in October 2005. As a result, Ellen Johnson Sirleaf was elected president by the people of Liberia and was inaugurated into office in January 2006. Expectations among the Liberian public for immediate improvements in living conditions and the economy were extremely high, and positive change needed to occur quickly. The U.S. Government saw a strong need to support the new President and Government of Liberia. As part of this support process, USAID worked directly with the President and the Ministry of Public Works to identify critical infrastructure projects that would either assist the government in its functioning or directly benefit the Liberian people. Likewise, it was believed that a balance needed to be struck between assistance to the Government and the people, but also between rural Liberia and the capital Monrovia. The President wanted to assist the common people while also improving governance. Therefore, there was a high degree of urgency placed on work done in the first days and months of the new democratically elected administration. The President announced her “150-day plan” for improvements and changes that would take place in the country in the early part of 2006. A key part of this plan was the U.S. Government’s support through LCIP I.

ACTIVITY AREA 1: REHABILITATION OF PUBLIC BUILDINGS

Working together, the Government of Liberia, USAID, and the LCIP I management team selected several key public buildings from the “150-day plan” list for rehabilitation and reconstruction. Within Monrovia, this included security enhancements at the Executive Mansion to improve the new President’s ability to perform her public duties, and a major rehabilitation of the Capitol Building, which had been so severely damaged that the new legislature was unable to function. Also in Monrovia, LCIP I would assess the costs to rehabilitate the Ministry of Public Works facilities. As LCIP I’s main focus was government-owned infrastructure that should be maintained by the Ministry of Public Works, it was deemed prudent by USAID that the Ministry receive support to improve its operational functionality. As with all government offices at the time, the Ministry of Public Works office structure was in an extremely poor condition.

USAID, in collaboration with the Government of Liberia, put together a program for teacher training and supporting government line ministries. Two large teacher-training facilities existed in Kakata and Zorzor, but required significant renovation before they could be put back into service. Therefore, LCIP I was requested to assess the extent of damages and develop a cost estimate for future renovation work to these structures. As well, the complete rehabilitation of the Multilateral High School in Zwedru was selected, in order to provide training to young Liberians in seven vocational and technical disciplines.

Although it was originally anticipated that LCIP I Phase II funding would be sufficient to rehabilitate Kakata Rural Teacher Training Institute (KRTTI) and the Zorzor Rural Teacher Training Institute

(ZRTTI), initial cost estimates indicated that existing funding was insufficient to complete these important rehabilitation efforts. As a result, the completion of the rehabilitation of KRTTI and ZRTTI were moved into the LCIP II workplan, as the scope for that Task Order was deemed sufficient to accommodate these activities. Additionally, it was determined that the total costs of rehabilitating the Ministry of Public Works facilities was outside of the LCIP I budget, and this task was also migrated to the LCIP II workplan. Based on initial cost estimates conducted with LCIP I Phase II funding, rehabilitation of two additional county administrative buildings was funded as part of the project: the administrative buildings in Tubmanburg, Bomi County and Buchanan, and Grand Bassa County.

TASK 1: ENHANCEMENT OF THE EXECUTIVE MANSION

TABLE 2: ACTIVITY AREA 1, TASK 1 SUMMARY – ENHANCEMENT OF THE EXECUTIVE MANSION

Grant Number	Subcontractor	Total Grant Amount	Number of Beneficiaries	Location
LCIP/INF/001	Team Technical Inc.	\$230,000	122 persons employed	Monrovia, Montserrato County
Target/Actual Number of Beneficiaries			Target: 3,840 Person Days of Employment	
			Actual: 10,586 Person Days of Employment	
Actual Duration			May 2006–September 2007	

OBJECTIVES

- Construction of a complete fence and gate to enclose the Mansion yard.
- Installation of new lighting for security.
- Erection of booths and lookout towers for security personnel.
- Construction of manually operated arm barriers.
- Rehabilitation of the Chinese Tea House.

DESCRIPTION

In 2005, Ellen Johnson Sirleaf won the election and was soon to become the first female president of Liberia and in Africa. Because of Liberia’s still volatile state, she requested the support of the U.S. Government in terms of increased security provision. As the Armed Forces of Liberia and all associated military units had been demobilized after the Comprehensive Peace Agreement in 2003, there was no suitable or reliable security unit that could provide adequate protection or security services to the President. Many of the former security service personnel that looked after the former President Charles Taylor were deemed unsuitable because of possible continuing alliances with the former President. The U.S. Government provided the incoming Liberian President with several American Special Forces personnel to provide her direct security as well as security advisors that would assist in recommending security enhancements to the Executive Mansion and other key facilities that she would use.

To improve the security at the Executive Mansion, LCIP I was requested to upgrade key exterior components of the Mansion grounds to control access and assist security personnel in providing adequate

security. The Mansion is in the centre of Monrovia opposite the Capitol Building and is where the President of the Republic of Liberia is intended to work and reside. The building is an impressive eight-story building with extensive grounds. LCIP I requested to work on improvements to the grounds and structures separate from the main Executive Mansion building. The work that included repairing fencing (including security towers/booths at strategic locations), repairing gating mechanisms (to control access), and rehabilitating the teahouse to be used as a security training facility.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- All of the work (objectives) were successfully completed by a Liberian contractor, Team Technical, in September 2006 and were fully supervised by M&R.
- Two hundred and twenty-two people were employed on this activity, reaching a total of 10,586 PDE. This represents over 275 percent of the target for this activity.

Anecdotal Successes

Although of the work were completed successfully, the Mansion suffered a fire on the July 26, 2006. The President was holding an Independence Day function, which included the Presidents from Cote D'Ivoire, Ghana, and Sierra Leone. The event unfortunately overloaded the electrical systems of the mansion and caused a fire that damaged the building. The fire (although not causing major structural damage) made the building uninhabitable for conducting the business of President. Therefore, the President was moved over to the Ministry of Foreign Affairs.

Although the building is not currently in use (as of May 2008), the grounds are being used for high-level visits and special functions. For example, the President of United States visited Liberia in February 2008 and the grounds of the Executive Mansion were used to host the event. The repair of the mansion is hoped to take place in three phases later in the year under funds provided by the Government of Liberia.

Had the fire not taken place in July 2006, the impact of the project would have provided a sense of improved security for the President and the Executive Mansion staff. The compound would have lit up at night and would have provided the public with a sense of order and management from the government. The service provided under this grant will still benefit the Executive Mansion staff once the building is brought back into service.

LESSONS LEARNED

The following recommendations and lessons learned are based on field visits and discussions with the DAI field team, consultants involved, contractors, and the Ministry of Public Works. Some of the recommendations are based what the LCIP I team has already implemented as part of LCIP II in order to improve operations on the ground and outputs from the grants.

- A dedicated project manager from the owner of the building (such as the Ministry Public Works) or delegated authority to a second party with the authority and knowledge to make the appropriate decisions helps to resolve many problems early, and therefore to expedite the completion of the rehabilitation activity.
- The collaboration with the security personnel from the U.S. government's Security Sector Reform project greatly assisted in the direction of design and the requirements that were needed. Clear

- A project of this size and scope was well within the capacity of the Liberian private construction sector and was conducted quickly and successfully.

TASK 2: CAPITOL BUILDING RENOVATION

TABLE 3: ACTIVITY AREA 1, TASK 2 SUMMARY – CAPITOL BUILDING RENOVATION

Grant Number	Subcontractor	Total Grant Amount	Number of Beneficiaries	Location
LCIP/INF/002B	Sawyer & Associates	\$2,180,187	385 persons employed	Monrovia, Montserrato County
Target/Actual Number of Beneficiaries			Target: N/A	
			Actual: 51,619 Person Days of Employment	
Actual Duration			November 2006–December 2007	

OBJECTIVES

- Repair and/or replacement of critical fixtures and fittings (doors, windows, false ceilings, cabinets, etc.).
- Repair key structural elements (walls, ceilings, floors, etc.).
- Complete internal and external painting.
- Removal and reinstallation of plumbing systems and supply.
- Removal and rehabilitation of electrical distribution systems.
- Rehabilitation of air conditioners and joint-chambers furniture.

DESCRIPTION

The Capitol Building is located in the center of Monrovia opposite the Executive Mansion and serves as the national seat of the legislative branch of government. The building comprises four floors covering approximately 120,000 square feet. The building has gone through many revisions since it was built in 1956 as the legislature of Liberia has grown and changed. In 1956, Liberia consisted of three provinces but in 2008 has 15 counties. The building was expanded in 1974 to accommodate the legislature as it was then, but the 15 counties of today exceeded the capacity of the building. In 2008, the building needed to provide the legislature with 64 offices for the elected members of the House of Representatives and 30 offices for the Senate, along with office space for the Vice President who serves as the President of the Senate. The building also needed to provide meeting spaces for legislation to be discussed, for support staff for the legislature, and for the building maintenance crew.

The building suffered little direct damage but was heavily looted and severely neglected during the war. Although the building was able to serve the legislature in 2006 (and before for the transitional government), it desperately required renovation and improvements. It also did not have enough office

space for the legislature given the expansions and changes in counties that were made under the Taylor administration.

In 2006, LCIP I was tasked and funded to renovate the Capitol Building for the Liberian legislature of today, which included redesigning the existing building. Design work was conducted through 2006 by the LCIP I team in conjunction with the A&E firm M&R. The design teams worked closely with the Ministry of Public Works, USAID Cognizant Technical Officer, and a committee from the legislature that comprised representatives of the House and Senate. A \$2 million allocation was made for this work and improvements. The consultation and design process was extremely complex and difficult, involving numerous politically charged meetings, but was finally completed in September 2006. The project was tendered and awarded to Sawyer & Associates Incorporated in November 2006. Work on the building took just under a year to complete and the President of Liberia dedicated it in November 2007. In January 2008, the legislature returned to the building after their holiday break, officially bringing the Capitol Building back into service.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- Sawyer and Associates, a Liberian contractor, successfully completed all of the work (objectives) in December 2007 and M&R fully supervised the project.
- Three hundred and eight-five people were employed on this activity, reaching a total of 51,619 PDE. There was no PDE target established for this activity in the subcontracts and grant agreements.
- The completion of this building is a major achievement of the LCIP I team due to the complexities of the work that needed to be done and political pressures that were brought forth by the legislature and the president's office. The LCIP I team worked tirelessly with the legislature and the Ministry of Public Works to ensure that the designs and renovation work of the building were to their requirements and remained in budget.



Inside Liberia's Capitol Building

During the design phase, the legislature was constantly consulted and advised on what was possible. The USAID Cognizant Technical Officer presented in the joint chamber of the Capitol Building to both the members of the Senate and the House of Representative what could be done with the funds available. Members were given the full opportunity to discuss what was required and many changes were made to accommodate their requirements. Despite this participatory approach by the LCIP I team and the U.S. Government, many of the stakeholders did not collaborate with the effort until the work began and they could physically see how the building would change.

The construction (additional office space was newly constructed on the ground floor) and renovation of the building was a major challenge and the work nearly took double the original estimated time. Many areas of the building could not be fully assessed in the design phase, as access was limited as the legislature continued to function. This created problems in the bill of quantities and unexpected cost increases that had to be borne by USAID or the contractor. The extent of damages to the building was

also a major problem, as some damage only became evident after the interior of the building was dismantled. To add to these complications, the legislature constantly requested changes—which LCIP I accommodated where practical, and diplomatically rejected when they were either inappropriate or exceeded the budget ceiling. These changes not only increased the costs of the original subcontract to Sawyer & Associates, but also significantly added to the difficulties in managing the reconstruction contract. Despite these complexities, the team from LCIP I and M&R worked with the contractor to find solutions and made the project a success.

Anecdotal Successes

Today the LCIP I-renovated Capitol Building is a major improvement over the previous condition of the facility before 2006. The building is now effective for the Legislature to use, despite the shortfalls of electricity and damages that have occurred through misuse. As of May 2008, the building was bustling with activity and power was provided to most of the offices through the budget of the legislature. All of the legislators now have an office and rooms to discuss and meet. Delivery of good administration to the people of Liberia will be the next challenge.

LESSONS LEARNED

The following recommendations and lessons learned are based on field visits and discussions with the DAI field team, consultants involved, contractors, and the Ministry of Public Works. Some of the recommendations are based what the team has already implemented under LCIP II in order to improve operations on the ground and outputs from the grants.

- When the Capitol building needed to be expanded in the past to accommodate a growing legislature, the building size and “footprint” was significantly expanded. When the building needed to be expanded in 2006–2007, there was great expectation that the building would be expanded by adding new wings to the building or otherwise changing the total square footage of the building footprint. With the funding available from the U.S. Government, this was not possible. Both USAID and the LCIP I team constantly shared and consulted with the legislature the limitations to what could be done and how much funding was available. In Liberia, U.S. Government funding is often seen as an endless pot of money, and limitations and funding restrictions are not usually believed or understood. This situation links into the broader context of managing expectations in Liberia and communicating to the Liberian people the realities of what can be done with donor funds. In terms of managing expectations with the Capitol Building, the LCIP I team, in conjunction with both USAID and the U.S. Embassy, constantly reviewed the situation with the legislature. Unfortunately, because the legislature is a fragmented institution at present, they do not always communicate, and a consensus was never formed for the Capitol Building. This made the path of construction especially difficult: as the realities of how the building was shaping up became apparent, change requests were constantly put forward.
- The technical approach of M&R could have been better as their design and bill of quantity did not allow for unforeseen circumstances—which were clearly required for a building of this size and nature. The LCIP II team has now adopted a process of “measure and pay contracts” as well as the use of provisional sums. If both of these measures had been used on the Capitol Building, the project would have been easier to manage and fewer disputes over costs changes would have occurred.
- The warranty period provided by the contractor was a useful tool for correcting errors and problems after completion. That said, the contractor was requested to deal with more than what is reasonable in

the agreement because of building misuse and the lack of maintenance and care. In the future, perhaps a bank guarantee between the contractor and building owner be employed with a tighter terms of reference and without the involvement of the LCIP I.

- Sawyer & Associates employed an American Liberian who was trained in the United States and had managed several construction projects there. This increased management capacity assisted the contractor in administering the contract and provided a politically neutral point of contact for the activity stakeholders. The later reduced the legislature's influence over the contractor for unauthorized requests.
- The use of a bank guarantee was extremely restrictive on the contractor's cash flow. At the start of the project—because of the large amount of funds had to be dispersed—LCIP I insisted on a bank guarantee for the value of the disbursements. The controls that the bank imposed on the contractor in terms of access to fund severally limited their cash flow. It also took considerable time for the bank to review work done and provide further approval for funds to be released. The requirement of a bank guarantee was later removed by LCIP I due to good performance of the contractor and the restrictions the bank imposed.
- Communications on the project (as with many large-scale projects) proved to be problematic at times and broke down in some instances. The communication of subcontractor work schedule changes was not always cleared with LCIP I, and as a result project funds were not dispersed when needed to the subcontractors, causing problems in relationships between the stakeholders. Both the A&E firm M&R and the subcontractor needed to be clear on parameters of communication of decisions. Communications with the legislature could have been improved by with a better understanding of their high expectations and fragmented state. What was agreed with the working committee or the Speaker of the House was not always communicated or communicated correctly to the rest of the legislature.
- Post-rehabilitation maintenance and management of the building were not considered sufficiently by the legislature, and therefore a number of problems have occurred since the completion of the renovation that has had a detrimental effect on its ability to function as designed. Although the Capitol Building has a maintenance team, they are not appropriately trained or empowered to deal with the issues correctly. In the future, when such key government buildings are renovated, LCIP II should consider devising a management plan for the use and maintenance of the building or making the management plan a deliverable of the grant with sufficient resources to implement as such.
- Theft was an ongoing problem through the construction phase and continue to affect the functioning of the building. Construction materials were lost from the site even though the contractor provided security. After the building was completed and handed over to the legislature, some items installed in the building were stolen by Capitol Building users (items such as air conditioning parts, plumbing parts, and copper grounding rods).
- General misuse of the building continues. For example, nearly 50 percent of the building users do not have running water or basic plumbing in their own homes, and therefore do not know how to use the lavatory systems. This has resulted in some damage to the water and sewage system of the building. Likewise, many staff and workers do not have an electricity supply at home and are not familiar with use of electronic items and the limitations of power supply when using generators. Overloading the system was a major problem during the early stages of use of the building and the control and use of air conditioning systems remains problematic.

- No electrical supply provision was made under this project as it was deemed too expensive to provide and it was understood that the Liberia Electricity Corporation (LEC) would reach Capitol Hill within the timeframe of the project. Unfortunately, LEC has still been unable to provide power to Capitol Hill and the legislature has been running on a power-rationing schedule, using the small generators that were already available. No consideration was made for this and how power was going to be managed. To compound the problem, many of the senior legislative members demanded constant power, which overloaded the system. Once it was understood that LEC was not going to be able to provide power, LCIP I or the legislature should have devised a clear management plan for powering the building and adapted the electrical set up to suit. This also highlights the weaknesses in the building’s management and maintenance system.
- The doors installed in the building are suffering from shrinkage due to the wood not being fully dried before installation. Timber products in Liberia are in many instances made of wet wood or partially dry wood because no drying facilities are available in the country. Since the LCIP I activity began, kilns are now available in Liberia that can be used to dry timber before products are manufactured. Either contractors need to be given more time for timber to dry (due to humidity this can be for more than six months, depending on storage conditions and timber type) or kilns facilities need to be considered into the project timeframe.

TASK 3: REHABILITATION OF ZWEDRU MULTILATERAL HIGH SCHOOL

TABLE 4: ACTIVITY AREA 1, TASK 3 SUMMARY – REHABILITATION OF ZWEDRU MULTILATERAL HIGH SCHOOL

Grant Number	Subcontractor	Total Grant Amount	Number of Beneficiaries	Location
LCIP/INF/004	Gilgal Construction Company	\$368,116	109 persons employed	Zwedru, Grand Gedeh County
Target/Actual Number of Beneficiaries			Target: N/A	
			Actual: 8,808 Person Days of Employment	
Actual Duration			August 2006–January 2007	

OBJECTIVES

- Provide schooling facilities for more than 1,500 students in Grand Gedeh County and beyond.
- Renovation of 15 classrooms and campus buildings (roofs, ceilings, walls, windows, doors, floors, electrical, plumbing, painting, and the provision of beds).

DESCRIPTION

Liberia has one of the highest illiteracy rates in Africa. Much of this can be attributed to the 14 years of civil conflict. Grand Gedeh County, a county like others in Liberia, suffered major destruction of its educational institution. As a result, school age children were victimized by the conflict as most of them became prime recruits for the various warring factions. The rehabilitation of schools offers opportunities for Liberian children to improve their education and build a foundation for their future, as well as offer an alternative engagement to crime, vagrancy, and idleness.

The Zwedru Multi Lateral High School is a technical and vocational institute constructed by the World Bank and made operational by the Government of Liberia in 1978. Before the war, the school trained many young Liberians in seven vocational and technical disciplines. Its facilities were damaged by the war and it could not function at full capacity.

LCIP I was tasked to renovate as much of the campus as possible with the funds available under the contract. An approximate allocation of \$350,000 was made for the project, which aimed to renovate the critical structures on the campus that would allow the school to function near full capacity and functionality. The A&E firm M&R was engaged to provide the renovation assessment and determine the level of work required at the campus. A full survey was completed in July 2006 that indicated the level of damages required more than the funds available. LCIP I worked with closely with the Ministry of Education and M&R to identify the critical structures and facilities that needed to be renovated. Fifteen structures were identified, including the provision of electricity and water supply.

In August 2006, work on the Zwedru Multi Lateral High School campus started with the Liberian contractor Gilgal under the supervision of LCIP I engineers and M&R. Gilgal is one of the few women owned Liberian contractors, and LCIP I was therefore excited that this firm won the bid for this activity. The company has conducted several projects for LCIP I over the last four years to great success, but none were to the scale and funding levels of the Zwedru Multi Lateral High School.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- Gilgal Construction Company successfully completed the 15 buildings on the campus in April 2007.
- Minor work on power and water supply continued into July 2007, when the campus was fully completed as laid out in the grant agreement.
- The President of Liberia and U.S. Ambassador dedicated the campus on the April 12, 2007.
- The school started its first semester in the new structures at start of the new school year in September 2007.
- As of June 2008, the school had 1,144 students in different disciplines.
- One hundred and nine people were employed on this activity, reaching a total of 8,808 PDE. There was no PDE target established for this activity.

Anecdotal Successes

With all the classrooms of the school are fully functional, the school now operates a morning session with 701 students and an afternoon session with 218 students. In addition, the school has expanded its level of education and started a junior college with 225 students. Although the dormitories have been fixed, they are currently only being used by 5 students when they can accommodate 192 students. Zwedru Multi Lateral High School is one of the main educational facilities in the Southeast and is now functioning after many years of conflict and neglect.

LESSONS LEARNED

The following recommendations and lessons learned are based on discussions with the DAI field team, consultants involved, contractors, and the Ministry of Public Works. Some of the recommendations are

based what the team has already implemented under LCIP II in order to improve operations on the ground and outputs from the grants.

- As of June 2008, the dormitories were not being fully used because lodging costs were perceived by the students to be prohibitive, and food service was not provided. Many students stated their desire to stay in the dormitories, and registered with the school to have a place reserved for them. The school is charging 4,500 LD for lodging per semester—which does not include meals. The students have complained that they cannot afford these costs and therefore the dormitories are not being used. The school and the Ministry of Education did not foresee this issue and did not budget any costs to support students in the dormitories. The costs of food and lodging should be carefully considered before dormitories are rehabilitated or constructed in the future.

Before

After

Girls Dormitory



Before the rehabilitation, the girls' dormitory lacked a roof, doors, windows, part of the walls were collapsed, and trees and other plants had overgrown the structure.



After the rehabilitation was completed, the girls' dormitory was fully functional, and ready for students.

Boys Dormitory



Before the rehabilitation, the boys' dormitory lacked a roof, doors, windows, and large trees and other plants had overgrown the structure.



After the rehabilitation was completed, the boys' dormitory was fully functional, and ready for students.

- The use of a contractor that has been working with LCIP I on several other projects proved to be a major success for the project. The contractor worked hard and efficiently to complete the work on schedule, and with very few budget alterations. One explanation of this is that the contractor attended the school during her youth, and had took pride in making sure she completed the work successfully.
- Working in Zwedru involved many constraints due to the distance from Monrovia and the lack of accessibility by road. Many of the construction materials required for this large-scale renovation work were not available locally, and as a result, many of the materials had to be transported from Monrovia. Due to poor road conditions, this had major cost and time implications. However, in the initial design of the project, the percentage for transportation was increased because these factors were encountered on previous projects in the region. The contractor also worked to source as many materials from the local market as possible. Furniture and doors, for example, were purchased locally. Therefore, although the contractor encountered problems and delays because of road conditions, she dealt with the situation well.
- The water system at the campus, which was installed by the project, is apparently not working. Through conversations with the school principal, the pump installed is undersized and cannot draw water from the borehole. This should have been addressed before completing the rehabilitation activity.
- Theft and problems with rogues have increased since the renovation of the campus was completed by LCIP. Because the campus has an attractive finish and is not fenced, rogues have easy access to investigate what can be stolen. High unemployment and the lack of interest by youth in agriculture in Grand Gedeh County (this can be extrapolated for Liberia as a whole) means that large numbers of the community still do not have enough resources to sustain their daily lives, a possible underlying reason for the existence of rogues. The principal has stated that the maintenance department can handle the erection of a simple wire fence if enough material is provided.
- Maintenance and care of the campus is being carried out by the school authorities and the students. The students that attend school are encouraged to clean the campus every now and again, to ensure the place remains pleasant to study. The school also has a maintenance crew that looks after the campus and provides minor maintenance when required. Major maintenance and improvements are not currently budgeted by the Ministry of Education for Zwedru Multi Lateral High School. Long-term care of the school facilities could become problematic if a long-term maintenance plan is not considered and funded.

TASK 4: REHABILITATION OF BUCHANAN ADMINISTRATION BUILDING

TABLE 5: ACTIVITY AREA 1, TASK 4 SUMMARY – REHABILITATION OF BUCHANAN ADMINISTRATION BUILDING

Grant Number	Subcontractor	Total Grant Amount	Number of Beneficiaries	Location
LCIP/INF/015	Triple W Inc.	\$197,245	69 persons employed	Buchanan, Grand Bassa County
LCIP/INF/017	Triple W. Inc.	\$23,720		Buchanan, Grand Bassa County
Target/Actual Number of Beneficiaries			Target: 4,620 Person Days of Employment (42 persons employed)	
			Actual: 5,810 Person Days of Employment	
Actual Duration			August 2007–March 2008	

OBJECTIVES

- Rehabilitation of the Grand Bassa County Administrative Building in Buchanan (roof, ceiling, plumbing, mechanical, sewage, windows, doors, floors, stairs, landscaping).
- Improve the working environment for government offices and therefore improve the service they can provide to communities.

DESCRIPTION

The Buchanan administrative building has two stories, a typical T-shape structure, and a basement section located at the front of the building. The building is divided into sections, including the superintendent's office, magistrate court, county attorney's office, national police office, bureau of national investigation office, circuit court office, debt court office, prison, Ministry of Gender office, assistant superintendent for Development, Office of Lands and Mines and Energy, City Mayor Office, Post and Telecommunications Office, County Inspectors Office, Land Commissioners Office, and Immigration Office. During the war, this key county administration building was destroyed, looted, and otherwise made uninhabitable.

Before



Before rehabilitation of the Buchanan Administration Building, major components of the structure were severely damaged including the roof, ceiling, plumbing, mechanical, sewage, windows, doors, floor, stairs, and landscaping.

After



After rehabilitation was completed, the building was fully functional.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- The Buchanan Administration building was completed in January 2008. The Liberian subcontractor and the A&E firm's support to this project were effective and no major problems were encountered on the project.
- Sixty-nine people were employed on this activity, reaching a total of 3,716 PDE. This represents over 125 percent of the target for this activity.

LESSONS LEARNED

The following recommendations and lessons learned are based on discussions with the DAI field team, consultants involved, contractors, and the Ministry of Public Works. Some of the recommendations are

based what the team has already implemented under LCIP II in order to improve operations on the ground and outputs from the grants.

- As the complexity of the project was limited and work required on site simple compared to other projects implemented by LCIP I in this phase, no major problems occurred. This type and size of project is well within the parameters of the engineering capacity in Liberia.
- The County Superintendent was constantly engaged in the project and provided good support to LCIP I and its partners.
- At the inception of the project there were minor problems getting the police and prisoners they held in the basement of the building to vacate. LCIP I with the support of the Superintendent and her office was able to resolve this in a minimum amount of time and no major delays occurred.

TASK 5: REHABILITATION OF TUBMANBURG ADMINISTRATION BUILDING

TABLE 6: ACTIVITY AREA 1, TASK 5 SUMMARY – REHABILITATION OF TUBMANBURG BOMI ADMINISTRATION BUILDING

Grant Number	Subcontractor	Total Grant Amount	Number of Beneficiaries	Location
LCIP/INF/016	Gilgal Construction Company	\$182,451	55 persons employed	Tubmanburg, Bomi County
Target/Actual Number of Beneficiaries			Target: 4,400 Person Days of Employment (40 persons employed) Actual: 3,148 Person Days of Employment	
Actual Duration			November 2007–January 2008	



Before: Although the structural integrity of the Tubmanburg County Administration building in Bomi was considered adequate, the building had been badly damaged during the war.

and the Liberian government. It was dedicated on March 31, 1971. It hosted the Ministry of Lands, Mines & Energy; Ministry of Information; Ministry of Internal Affairs; and the Circuit Court, the General Services Agency, Ministry of Public Works, and Ministry of Finance. The building is also divided into sectors, including the Superintendent’s office, Development Superintendent’s office, Special assistant’s

OBJECTIVES

- Rehabilitation of the Bomi County Administration Building in Tubmanburg (roof, ceiling, plumbing, mechanical, sewage, windows, doors, floors, stairs, landscaping).
- Improve the working environment for government offices and therefore improve the service they can provide to communities.

DESCRIPTION

The Tubmanburg Administration building is located on a 50-acre parcel of land in Bomi County. It was constructed by the Liberia Mining Company in 1970 as part of the contractual agreement between it

office, conference room, and other administrative staff area. During the war, this key county administration building was destroyed, looted, and otherwise made uninhabitable.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- The Bomi Administration building was substantially completed in March 2008 and was dedicated in late April 2008.
- Fifty-five people were employed on this activity, reaching a total of 3,148 PDE. This represents approximately 72 percent of the target for this activity.

Anecdotal Successes

Today the Bomi Administration building is fully functional and extremely busy, even though it does not have fuel to provide a constant power supply. The courts are especially busy as they provide a place to settle disputes in the correct manner. The building also provides a place for local officials and district commissioners to meet and work. Currently, the Ministry of Internal Affairs has provided three computers for the key members of staff in the office (Superintendent, Accountant, and Land Commissioner).

Although LCIP I provided a generator to supply some electrical power to the building, the Bomi Administration is unable to fund the fuel at present. They have put out a request to agencies working in the area to assist them with fuel for eight hours of running time a day, five days a week. The management and technical capacity of the administration is still very weak. It is unclear what kind of budgets and support they get from the Ministry of Internal Affairs. The building, however, is supported by a maintenance crew of seven people (two electricians, two mechanics, a plumber, a caretaker, and a cleaner).



After: After rehabilitation was completed, including repairs of the walls and floors, replacement of the doors, windows, ceilings, painting of the interior and exterior, installation of approved fixtures, and landscaping, the Administration building in Tubmanburg was restored."

The A&E consultant's performance on this project was reasonably good and they even supported the project in overcoming deficiencies incurred by the subcontractor. Several doors were procured by the consultant directly because the contractor ran out of working capital. The presentation of design work and the quality of supervision was an improvement over other A&E firms used by LCIP I on other projects.

LESSONS LEARNED

- Many of the plumbing materials, fixtures, and fittings provided were not manufactured to withstand the rough use that has occurred over the last two months since the building was handed over to the county administration. Although samples of products used in the construction and installed in the building were supposed to have been approved by the A&E consultant, the contractor sometimes bypassed this system and installed inappropriate materials. In the future, higher quality materials need to be provided in order to withstand the rough use that occurs in public buildings, particularly those materials provided

for sanitation facilities. As well, contractors should be discouraged from procuring inappropriate or low-quality materials.

- Many of the users of the building do not know how to use standard flushing toilets, instead outside pit latrines should also have been provided. The number of toilets provided (eight) for a building of its size and use is not sufficient. The courthouse has numerous visitors, and many are more comfortable with the use of a pit latrine. An education program on hygiene and sanitation, as well as other maintenance, to accompany sanitation facilities to assist users in how to use and look after their building.
- The Bomi public officials had high expectations on what the rehabilitation of the building would accomplish. Because it was understood that USAID was funding the project, the Bomi administration perceived that every single problem would be solved and all their desires would be met. A communications effort should have accompanied the rehabilitation effort, in order to set expectations appropriately.
- The subcontractor used on this project had previous good performance with LCIP I and had completed three projects successfully and on time. However, the performance of the contractor on this project was slightly problematic. Major delays were incurred and the quality of output and products was a concern. For example, some of the doors had to be replaced because they were of poor quality. Through an investigation by the LCIP I engineers and the subcontractor, it was determined that the reduced performance was the result of the change in contract mechanism. The mechanism used on previous contracts with the contractor was a milestone contract; on this project, a measurement contract was used.

With a measurement contract, the subcontractor receives a 20 percent advance to begin work. This advance did not allow the subcontractor for the Tubmanburg Administration Building with enough working capital to buy all the materials required or to deal with market deficiencies and fluctuations. Second, payments were made on monthly measurements, which further reduced the contractor's working capital. On each measurement, only a small amount was paid to the subcontractor because performance was low. This had a protracted effect on the subcontractor's working capital and thus reduced the contractor's performance and compounded the problem further. For some of LCIP I's subcontractors—particularly where their capacity to implement fully is unclear—a 30 percent advance should be made and payments should be made on a milestone basis instead of monthly.

ACTIVITY AREA 2: REHABILITATION OF PUBLIC ROADS

Because of years of neglect and war, almost all major public roads—both primary and secondary—in Liberia were so severely damaged that they were inaccessible for months at a time. As well, the climate and the heavy seasonal rainfall have had a deleterious impact on all roads in the country. Therefore, as part of the “150-day plan,” the President of Liberia identified key public roads for rehabilitation and repair, in order to improve the livelihoods of the population and to restore a key component of economic growth in the country. With USAID, LCIP I staff identified three primary road sections for rehabilitation and repair, including the Ganta to Sanniquellie road in Nimba County, and the national road that runs through Grand Bassa, River Cess, and Sinoe counties.

TASK 1: REHABILITATION OF GANTA TO SANNIQUELLIE ROAD

TABLE 7: ACTIVITY AREA 2, TASK 1 SUMMARY–REHABILITATION OF GANTA TO SANNIQUELLIE ROAD

Grant Number	Subcontractors	Grant Amount	Number of Beneficiaries	Location
LCIP/INF/005	Pacific Construction Company Atlantic Engineering and Construction Company	\$520,766	244 persons employed	Nimba County
Target/Actual Number of Beneficiaries			Target: N/A	
Actual Duration			Actual: 24,233 Person Days of Employment	
			September 2006–March 2008	

OBJECTIVES

- Rehabilitate 20.4 miles of public road from Ganta to Sanniquellie, Nimba County.
- Increase access to goods and services for rural populations.
- Reduce transit times between destinations along the road, improve road safety, and reduce the risk of accident.
- Provide short-term employment and training for youth and other community members in the following disciplines: fabrication of reinforce concrete of specified dimensions, bridge rehabilitation, culvert installation, head walls construction, steel bending, form work erection, road signs identification, and the usage of required road materials.
- Assist government officials and legislators to access the populations that they serve.

DESCRIPTION

The Ganta to Sanniquellie road is located in Sanniquellie Mah District, Nimba County. It was originally designed to be an all-weather, laterite-surfaced, double-lane secondary road. The road has a length of 20.4 miles/32.8 kilometers, with a cross section/width of 48' 0"/14.63 meters. It serves as one of the most important access routes within the county. It links Liberia with both the Republic of Guinea and The Republic of Ivory Coast. The road is also connected to the county's former and largest iron ore mining company (LAMCO), which was looted and destroyed during the war. The road passes through agricultural lands that produce commodities such as rubber and sugar cane, and through towns and villages. The Government of Liberia originally constructed the road under the leadership of the late President Dr. William V.S. Tubman, through the Ministry of Public Works, in the early 1960s. From the 1960s to the late 1980s, the road was maintained by LAMCO Civil Engineering Crew/Civil Works.

During the past two decades of civil conflict in Liberia, the road has suffered heavy damage due to years of neglect, harsh climate conditions, and war. In 2006, when the project was proposed, the United Nations Mission in Liberia Engineering was already engaged in some minor work along the road to allow cars/trucks to travel freely in both rainy and dry seasons. Despite this effort, the road carriageway was rapidly declining, and all drainages (including multiplate culverts, bridges, and other essential structures)

were severely damaged. Most of the steel culverts were corroded and filled with debris, and required replacement.

Through discussions with other funding agencies working in Nimba County, the LCIP I team gathered information that the European Commission (EC) also had funding to conduct work on the Ganta to Sanniquellie road. Both USAID (through LCIP I) and the EC worked together to determine how to best use their combined resources to improve access to the communities in the area. Neither agency had enough funding to renovate fully the road nor drainage structures to an all-weather laterite road, but, combined, there was enough to rehabilitate the entire road substantially. In coordination with the Ministry of Public Works, the EC was tasked with the repair of the road pavement and LCIP I was tasked with the repair of the drainage structures.

LCIP I engaged the services of M&R to conduct a full survey of the road with the support of Ministry of Public Works engineers. Design work was completed in August 2006 and tendered in two sections to Liberian contractors for culvert fabrication and drainage structure construction and installation. LCIP awarded two contracts for the project and work started on the road in September 2006. LCIP I again used the services of M&R for supervision of the work with the support of the Ministry of Public Works regional engineers. The EC also conducted its own assessments and tendered the work for pavement repairs to another local contractor. Work by the EC started in January 2007. A groundbreaking ceremony was held in October 2006 with the President of Liberia and ambassadorial representatives from the U.S. Government and the EC.

Due to improved understanding of ground conditions and required improvements as work progressed on this rehabilitation activity, a number of revisions were made to the original scope of work that was given to the contractors responsible for the installation of drainage structures. These revisions and deteriorating working conditions on the ground pushed the project implementation into the rainy season, which caused substantial delays on the project. During the rainy season, the subcontractor semi-demobilized as working conditions were impractical for full-scale work. The subcontractor fully remobilized in October 2007 to complete all the outstanding work, as well as additional work that was identified. Unfortunately, in September 2007, a major flood hit Nimba County and caused substantial damage to the road on a section that had not been identified as needing a new drainage structure installed. The flood caused a 50-foot wide, 30-foot deep channel across the road approximately 25km from Ganta. The damage closed the road, and road users were forced to change vehicles at the channel to reach their final destination. LCIP I conducted emergency work on the damaged section and built a temporary bridge on a diverted section of road in October and November 2007. This has allowed traffic to bypass the damaged section and the road was reopened.

Under LCIP II, USAID requested that LCIP provide a permanent repair to this section and that a bridge be constructed over the channel because, despite the repair provided by the temporary bridge, damage to this section of the road continued to impede commerce and travel in the area. However, LCIP staff discovered that Mital Steel is planning to restart iron ore mining work in the former LAMCO mine in Yekepa, and that LAMCO is rebuilding the railway line that runs from Buchanan to Yekepa to ensure access to the mines. To assist in the construction process of the railroad, Mital Steel needs access along the Ganta to Sanniquellie highway. During meetings and discussions about for the repair of the damaged section of road, Mital Steel agreed with the Ministry of Public Works to build a permanent bridge over this part of the road.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- All work that was agreed for LCIP I to undertake was completed in January 2008.
- The EC completed their section of work in April 2007, but had to reduce the amount of work they could complete substantially. The EC planned on a 6m-wide carriageway, with a ceiling value of €300,000. The Ministry of Public Works requested that the road be constructed to 39.37 feet (12m) wide; therefore, the EC was not able to complete all the work within their budget allocation. Therefore, only 11.18 miles (18km) of the original 20.38 miles (32.8km) of resurfacing was completed by the EC (from Sanniquellie to Millers Farm).
- Even though the entire length of the road was not resurfaced, it remains open to traffic between Ganta and Sanniquellie year round. The road has been a challenge for LCIP I as the work was more complicated than originally envisioned, and stretched over the rainy season, which has its inherent problems. LCIP I and its partners have managed to overcome these challenges and improve access to the citizens of Nimba County.
- It used to take more than two hours to travel from Ganta to Sanniquellie and some sections during heavy rains were only passable by 4x4 vehicles. Now it can take under 45 minutes to travel the road. Farmers are finding it to be both easier and quicker to get their produce to markets or to buying stations, and transport costs have reduced.
- Two hundred and forty-four people were employed on this activity, reaching a total of 24,233 PDE. No targets for employment were set for this activity.

Anecdotal Successes

Through activities supported by DFID funding, LCIP I conducted projects to support smallholder rubber farmers in Nimba County, and the farmers are greatly benefiting from improved access due to the rehabilitation of the Ganta-Sanniquellie road. For example, these farmers are now able to obtain rubber price information from Ganta because travel is no longer prohibitive due to cost or time constraints. Rubber farmers typically sell their rubber to intermediaries, who usually control pricing information. Understanding the prices in local markets and buying stations run by Firestone and Liberian Agricultural Company (LAC), the LCIP I-supported farmers were able to push for higher prices that were closer to the true market value because they were able to travel to the markets themselves to gather pricing information (price checking can still not be done through the phone network as it is not operating throughout the rural parts of the county where the rubber farms are located).

As well, many of the LCIP I-supported smallholders have become employers in areas around the road. Improved transport conditions have enabled smallholders to meet with each other and develop common strategies to improve their rubber production and maintain the rubber tappers in the area.

LESSONS LEARNED

The following recommendations and lessons learned are based on discussions with the DAI field team, consultants involved, contractors, and the Ministry of Public Works. Some of the recommendations are based what the team has already implemented under LCIP II in order to improve operations on the ground and outputs from the grants.

- The design requirements of the road were not fully developed as M&R, Ministry of Public Works, and LCIP I did not have the capacity to undertake the required investigation and assessment of such a major

road rehabilitation activity (during Phase I of LCIP I, these implementation partners had had experience with feeder roads and some minor regional roads, the Ganta-Sanniquellie road and other national roads presented challenges that were not anticipated). As a result, for example, no assessment of hydraulic conditions was conducted, and the design of drainages structures was not realized until construction work had started. Additionally, the supervision of the work by both M&R was not as detailed as required, and the quality of some of the work depended on the subcontractor's self-assessment.

- The gravity and scale of the project was not fully realized. Works should have been planned to be undertaken over two dry seasons and not one.
- Although the road has significantly improved the access to the area, the sustainability of the road condition is a major concern. Laterite roads in tropical climates need regular maintenance to ensure that the road does not deteriorate to its prior condition. The Ministry of Public Works and the county authorities do not have the capacity to maintain the road at present. Fortunately, because Mital Steel is working in Yekepa and requires access along this route, maintenance and improvements are a real possibility. Future road work should include options for sustainable maintenance programs, while improvement and maintenance of roads in Liberia remains the responsibility of the private sector and international donors.
- Most of the tools and equipment available to the contractor were old and subject to constant failures, causing significant downtime. This is a common problem across the board with construction contractors in Liberia.
- The war has left a huge technology and information gap. Both subcontractors and the A&E firm rely on out-of-date practices and procedures because they have not had access to current best practices and methodologies.
- Although it was a good idea for donors to collaborate in order to achieve mutual goals, there were many problems. One was determining who had overall management control of the projects. Failure by one donor is blamed on both. This could have been resolved through better communication and by a more detailed memorandum of understanding between the two donors.
- Time given to bidding contractors to review the work plans was insufficient for the subcontractors to understand the work that would be required. Only one week was given to the contractors to assess the work plan.
- Specifications and design requests made by the Ministry of Public Works were sometimes flawed. A presumption was made that the Ministry had the capacity to review design work and had basic specifications for standard drainage structures on the road. Although the Ministry was questioned, future efforts should consider mentoring activities and other training to improve the design skills and capabilities of the Ministry of Public Works staff.
- Throughout construction, the road was open to traffic. This caused serious problems for the subcontractor because it did not have control over traffic flow, which resulted in delays, and because the traffic caused damage to structures that were recently or partially installed. Many road users had heavy trucks that transported goods from neighboring countries. The weight of these vehicles caused serious damage to a number of drainage structures, so they had to be redone. In the future, despite

pressure from road users, the Government of Liberia should support contractors' efforts to better control traffic during construction.

- Communications with key stakeholders about the objectives, progress, and management of the rehabilitation effort along the road was lacking. For example, one of Nimba's senators questioned the quality of the new culverts, although the quality had been certified by the Ministry as satisfactory. This caused delays while further review was conducted. Similarly, another senator incited the workers against the subcontractor because of claims that it was under paying them. The contractor had agreed to pay the workers \$3 per day as per their subcontract with LCIP I (LCIP I did not stipulate wages that contractor had to pay other than worked in accordance with Liberian labor law which required minimum daily rates). The \$3 per day during 2006 was above the minimum rates set by the government, but the senator informed the workers that the subcontractor was actually supposed to pay \$5 per day—which was false information.

TASK 2: REHABILITATION OF BUCHANAN–CESTOS–GREENVILLE ROAD

TABLE 8: ACTIVITY AREA 2, TASK 2 SUMMARY – REHABILITATION OF BUCHANAN–CESTOS–GREENVILLE ROAD

Grant Number	Subcontractors	Total Grant Amount	Number of Beneficiaries	Location
LCIP/INF/006	<ol style="list-style-type: none"> 1. Pacific Construction Company 2. Morweh Liberia Limited 3. Borbor Nyumah Construction Company 4. Tutex Construction Company 5. Westwood 6. AAA Engineering 7. Crossroads Construction 8. Boimah Engineering 9. Bailey Inc. 	\$3,337,737	1,131 persons employed	Rivercess, Grand Bassa, and Sinoh Counties
Target/Actual Number of Beneficiaries			Target: N/A Actual: 75,906 Person Days of Employment	
Actual Duration			August 2006–March 2008	

OBJECTIVES

- Undertake long-term permanent improvements of the Buchanan-Greenville road to facilitate flow of vehicular traffic between and among population centers along the route.
- Increase access to goods and services for rural populations.
- Reduce transit times between destinations along the road, improve road safety, and reduce the risk of accident.
- Provide short-term employment for youth and other community members along the road in the following disciplines: fabrication of reinforce concrete of specified dimensions, bridge rehabilitation, culvert instillation, head walls construction, steel bending, form work erection, road signs identification, and the usage of required road materials.

DESCRIPTION

The Buchanan-Cestos - Cestos-Greenville Highway is an all-weather, laterite-surfaced road, located in Grand Bassa, Rivercess, and Sinoe counties in the Southeastern region of Liberia. The existing road alignment traverses an undulating land profile with physical features that are common along a tropical coastal belt. These features are predominately composed of high and low elevations covered by sprawling tropical rain forest and marshy zones of savannah. As the road runs along the coastal belt of a country with extremely high rainfall, it crosses many tidal swamps, streams, and large tributaries.

The road has a total length of 150.60 miles commencing from Buchanan, continuing through a dogleg to Cestos City, and onward to Greenville City. The road was initially constructed in the early 1970s during the leadership of President William R. Tolbert, under a program geared toward providing vehicular transportation to the area and accelerating socioeconomic development for rural dwellers of the region.

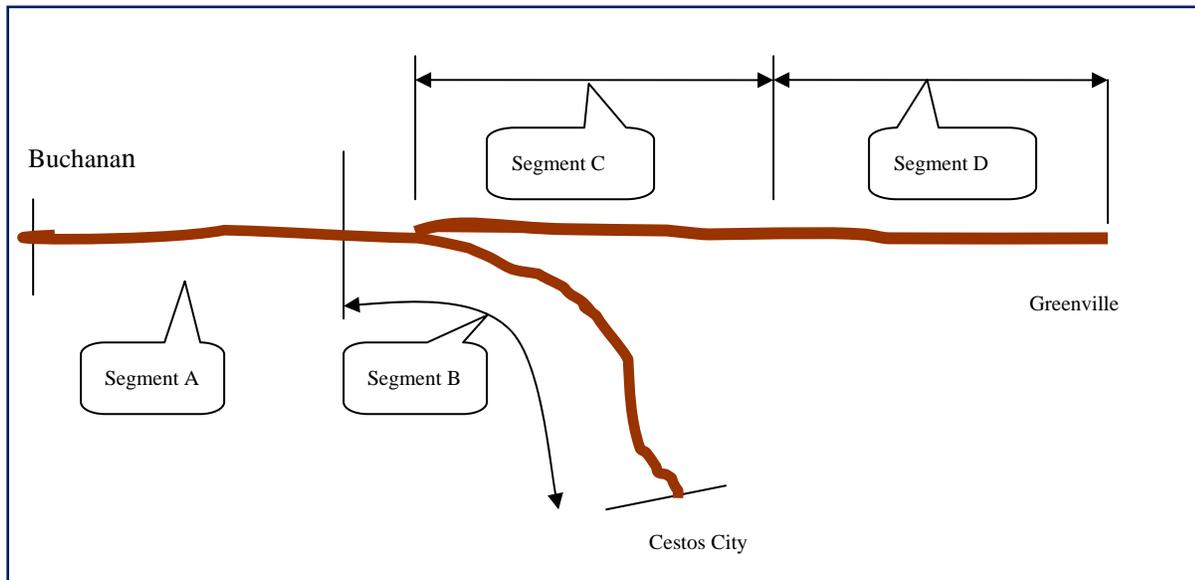
During an inspection study in 2006, it was observed that the drainage structures and bridges along the road had been destroyed and/or heavily damaged—making the entire road inaccessible for much of the year. Other related bridge and drainage structure materials that were being used on this stretch of road included large diameter logs, which had been felled indiscriminately from the surrounding forest, all of which were decayed or damaged completely. Recent basic maintenance of the road was being provided by the United Nations Mission in Liberia; a private logging company, the Oriental Timber Corporation (OTC); the European Union; and ITI Timber Company. Recurrent military insurrections and civil strife in Liberia over the past two decades caused the near complete abandonment of this road, and resulted in the road's present and dilapidated condition.

This road is the main conduit to the Southeast region of Liberia and allows access to counties beyond Greenville. Much of the disarmament, demobilization, reintegration, and rehabilitation planning under LCIP I Phase I was focused on areas of high concentrations of ex-combatants. The Southeast, especially along the coastal belt, had a relatively limited number of ex-combatants and therefore LCIP I did not focus in these areas. It was not only LCIP I that did not focus in these areas, but also much of the donor community and many of the NGOs because access to this area was so difficult and financially prohibitive. Because the Southeast had been neglected, the President, as part of her 150-day plan, requested support from the U.S. Government to open this region up to development. U.S. Government assistance in this regard was through LCIP I and was originally targeted to be basic grading of the Buchanan to Greenville highway.

LCIP I started the review of the Buchanan to Greenville highway in April 2006 and employed the services of the A&E firm M&R to assist in developing a scope of work in partnership with the Ministry of Public Works. Through the design process, LCIP I worked with its partners and determined that basic grading of the road was not the most appropriate approach for long-term impact on the road. To understand the nature of work that needed done on the road, a complete review of all work was conducted with M&R. Due to the complexities of the road and access to certain areas, the review was a protracted process. The original target was to have work start in October 2006 at the end of the rainy season, which meant having design work completed by August 2006. Unfortunately, not all of the design work was completed until October 2006. Once the design work was completed, LCIP I held several meetings with M&R and the Ministry of Public Works to evaluate the design and reduce the level of work to match the funds available. At this stage, LCIP I and its partners agreed that repair of the drainage structure was the best course of action.

The original target of this rehabilitation program for this stretch of road incorporates the reconditioning of all existing damaged drainage structures with immediate backfill to approaches at 50 feet before and after each drainage structure laid, and the provision of side drains to control erosion at critical sections of the road. The road was split into four sections (A, B, C, and D) and was composed of eight contracts. (See Figure 5).

FIGURE 5: WORKPLAN BREAKDOWN FOR REHABILITATION OF GREENVILLE/BUCHANAN ROAD



LCIP I tendered work in November and December 2006 and awarded work to seven contractors to begin in December. Three contractors (for four contracts) were engaged to fabricate concrete culverts and an additional four contractors were engaged to conduct the installation work and backfilling. To ensure that the work was conducted to design requirements, the scope of work, and the bill of quantity, M&R was contracted to provide monitoring and supervision of all the work in conjunction with the Ministry of Public Works. However, many of the ministry regional engineers at this stage had not been fully mobilized; even if they did, they did not have adequate access to operate in these areas.

Although the subcontractors signed contracts weeks earlier, full mobilization was not complete until March 2007. Very little work was completed by the contractors in the remainder of the dry season in early 2007, in part because the subcontractors had access problems along the road that impeded their ability to deliver supplies, equipment, and labor. Although most of the culverts were manufactured, the installation process did not go according to plan. Additionally, the subcontractors discovered the volume and depth of the former log structures were much deeper and larger than what was included in the original design/bill of quantity developed by M&R. The subcontractors had access problems along the road that impeded their ability to deliver supplies, equipment, and labor. Unfortunately, the subcontractors were not properly supervised by the M&R team, therefore, the quality of many box culverts were not satisfactory, and in some cases, defective. One of the contractors, Tutex, defaulted on its work after only completing 14 percent of their scope of work. As a result, little was achieved in section D, which is the Greenville end of the road, and most of the completed work had to be replaced and corrected. By the 2007 rainy season,

nearly all (97 percent) of the culvert fabrication had been completed, but only 40 percent of the culvert installation was complete.

LCIP I implemented a “stop-gap” program that was designed to keep the road open and keep traffic moving throughout the 2007 rainy season (and until rehabilitation work could start again). This mainly involved working on the critical sections of the road and assisting road users through the mud and repairing any bridge damage that was impeding access. This work was conducted by Westwood and AAA Construction Company, two of the installation contractors.

In September, a formal legal claim was levied against Tutex for their failure to complete the work, and both advance money and costs of remedial work were sought through the Performance Bond provided by Tutex.

At this stage, LCIP I management determined that the scope of work of the program was not being followed nor was appropriate. Overall performance by the road subcontractors and the engineering consultant had been largely unsatisfactory. Appropriate methods of quality control and inspection were not employed by the contractors and the engineering consultant. As originally designed, each section was assigned a dedicated M&R supervisor, managed by a road engineer. LCIP I determined that M&R technical documentation was not up to standard, especially the original culvert designs, specifications, and original bills of quantities. The consultant’s team did not have the capacity or experience in road drainage design and contract supervision to manage a project of such a size.

As early as March 2007, LCIP I recognized the critical absence of resources, including trained road engineering designers, supervisors, and managers. Three international and two national engineers were engaged by DAI through LCIP I in the months of July and August, and immediately began a thorough investigation to determine what the contractors had achieved and were required to be paid for was a complicated process that was not completed until December 2007. A new scope of work, design, and technical specifications had to be developed for the contractors to work on the road and additional support was required. Five road inspectors were hired and a revamped supervision team, along with logistical support (offices, vehicles, and logistics staff), was deployed in January 2008 to begin the work under the three new subcontracts that were approved and signed in January 2008. Additional funding (under LCIP II), approval of additional resources, and vehicles were all approved by USAID and the GOL between November 2007 and January 2008.

In January 2008, a USAID team (McDonald Homer and USAID Technical Advisor Jacob Greenstein), along with the LCIP I Engineering team, traveled to Sections A and B to meet with the contractors and discuss the scope of work, implementation methodologies, resources, equipment, and tools. The result of this investigation was a Technical Memorandum of Understanding between USAID and DAI, which redirected efforts, required a new survey, changed the scope, and in many ways reduced the volume of work required. Subsequently, designs, specifications, and bills of quantity were reworked and contract modifications issued.

Overall, the memorandum of understanding changed the scope of work from long-term permanent structures, to structures that would not require any additional major investment within 3 to 5 years.

Major technical components of this memorandum of understanding included:

- Reduction in road improvement width from an 11-meter to 6-meter carriage way;

- Increased use of 24” culverts, opposed to 48” and 60” culverts already manufactured;
- Not demolishing or replacing existing timber bridges, or other drainage, if they have performed adequately and were expected to do so for three to five years; and
- Requirement to prepare engineering guidelines and procedures for routine maintenance work for possible implementation by local contractors or community-based microenterprises.

In February 2008, LCIP I competed two new subcontracts on Section D, in an effort to re-tender the work previously contracted to Tutex. These two subcontracts were awarded under the new funding made available by LCIP II.

Work continued, at a challenging slow pace, through March 2008 with the remaining three contractors and remaining funds under LCIP I. All work after March 31, 2008 continued under LCIP II.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- This project is still ongoing, using additional resources and funds from LCIP II.
- Since work started on the road in 2006, all of the culvert fabrication has been completed and the road was kept open throughout the rainy season of 2007.
- All four road sections have improved, resulting in greatly reduced travel times between towns. For example, the travel time between Yapas Town and Cestos City used to be up to three days during the rainy season—this distance can be traversed in around 45 minutes.
- One thousand, one hundred and seventy-four people were employed on this activity, reaching a total of 75,906 person days of employment. No employment targets were set for this activity.

Anecdotal Successes

Rehabilitation of the road has greatly opened up transportation in the area, allowing resources in and out of the Southeast. LCIP I conducted an apprentice program in Cestos City, and one of the trades targeted was fishing. Now that there are improved road connections, more fish are being transported out of Cestos to local villages. This has resulted in improving the livelihoods of local fishermen and strengthening the local economy.

LESSONS LEARNED

The following recommendations and lessons learned are based on field visits and discussions with the DAI field team, consultants involved, contractors, and the Ministry of Public Works. Some of the recommendations are based what the team has already implemented under LCIP II in order to improve operations on the ground and outputs from the grants.

Quality Control, Supervision of Works, and the Capacity of M&R:

- M&R supervision was not suitable for the size and complexity of the job that was undertaken. They failed to mobilize qualified and experienced engineers to supervise the work adequately and those who were mobilized did not have the requisite logistical support. Thus, the LCIP I subcontractors received little guidance on conducting the work and errors were not caught in time. M&R also miscalculated the resources required to manage seven contractors in a logistically demanding environment.

- Compaction was a major problem on every section of the road as none of the contractors had any compaction equipment and were reliant on vehicle compaction, which is not effective. The lack of appropriate compaction meant that many of the drainage structures installed suffered major depressions and water pooled in these areas. These areas became mud holes over the rainy season and sections of the road deteriorated quickly. LCIP II has since acquired several compaction machines of varying sizes to ensure that this situation does not reoccur.

Project Planning:

- The scope of work was too large to be completed in one dry season, and especially so for a regional dry season that is shorter than in other areas of the country. Therefore, when the installation work was ready to be started, either a limited scope of work should have been devised for the remainder of the dry season, or work should not have commenced until October 2007. Additionally, each of the drainage structures should have had either a bypass or a management plan for traffic. During the rainy season, a section of the road was cut by the rains, and resources were diverted from construction work to just keeping the road open.
- Based on knowledge gained through implementation during Phase II, it is suggested that the funding allocation should have focused on completing the rehabilitation for sections of the road, instead of partially completing the whole length of the road.
- Both the subcontractors and M&R miscalculated the transportation costs and accessibility problems related to the rehabilitation of the road. All of the subcontractors incurred higher transportation costs and had transportation difficulties. The complexity of getting equipment and materials to all of the locations along the road was problematic, especially at the Greenville end of the road, where the existing Zwedru highway to Greenville, which had originally been thought to function, but was more difficult than from the Buchanan side.

Outside Factors: A number of factors outside of the project that were not either planned for or were outside of the control of the project.

- The road use is considerably higher and heavier than was anticipated in the planning stages. Installed drainage structures were damaged as road users required access and traversed over them when they were partially installed or before curing times were complete (structure strength of concrete was not achieved). Traffic increased, along with the size of trucks, as the road improved, further exacerbating the problem. Large trucks carrying timber planks caused major damage to many drainage structures due to their weight and size.
- Different work rates in each of the sections caused problems with local officials, as areas where the work was slower than others would receive many complaints and increased political pressure for action.
- Some of the road users, for example the international NGOs, complained about the work and incited the communities against LCIP I. Although this was not done deliberately, the constant negative reports from these agencies created disquiet in the communities and prompted them to complain.
- Many of the log culverts that had been installed by OTC (before the Phase II project began) were made of large logs dumped into river and stream crossings. The number of logs and their depth was far greater than could have been anticipated. The level of excavation and the requirement needed for the

extraction of logs was resource intensive for the contractors and caused serious delays and cost implications.

Capacity of Contractors:

- The contracting capacity in Liberia is limited. This is especially for road construction. Not only did all the subcontractors lack capacity in terms of technical skills, management capacity, and equipment, but also they were engaged with multiple clients. The insurgence of private enterprise and high levels of donor funds has imposed large stresses on the contracting industry. These weaknesses were exposed by the contractors and their lack of ability to conduct the work correctly.
- The contractor's mobilization time was substantially delayed and protracted. The cause of these delays was due lack of urgency, road conditions, and the difficulties of getting heavy equipped to these areas of the country safely and quickly.

Capacity of LCIP I:

- With all the projects that were being designed and mobilized in 2006 and then undertaken by LCIP I during 2007, management of this road activity overstretched LCIP I's internal engineering capacity. During the planning phase in 2006, the size and gravity of this project posed should have been noted, and additional resources should have been brought to bear onto the new activities. The assumption was that previous experience with LCIP I Phase I infrastructure activities—although focused on labor-intensive approaches—would provide enough of a foundation for taking on these significantly larger infrastructure projects during Phase II. LCIP II has significantly ramped up its capacity to deal with the work on the road and bring additional technical, material, and logistical support.
- The departure of the engineering team leader in the early part of 2007 reduced what was an already a limited and overloaded engineering team. Because of the problems mentioned earlier with international recruitment for expatriates willing to be posted to Liberia, and despite temporary solutions that were used (including bringing in short term technical expertise), the LCIP team had to develop a new approach for implementing such large public infrastructure rehabilitation activities. This has largely been accomplished under LCIP II.
- LCIP I's knowledge and understanding of the capacity of both A&E firms and contractors was not fully realized until implementation of the rehabilitation of national roads was well underway. This lack of understanding allowed LCIP I to engage subcontractors for projects which they were not able to undertake or successfully complete without major support or capacity building. An option in the future is to provide capacity-building support to A&E firms and subcontractors in order to deliver the work.

Community Focus:

- Communities in section "A" have recently expressed that they appreciate the work undertaken by LCIP I, and that great improvements have been made to the road since the early part of 2007. They also are aware that that work conducted in 2007 did not go as planned. The communities seemed to understand the level of work and complications that the road posed, and therefore accepted that not all could be done quickly and right first time. This attitude demonstrates a major positive transition that is occurring in Liberia.

- Some of the log bridges constructed by the contractor were burnt by the communities because they felt they were substandard or that the materials were inappropriate. The citizens in these communities did not understand that many of these log bridge were installed temporary fixes and not as final structures. Communication with the community was clearly problematic during certain phases of the project.

Information Management and Communication:

- During the initial phases of the project, work was supported by the Road Sensitization and Support Program (RSSP) funded by DFID and USAID under LCIP I. This program was designed provide information to the communities along the road about the road program and assist subcontractors with a working relationship with communities. This program was only conducted for eight months of the rehabilitation project, as per the workplan approved by both USAID and DFID. Through RSSP efforts, the grantee developed a good relationship with the communities and helped them understand the roads rehabilitation activities—it did not, however, develop a good working relationship with the subcontractor and the A&E firm. Problems at these early stages were highlighted by the RSSP grantees, but were seen as interference as by the INF subcontractors and the A&E firm. The slow progress of the roads project and the questionable quality of the work fragmented the relationship between these two LCIP I programs, and information transfer was poor or not done in a timely fashion. The breakdown in communications meant the effectiveness of RSSP was reduced, and once the timeframe of RSSP was completed, it was not renewed through USAID-funded grants.
- During a quick survey of the communities along road in section “A,” many did not know what was happening on the project or what it was trying to achieve. They appreciated the work but did not have any information or understanding of what was being conducted. Information of what the project is trying to achieve needs to be improved.
- Expanded employment opportunities have not always been forth coming for the communities along the length of the road as expected. Instead, many of the subcontractors employed laborers from Monrovia, which caused conflict in the communities and resulted in difficult access to community resources. Many of the communities had plenty of unskilled labor that could have been used. Because the relationship between the communities and roads work activities were poor, community materials such as rock, laterite, and timber were supplied to the contractors at a cost (instead of as part of the community’s contribution to the activity). If local employment had been generated within these communities, then these materials would likely to have been either free or available at reduced rates. The limited supervision of the subcontractors is the main contributing factor pertaining to the poor employment of community people.

TASK 3: MONROVIA CONSTRUCTION PROGRAMS

TABLE 9: ACTIVITY AREA 2, TASK 3 SUMMARY – MONROVIA CONSTRUCTION PROGRAMS

Grant Number	Subcontractor	Total Grant Amount	Number of Beneficiaries	Location
LCIP/INF/013	Tutex Construction Company	\$36,186	49 persons employed	Monrovia, Montserrat County
Target/Actual Number of Beneficiaries			Target: N/A	
			Actual: 978 Person Days of Employment	
Actual Duration			February 2007—March 2007	

OBJECTIVES

- Rehabilitation of five roads (1.42 miles [2.29 km] and four bridges [for a total of 00 feet]) for local transportation.
- Provide additional transportation routes for goods and services.
- Link major communities in Paynesville with the rest of Monrovia.

DESCRIPTION

Five projects from the 2006 LCIP I Monrovia Workplan were identified as incomplete at the end of the previous dry season in June 2006. The work was restarted on February 23, 2007, and was nearly complete, but two locations (Peace Island and Police Academy) were not finished due to failures by the subcontractor and negative community obstructions. These activities were as follow:

- Peace Island Vehicular Bridge and Culverts Project.
- Soul Clinic Road Rehabilitation Project.
- Police Academy Road Rehabilitation Project.
- Neezoe One Vehicular Bridge Rehabilitation Project.
- Coca-Cola Factory Road and Footbridge Rehabilitation Project.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- All of the work was completed with the exception of Police Academy Road. Police Academy Road was not completed because the community was unhappy with the subcontractor and blocked the project. The community submitted a proposal to LCIP I to complete the work on the road, but since the community's company was not registered with the Ministry of Public Works they could not be used to conduct a project on Ministry-owned and -maintained infrastructure.
- Forty-nine people were employed on this activity, reaching a total of 978 PDE. There were no employment targets set as part of this activity.

LESSONS LEARNED

Many of the communities on these projects were aggressive and difficult to deal with. A large number of ex-combatants live in these areas and still behave in an aggressive manner. More work needs to be done with these communities, as they are vulnerable to violence and unrest and could become even more estranged from society. These areas could become pockets within Monrovia where a resurgence of conflict could ignite. These road rehabilitation activities should have been accompanied by psychosocial counseling and community-based approaches.

ACTIVITY AREA 3—OTHER INFRASTRUCTURE REHABILITATION

The following summaries detail the drilling of boreholes and wells, and assessments of infrastructure rehabilitation activities in order to develop detailed designs and bills of quantities. Without the later, cost estimates and the extent of rehabilitation work would have been impossible to complete.

TASK 1: DRILLING OF BOREHOLES AND WELLS

TABLE 10: ACTIVITY AREA 3, TASK 1 SUMMARY – DRILLING OF BOREHOLES AND WELLS

Grant Number	Subcontractor	Total Grant Amount	Number of Beneficiaries	Location
LCIP/INF/003	Living Water International (Grantee)	\$115,000	34 persons employed	Monrovia, Montserrato County
Target/Actual Number of Beneficiaries			Target: N/A	
			Actual: 2,131 Person Days of Employment	
Actual Duration			August 2006–January 2007	

OBJECTIVES

- Improve community health through the provision of clean, safe water and sanitation.
- Drill boreholes and wells at 15 educational and training facilities.
- Support LCIP I’s existing programs.
- Support President Ellen Johnson Sirleaf’s 150-day plan.
- Provide employment for graduates with the Living Water International-LCIP I ex-combatant training program.

DESCRIPTION

In May 2006, 15 schools were identified by LCIP I, with active community participation in Paynesville and Bushrod Island, to be in desperate need of improved sanitation and water supply. LCIP I had already worked closely with Living Water on a number of programs and they were one of the few organizations that had the capacity to drill boreholes in Monrovia to an acceptable standard. Therefore, LCIP I selected Living Water International to construct latrines and boreholes in the following communities⁷:

- Angeline Brisbane Elementary School;
- Momo Town Elementary School (Duala);
- Church of God Jr High School (Bassa Town);
- Calvary Chapel Mission School (Rehap Community) ;
- Saribil Christian Community School (Parker Paint Community);
- Pipeline Academy Community School (Pipeline Community);
- Dyufateb Ecumenical School System (12th houses Community);
- Carr's Community School (Caldwell);

⁷ Some of the initial schools were dropped because the facility was already under construction by another organization. Instead, additional schools were added, in order to complete latrines and boreholes for a total of 15 schools.

- Bishop Doe Elementary School;
- Elizabeth Pratt Memorial School System (12th houses Community);
- Marvin Sonii School (Clara Town);
- Soul Clinic Community School;
- LIVAP Demonstration Community School;
- Nathan E. Gibson Community School; and
- Zinan Foundation.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- The construction of 15 portable pit latrines and boreholes in the above-identified communities were completed to 100 percent. Some of the boreholes were relocated because their original geographical location and/or the texture of the soil were determined to be inadequate.
- Twenty-eight people were employed on this activity, reaching a total 2,131 PDE. There were no employment targets set for this activity.

Anecdotal Successes

- All of the schools now have improved drinking water and functioning latrines.
- Health and hygiene at these schools has greatly improved.

LESSONS LEARNED

The following recommendations and lessons learned are based on field visits and discussions with the DAI field team.

- Although Living Water had the capacity to conduct the grant activities, they severely miscalculated the time and resources required to get the appropriate equipment into the country. Major delays on the program were incurred because Living Water could not get trucks and drilling equipment from the United States, through customs, and then to the final activity sites on time. To compound the situation, some shipments were lost and had to be recovered through insurance claims, and other shipments faced major delays in the Freeport of Monrovia.
- To reduce costs Living Water relied on donations and relationships to help provide some of the funds for the project and assist in shipping trucks and drilling equipment. These relationships relied on the goodwill of companies such as Firestone for shipping resources. Although this relationship was a major cost saving and highly appreciated, urgency and efficiency were lacking. When working with partners that are reliant on other funding sources, a greater understanding is required of possible delays. LCIP must plan for these eventualities. Either higher costs are accepted or longer duration of implementation is required, which may exceed original plans.

TASK 2: ASSESSMENT OF KRTTI, ZRTTI, AND MINISTRY OF PUBLIC WORKS FACILITIES

TABLE 11: ACTIVITY AREA 3, TASK 2 SUMMARY – ASSESSMENT OF KRTTI, ZRTTI, AND MINISTRY OF PUBLIC WORKS FACILITIES

Grant Number	Subcontractor/Activity	Total Grant Amount	Number of Beneficiaries	Location
LCIP/INF/011	Various (see below)	\$152,890 (total)	18 persons employed	Various (see below)
	ACE Consulting/Kakata Rural Teacher Training Institute	\$48,890	6 persons employed	Margibi County
	AEP A&E Consultants/Zorzor Rural Teacher Training Institute	\$59,000	6 persons employed	Lofa County
	M&R/Ministry of Public Works Facilities	\$45,000	6 persons employed	Montserrato County
Target/Actual Number of Beneficiaries			Target: N/A	
			Actual: N/A Person Days of Employment	
Actual Duration			December 2006–February 2007	

OBJECTIVES

- Determine the extent of damages sustained at key infrastructure sites.
- Develop detailed scopes of work for undertaking reconstruction and rehabilitation of the three public buildings.
- Determine the estimated cost of this rehabilitation work.

DESCRIPTION

Three facilities under the auspices of the Ministry of Education or the Ministry of Public Works were requested by USAID and the respective line ministries to be repaired. These facilities were the Ministry of Public Works complex, KRTTI, and ZRTTI. As with many structures in Liberia, these had fallen into disrepair or were heavily looted after 14 years of civil war. Under modification to contract number six, USAID approved funds for all of these facilities to be repaired with the possibility of repair under LCIP I Phase II but most likely under LCIP II. All of the facilities are currently under rehabilitation through LCIP II funds.

An A&E survey was conducted for the three facilities and entailed a full analysis, a scope of work, and a bill of quantities for the complexes to be renovated. The work required at each facility was going to be a multimillion-dollar activity. Due to the size and complexity of the work required, the A&E survey was tendered for each complex and awarded to three A&E firms. All three firms completed an analysis of each of these facilities in March 2007.

KRTTI

KRTTI is a campus training facility built in the 1960s by the U.S. Government covering 175 acres and including 83 structures. The facility was originally designed to provide training facilities for teachers to conduct up to ninth-grade teaching. The structures were severely damaged and looted in the past 14 years. In 2006, when LCIP I was tasked to assess the facility, it was barely functioning and had few resources,

both human and physical, to conduct effective training. LCIP I was tasked by USAID to estimate the damages of the facilities under LCIP I Phase I and renovate the campus under LCIP I Phase II.

ACE Consulting was contracted to cover the A&E design work for the whole campus at KRTTI. ACE completed the A&E designs on March 1. Based on these designs, the consultant estimated it will cost \$2.7 million to fully rehabilitate the KRTTI campus, including all administrative buildings, director and staff residences, classrooms, girls' and boys' dormitories, workshop, external water supply and sewage disposal, external lighting, power generation distribution, telecom system, road work, and landscaping. The funding earmarked under LCIP II was \$2.5 million and therefore some reductions were necessary.

On March 5, 2007, the Ministry of Education submitted the list of priority structures to be rehabilitated through the Ministry of Public Works to LCIP I. After a careful review, LCIP I passed it on to the consultant (ACE) to prepare all tender documents for a competitive bidding process. The contract for the subject campus is arranged in four parts to be awarded to four contractors. The priority sections of the campus were identified as follows:

- Twenty-three academic and administrative buildings;
- Fourteen dormitories and staff houses;
- Water and sewer system ; and
- Electrical supply systems.

ACE Planning and Consulting Group undertook the initial detailed analysis of the accepted bids and provided the DAI LCIP I team and the Ministry of Public Works with recommendations for award to responsive bidders. LCIP I and ACE Planning and Consulting agreed that award would be made on a best value basis combining qualitative and quantitative/financial analysis. Consent to subcontract was subsequently awarded by the Regional Contracting Officer (RCO) on June 26th and work started on site July 2007 under LCIP II.

ZRTTI

ZRTTI is a campus training facility built in the 1960s by the U.S. Government covering 1,000 acres and containing 44 structures. The facility was originally designed to provide training facilities for teachers to conduct up to ninth grade teaching. The structures were severely damaged and looted in the past 14 years of war. In 2006, when LCIP I was tasked to assess the facility, it was barely functioning and had few resources, both human and physical, to conduct effective training. USAID tasked LCIP I to estimate the damages of the facilities under LCIP I Phase 1 and renovate the campus under LCIP I Phase II. The renovation of the facility would enable USAID and Government of Liberia to provide teacher training and bring up the level of minimum standards. At the time, the only training available to teachers was three-month United Nations Children's Fund training. Once opened, the facility would provide one-year teacher training to bring minimum standards up and improve teaching across the country. This would be increased over time to bring the level of teacher training up further. USAID and the Government of Liberia will work on the running of the campus at ZRTTI and the implementation of training; it does not come under the purview of LCIP I.

AEP Architectural and Engineering Consultants were contracted to perform the architectural and engineering design work for the whole campus at ZRTTI. AEP completed the architectural and engineering designs on March 1. Based on these designs, the consultant estimated it would cost \$3.4

million to fully rehabilitate the ZRTTI campus including, administrative buildings, director's and staff residences, classrooms, girls' and boys' dormitories, workshop, external water supply & sewage disposal, external lighting, power generation distribution, telecom system, road work, and landscaping. The funding earmarked under LCIP II was \$2.5 million and therefore some reductions need to be made.

During March 2007, the Ministry of Education, Ministry of Public Works and LCIP I determined a list of priority structures to be rehabilitated. AEP prepared all the tender documents for a competitive bidding process and the construction contracts were arranged in five parts to be awarded to five distinct contractors. The priority sections of the campus were identified as follows:

- Eleven academic and administrative buildings;
- Fifteen dormitories and staff housing;
- Water and sewer system ;
- Electrical supply systems; and
- External work including entrance gate and landscaping.

AEP undertook the initial detailed analysis of the accepted bids and to provide LCIP I and the Ministry of Public Works with recommendations for award to responsive bidders. LCIP I and AEP agreed that award would be made on a best value basis combining qualitative and quantitative/financial analysis. Consent to subcontract was subsequently awarded by the RCO in October 2007 and work started on site November 2007 under LCIP II.

Ministry of Public Works Complex

The Ministry of Public Works is the Government of Liberia institution responsible for constructing and maintaining all horizontal and vertical structures located within Liberia. The ministry's headquarters is located in the capital city, Monrovia, in Montserrado County on the corner of UN Drive, Lynch, and Center streets.

The Ministry of Public Works building complex is a one storey S-shape multipurpose building, with associated facilities for the management and administration of a broad range of infrastructure activities. The complex was constructed in the early 1970s and comprises the following sections: zoning regulation, traffic signs, asphalt manufacturing, permit regulation for construction of structures, garage, maintenance, heavy-duty equipment, fueling, engineering, laboratory, architecture, and administration.

The entire public works complex was severely damaged during the civil war, making it extremely difficult or impossible for the various components or sections of the Ministry to function effectively. A large portion of the building, namely the east wing from the Lynch street end, experienced severe fire destruction of the internal walls, external walls, structural components, roof, ceiling, and floor and required complete rehabilitation. The rest of the roof component on the building, including the timbers and roofing sheets, were looted, subjecting the entire reinforced concrete roof to severe cracks and leakage which has destroyed the floor tiles. All electrical components and fixtures of the buildings were also destroyed and or looted, as well as the plumbing components and fixtures and other finishing components including the doors windows, and ironmongery.

M&R were contracted to deliver the A&E design work for the whole complex at the Ministry of Public Works. M&R completed the A&E designs on March 10. Based on these designs, the consultant estimated

it would cost \$3.1 million to rehabilitate fully the Ministry of Public Works complex, including the main administrative building, warehouse building, mechanical workshop, motor pool building, workshop building, mechanic office building, and generator building, as well as paving of all parking areas, power generation, and electrical supply. The funding earmarked under LCIP II was \$2 million and therefore some reductions were necessary.

M&R undertook the initial detailed analysis of the accepted bids and provided LCIP I and the Ministry of Public Works with recommendations for award to responsive bidders. LCIP I and M&R agreed that award would be made on a best value basis combining qualitative and quantitative/financial analysis. Consent to subcontract was subsequently awarded by the RCO in July 2007 and work started on site August 2007 under LCIP II.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- All of the objectives for this infrastructure activity were met.
- Eighteen people were employed on this activity. Employment targets were not set for this activity, and PDE were not reported by the subcontractors.

LESSONS LEARNED

The following recommendations and lessons learned are based on discussions with the DAI field team, consultants involved, contractors, and the Ministry of Public Works. Some of the recommendations are based what the team has already implemented under LCIP II in order to improve operations on the ground and outputs from the grants.

- Work with the A&E firms AEP and ACE was accomplished with only a few problems and no major design errors.
- The work done by M&R was not conducted well, and some major design and assessment flaws were made. The assessment of the electrical systems was completely underestimated and several other assessments had to be done. IRG, another of USAID's partners, was eventually requested to review the assessment to assist LCIP I in determining the best way forward. The lack of an LCIP I electrical engineer on staff compounded the problem as a clear determination of the work required could not be analyzed by LCIP I's own team.
- When the projects were tendered, some of the A&E firms attached conditions to their contracts. Some of these terms were contradictory to DAI and USAID's regulations and policies, and some were major improvements. The conditions of contract for LCIP I were updated accordingly to incorporate improved practices and deter future errors.
- The scope of work for A&E firms was inadequate and had to be revised, as firms were not providing all the requirements needed for contractors to produce an acceptable bid.
- Preconstruction fees were increased from 2 percent to 3 percent, and then to 5 percent of the estimated cost of projects because the completed work projects by the A&E firms were underestimated.
- Many errors in A&E firms' submissions could have been prevented by the use of electronic formats for estimates. Excel formats for bill of quantity has become a requirement for all A&E firms working with LCIP II.

TASK 3: ASSESSMENT OF FIVE ADMINISTRATION BUILDINGS (BOMI, GRAND BASSA, LOFA, SINOE, AND MARYLAND) AND TODEE ROAD MARGIBI COUNTY

TABLE 12: ACTIVITY AREA 3, TASK 3 SUMMARY – ASSESSMENT OF FIVE ADMINISTRATION BUILDINGS (BOMI, GRAND BASSA, LOFA, SINOE, AND MARYLAND) AND TODEE ROAD MARGIBI COUNTY

Grant Number	Subcontractor/Activity	Total Amount	Number of Beneficiaries	Location
LCIP/INF/012	Various (see below)	\$77,792 (total)	N/A	Various (see below)
	Finda Architects/Bomi Administration Building	\$7250	N/A	Bomi County
	ACC/Grand Bassa Administration Building	\$8350	N/A	Grand Bassa County
	M&R/Lofa Administration Building	\$8750	N/A	Lofa County
	ACC/Sinoe Administration Building	\$7500	N/A	Sinoe County
	ACE Planning/Maryland Administration Building	\$11,500	N/A	Maryland County
	Techsult/Todee Road	\$34,442	N/A	Margibi County
Target/Actual Number of Beneficiaries			Target: N/A	
Actual Duration			Actual: N/A Person Days of Employment	
			June 2007–January 2008	

OBJECTIVES

- Determine the extent of damages sustained at key infrastructure sites.
- Develop detailed scopes of work for undertaking reconstruction and rehabilitation of the three public buildings and a secondary road.
- Determine the estimated cost of these rehabilitation works.

DESCRIPTION

The Government of Liberia and USAID through the Ministry of Public Works identified key government buildings, Liberian institutions, and community infrastructure vital to the process of post-conflict reconstruction and revitalization of the Liberian economy. LCIP I was tasked to undertake a series of 14 pre-construction assessments and surveys. Information developed from these assessments assisted in estimating financial resources required and for determining priorities and sequencing specific activities for implementation.

The original list devised by Government of Liberia and the USAID to be assessed using funding under LCIP I follows:

1. Grand Bassa Administration Building
2. Bomi County Administration Building.
3. Lofa County Administration Building.

4. Maryland County Administration Building.
5. Sinoe County Administrative Building.
6. Tubman National Institute of Medical Arts
7. National Elections Commission on 9th Street
8. Todee Road, Margibi County
9. Robertsport Road, Cape Mount County
10. Ganta Border Post.
11. Bo Waterside Border Post
12. Lofa Border Post
13. Grand Gedeh Border Post
14. Bureau of the Budget

Due to priorities, time, and resources, only items 1 to 5 and 8 were assessed under LCIP I. In addition, the model border post design was developed that could be adopted for all four proposed border posts. The remaining items on the list are pending review under LCIP II subject to funds, time, and resources.

Requests for Applications for A&E services were posted in local newspapers in January 2007. A joint LCIP I and Ministry of Public Works Review Committee was formed and reviewed the applicants to see if they were qualified for the proposed A&E work.

Grand Bassa Administration Building—This typical T-shape building is two stories and containing a basement section housing the County’s administration, with square footage of 15,654 and estimated renovation cost \$187,842. The structural components of the building remained sound. Damaged components included doors, windows, floor, roof, ceiling, plumbing, and electrical system. These needed complete rehabilitation to restore to building to its pre-war status. This building was fully renovated under LCIP I.

Bomi Administration Building—This is also a typical T-shape building with a single floor, housing the County’s administration with a square footage of 8,240 and an estimated renovation cost of \$164,800. The entire building was nearly completely destroyed and only a few structural members remain standing. Doors, windows, floor, tiles, plumbing fixtures, electrical fixtures, and furniture were all looted. Intensive rehabilitation was needed to restore this building to its pre-war status. This building was fully renovated under LCIP I.

Lofa Administration Building—This is a rectangular-shaped building composed of two stories and containing a reinforced canopy section (in the front) with square footage of 18,253 and an estimated renovation cost \$273,795. Structural components remained sound with 80 percent of the damage portion occurring in the upper floor where some components including doors, windows, floor, roof, ceiling, plumbing, and electrical needed complete rehabilitation to restore the building. Works on this building are currently being undertaken through LCIP II.

Maryland Administration Building—This building was constructed in a T shape and is located in the heart of Harper, about 1,000 feet from the sea. The left, or east wing, of the building was constructed in

1950 and the right, or west wing, was added in 1956 during the administration of the late President William V.S. Tubman. Before the onset of the civil crisis in Liberia, the building housed most of the ministries and civil service agencies of the county.

The administration building is a two-story building with offices and courtroom on the ground floor and the superintendent's office and auditorium and other county administrative offices on the upper floor. The building was burned and vandalized during the civil crisis and the entire east wing of the building is structurally unstable and likely needs to be demolished.

The building was inspected by LCIP engineers and an A&E firm (ACE Planning) on several occasions. The reports from these surveys suggest that the cost of repair of the building was quite considerable and far higher than budget allocations made under LCIP II. Because the structural integrity was being brought into question, LCIP brought in structural engineers from the United States to review the building. These visits were funded under LCIP II, which conducted a review of the building in May 2008. The analysis and findings are due in a report to be submitted in June 2008. Once the report has been reviewed a determination of what can be done under LCIP II will be made.

Sinoe Administration Building—This building is in good condition and only requires a relatively small amount of work. The building is like most of the other administration buildings and is T-shaped two-story structure. The building was constructed during the 1960s under the Tubman administration. The building has an estimated renovation cost of \$109,374 and is currently under renovation through funds on LCIP II.

Todee Road—The Todee road is located in Todee District, Margibi County. The road was first constructed in the early 1960's and is an all-weather, laterite-surfaced route with a length of 28 miles or 45 kilometers and a cross section/width of 30' 0"/10 meters. The road links several key towns, villages, and a military training base to the primary road that leads to the capital, Monrovia. Towns and villages serviced by the route produce agriculture products such as rubber, sugar cane, cocoa, and coffee that must be brought to the market for sale.

A contract was issued to the A&E firm Techsult to assess and design of the Todee Road, Margibi County. Techsult submitted initial designs, which did not meet LCIP I expectations, including a failure to include bridges and water crossings in their designs. Upon meeting with the Ministry of Public Works, Techsult was instructed to design the rural road according to highway standards, which are not appropriate for a small community road. Therefore, a redesign was conducted under LCIP II by its in-house engineers and has included more community inputs, involvement, and locally available appropriate materials.

Model Border Post Design—A model border post design was developed by an LCIP I engineer, through collaboration with all line ministries anticipated to occupy a typical border post. This model border post design represented a typical design with basic special planning efforts, largely based on the existing structure found at Bo Waterside. Other border post locations cannot be rehabilitated, as the structures themselves are temporary mud construction.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- An initial assessment was carried out on four structures: the Buchanan, Bomi, Sinoe, and Lofa Administration Buildings in the months of May and June to ascertain the extent of the damage in order to derive an estimated cost for complete renovation/rehabilitation activities.
- Employment targets were not set, nor reported, for this activity.

LESSONS LEARNED

The assessments carried out by A&E firms and LCIP I demonstrated the limitation in the Liberian A&E sector. Small-scale projects such Bomi, Sinoe, and Grand Bassa administration buildings—where the level of damage was relatively small or nonstructural⁸—were completed effectively and efficiently by most of the A&E firms engaged. However, major structural concerns at Maryland administration building could not be fully understood without outside expertise from the United States. The work conducted by Techsult on the Todee road again confirmed that Liberia does not have the intuitional capacity for road work repair, design, and maintenance.

ACTIVITY AREA 4—PROCUREMENT OF HEAVY ROAD CONSTRUCTION EQUIPMENT

The Ministry of Public Works is the technical arm of government responsible for Liberia’s public infrastructure. The Ministry had relatively little capacity to repair or maintain this infrastructure due to lack of equipment and resources. In particular, the Ministry also had only a limited number of functioning road repair equipment, and was in urgent need of a new fleet. Road conditions throughout the country are extremely poor due to the harsh weather

conditions and lack of maintenance. Liberia as a whole has had the majority of its heavy road maintenance equipment looted or in such disrepair that it is barely functional. Both the Ministry’s and the private sector’s capacity to perform road maintenance was severely constrained by the lack of equipment in the country. Therefore, 16 new vehicles were selected by the Ministry in conjunction with LCIP I technical assistance.



The Minister of Public Works, the Fleet Manager for the Ministry, and the LCIP COP inspect the new equipment provided through funding from USAID.

TASK 1: PROVISION OF HEAVY EQUIPMENT TO THE MINISTRY OF PUBLIC WORKS

TABLE 13: ACTIVITY AREA 4, TASK 1 SUMMARY – PROVISION OF HEAVY EQUIPMENT TO THE MINISTRY OF PUBLIC WORKS

Grant Number	Subcontractor	Amount	Number of Beneficiaries	Location
N/A	N/A	\$2,100,000	N/A	Monrovia, Montserrato County
Target/Actual Number of Beneficiaries			Target: N/A	
Actual Duration			Actual: N/A Person Days of Employment	
			March 2006–March 2008	

OBJECTIVES

⁸ Not all of the reconstruction work was structural; some work was aesthetic or functional.

- Provide heavy road equipment to support national public works programs, and assist the Ministry of Public Works with a fleet of quality equipment.

DESCRIPTION

In September 2006, LCIP I was tasked to work with the Ministry of Public Works in determining the provision of \$2 million of heavy equipment for the ministry. LCIP I worked directly with the Minister of Public Works and his advisors in determining what would be the most appropriate use of funds. Liberia has limited resources in terms of supporting heavy equipment in Liberia. The majority of equipment that was used before the war was manufactured by Caterpillar and Caterpillar still maintained a presence in Liberia (although it was limited to maintenance and spare parts supplies.) For these reasons, the Minister of Public Works and LCIP I determined that Caterpillar equipment would be most suitable for the Ministry and Liberia. This desire also fell in line with the U.S. Government's Buy America act.



The new motor grader crossing a bridge on the way to the Ministry of Public Works compound in Monrovia, Liberia.

Caterpillar/US was contacted and LCIP I was redirected to their French procurement agent Delmas, which covers West Africa for Caterpillar. Due to the size of the procurement, Caterpillar, through Delmas, sent one of their representatives to Liberia to assist the Minister and LCIP I conclude the final selection of equipment. Through a number of detailed meetings and understanding the Ministry's requirements and the equipment capabilities, seven Caterpillar machines were purchased in November 2006.

During these meetings, LCIP I worked closely with the Minister to determine other equipment required that was not manufactured by Caterpillar. Within the budget allocation, eight trucks were purchased in December 2006. The requirement of maintenance truck was later determined in 2007 and purchased for the Ministry.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- The equipment arrived in Liberia in four delivery packages. The first four pieces of Caterpillar equipment were delivered in March 2007, and the remaining three pieces of Caterpillar equipment arrived in Monrovia in May 2007. The third package of eight trucks arrived in July 2007 and the maintenance truck arrived in March 2008. All the vehicles were cleared from customs at the Monrovia Port and delivered to Ministry of Public Works compound. The equipment purchased is detailed below.

TABLE 14: HEAVY EQUIPMENT PROVIDED TO THE MINISTRY OF PUBLIC WORKS

DESCRIPTION	QTY	UNIT PRICE	AMOUNT	DELIVERY DATES
Motor Grader	3	\$ 207,300.00	\$ 621,000.00	1 in March and 2 in April 2007
Wheel Loader	2	\$ 172,200.00	\$ 344,400.00	March 2007
Backhoe Loader	1	\$ 81,000.00	\$ 81,000.00	March 2007
Pneumatic Tire Compactor	1	\$ 115,000.00	\$ 115,000.00	April 2007

DESCRIPTION	QTY	UNIT PRICE	AMOUNT	DELIVERY DATES
Caterpillar Spare Parts			\$ 34,146.52	April 2007
Dump Truck 12 cy	6	\$ 87,074.55	\$ 522,447.30	July 2007
Water Tanker	1	\$ 90,725.80	\$ 90,725.80	July 2007
Truck Tractor with low bed	1	\$ 147,200.00	\$ 147,200.00	July 2007
Truck Spare Parts	7	\$ 2,600.00	\$ 18,200.00	July 2007
Caterpillar Equipment Training 1 st Session			\$ 12,950.00	March 2007
Caterpillar Equipment Training 2 nd Session			\$ 12,950.00	July 2007
Service Truck	1	\$ 56,000.00	\$ 56,000.00	March 2008
Total			\$ 2,056,919.62	

- Four pieces of Caterpillar equipment were officially handed over to the Ministry of Public Works on March 26 through a handover ceremony at the Ministry of Public Works compound, where a memorandum of understanding was signed between USAID and the Government of Liberia on the use, maintenance, and operation of Caterpillar equipment. This ceremony was attended by the American Ambassador to Liberia, the Vice President of Liberia, the USAID Mission Director, and the Minister of Public Works.
- To enhance the lifespan of the Caterpillar equipment, LCIP I also provided two 6-day intensive training courses for Ministry of Public Works operators and maintenance crews on the use, maintenance, and operation of the Caterpillar equipment in keeping with the equipment operation and maintenance manual. These courses were conducted in March 2007 and then again in July.

LESSONS LEARNED

- A culture remains within the Ministry of Public Works that it should return to its status prior to 1990, as an implementer of public works activities rather than as a supervisor or manager of all public works with staffed and equipped road maintenance units strategically placed throughout the country. This report suggests that although some operational capability should be maintained by the Ministry, stimulating the private sector through the award of work contracts will be far more beneficial through increased efficiency and reduced cost to the public.
- While the title of the equipment remains, for the duration of the agreement, with USAID, the final determination for the use of the equipment is vested in the Ministry of Public Works. The Ministry has had a free reign of usage and maintenance and LCIP has not had access to the use of the equipment as originally anticipated. The use of this equipment would have been extremely beneficial on the Buchanan to Greenville road.
- The Ministry of Public Works seem to know and understand well what machinery it needed to conduct rural road maintenance, except for compaction equipment.
- The Ministry of Public Works had no strategy of how the equipment was to be used.
- The training conducted by Caterpillar was useful, and many of the Ministry's operators showed good ability to run and maintain the machinery.
- The memorandum of understanding devised with the Ministry was a complicated procedure, and it might have been better if the availability and use of the equipment were covered through a grant with

key outputs the Ministry had to achieve. For example, a certain number of miles of road could have targeted for repair under the grant agreement.

USAID LEGACY

From 2004 through 2006, LCIP I's focus on infrastructure rehabilitation was to provide a means for the initial short-term reinsertion of ex-combatants into civil life. The USAID infrastructure activities provided an important transitional phase that helped LCIP I reorient its projects toward reconstructing the foundation for public service delivery and better linking the central government to the people in rural communities—including rehabilitating national roads, county administration buildings, the legislature, and other important public infrastructure prioritized by the Government of Liberia. This reorientation required significant modifications to LCIP I's approach, including: recruiting significant additional engineering staff, both Liberian and expatriate; increasing monitoring and management of the work projects by LCIP I staff, rather than relying on Liberian A&E firms; and redesigning subcontracts for engineering support from the older milestone forms to the better performance-based formats. Currently, the USAID-funded infrastructure projects have been incorporated into LCIP II on a larger scale, integrating modifications and improvements derived from the lessons learned during Phase II of LCIP I. The USAID-funded infrastructure activities during LCIP I Phase II supported a series of projects that provided the foundation for LCIP II's transition from crisis management to sustainable development.

LINKAGES BETWEEN USAID-FUNDED INFRASTRUCTURE ACTIVITIES AND DFID-FUNDED ESR ACTIVITIES

The DFID-funded interventions were targeted geographically in areas where LCIP I Phase II was conducting USAID-funded infrastructure programs, and were designed to invigorate the economy in these areas. The programs that were developed were mainly targeted in towns, villages, or farms located along or near either the Ganta to Sanniquellie highway or the Buchanan to Greenville highway. The programs were designed to use the lessons learned from LCIP I Phase I and to pilot activities that could be expanded under LCIP II.

AGRICULTURE

Through the DFID funding, LCIP I supported a number of rubber smallholders in Nimba County in areas near or around the Ganta to Sanniquellie highway and Nimba Cote D'Ivoire border. The farmers benefited from the improvements in the highway through better access to buyers and market pricing information. Workers on these farms have also benefited as they have easier access to working areas and to potential employers. Agricultural businesses have greater incentives to maintain a stable workforce and to encourage workers to live nearby. This is a resultant of both programs and the improvement in security and the economy in Liberia. The development of the road through USAID support is strengthening the rubber sector, and further development by Mital Steel will only improve opportunities for economic growth.

APPRENTICESHIPS

Through funding from DFID, LCIP I implemented apprenticeship programs in Buchanan, Cestos City, Zwedru, and Greenville. The direct links between DFID-supported activities and USAID-supported infrastructure activities were not particularly strong in the Buchanan to Greenville area, as the complicated management requirements of repairing the road overshadowed the DFID activity objectives. However, both the contractors and LCIP I used the artisans and apprentices in Zwedru to provide furniture and doors for the Zwedru Multi Lateral High School. A significant number of beds for the dormitories and furniture and doors for the classrooms were also manufactured in Zwedru by DFID-supported apprenticeship programs.

The support to the artisans and apprentices through LCIP I enabled them to have the tools and capacity to conduct the work and provide vital stimulus to the economy. Where before most of these products had to be made in Monrovia and transported to work sites in rural areas, now many of these products are manufactured locally; the local population can now retain the revenue. As well, LCIP I incurred lower transport costs by being able to source materials locally.

The quality of the goods produced in Zwedru was of lower quality than similar materials manufactured in Monrovia. Although higher-quality carpentry material can be obtained in Monrovia, they are still of basic- to low-quality compared to international or even regional standards. While skills levels and standards have a long way to go in Liberia before high-quality products can be produced, the locally sourced material was sufficient for the needs of the infrastructure projects and garnered the additional benefit of supporting local employment. Further work is required to help artisans and their apprentices improve standards that would better support durable infrastructure rehabilitation, and reduce the costs of maintenance.

Although the links between the apprentice programs and work on the road between Buchanan and Greenville and the Buchanan administration building were limited, the co-location of DFID-supported activities did improved community member's livelihoods and food security. For example, Cestos City is now providing more fish to sell in markets around the county not only because of the assistance to the fishing sector through DFID funds, but also because the fishermen can get their fish to a wider market as road access is easier, quicker, and cheaper. During the rainy season, Cestos City would virtually be cut off from the rest of Liberia, but now the road should remain open and travel times to major conurbations⁹ have been reduced to hours and minutes instead of days. Where before transportation along the road required 4x4 vehicles, now a simple taxi vehicle can traverse the road. Access to construction materials for small artisans under the program has also improved because of the improved road conditions, and artisans are producing more products for sale at local markets. This is especially the case for carpenters in both Nimba and the Southeast.

ROAD SENSITIZATION SUPPORT PROGRAM

The LCIP I RSSP supported the two road projects in Nimba and in Sinoe, Grand Bassa, and Rivercess. Its main objective was to sensitize the adjacent community to work being done by LCIP I, and to forge strong relationships between the communities and private contractors implementing the work. These programs were run by local NGOs and were supported by the LCIP I team. The program had good success in terms of working in and supporting the communities, but had limited success in forging a good working relationship between the contractors and the communities. This was more of a problem on the Buchanan to Greenville road where the performance of the contractors and the implementation of the work was highly problematic. Many of the implementing partners on RSSP understood that the contractors were struggling to conduct the work, but did not know the best means to support them. Many negative comments were made by the RSSP organizations, and relationships between the contractors and implementing partners broke down.

The working relationship was stretched further as many of the contractors did not employ local unskilled labor as envisioned in the original design of the Infrastructure activities. Instead, they brought in labor from Monrovia. This disenfranchised the communities and created problems in sourcing materials and getting the requisite support. In addition, the LCIP I engineering team was overstretched throughout late 2006 and early 2007 when this program was implemented, and did not provide the RSSP team at LCIP I with needed information about how the infrastructure activities were progressing. Therefore, information was not communicated internally in LCIP I or out to the NGOs and communities.

⁹ Conurbations are large urban or peri-urban areas created when neighboring municipalities or villages spread into and merge with each other.

The DFID-supported RSSP activities in all areas of the country were completed in August 2007 and were not renewed, although the roads were not complete at that time. Extensions to these programs were deemed not the best use of USAID funding, as the engineering problems completely overshadowed any community focus at this stage (the road had become impassable in some locations). These problems on both the USAID-supported road programs resulted in limited impact by the DFID-supported activities.

SUMMARY: DFID SUPPORT

The overall purpose of the DFID component of LCIP I Phase II was to support peace and stability in Liberia. This required the reconciliation and reintegration of the disparate groups within Liberian society—particularly those who felt disenfranchised and perhaps even disaffected by the new peace process.

Since the conflict, Monrovia has suffered tremendous overpopulation, and a huge percentage of the population is unemployed youth. Because the capital city is unable to provide employment opportunities and basic services to the current population, the DFID projects were designed to create training and employment opportunities through business support and farm rehabilitation in the peri-urban areas. The premise was to create a demand for labor in these rural counties that would provide incentive for internally displaced people living in Monrovia to return to their areas of origin. The interventions simultaneously intended to train youth in marketable skills that would prepare them to meet the significant demand for skilled labor in Liberia.

To determine the needs and priorities in project design, LCIP I worked with communities and five key ministries: Public Works, Agriculture, Youth and Sports, Labor, and Education. Additionally, LCIP I projects continued to support and forge stronger links with the Agricultural Industrial Training Board and the Cooperative Development Agency. The collaboration with Agricultural Industrial Training Board helped to create the training standards by which graduates were measured, and the collaboration with the Cooperative Development Agency helped the DFID-funded agricultural interventions be more business oriented.

Table 15 summarizes the DFID-funded LCIP I activities.

TABLE 15: SUMMARY OF DFID LCIP I ACTIVITIES

Grant No.	Name of Activity	Grantee Name	Total Disbursed Amount	Activity Period	Activity Location	Targets	Monitoring Visits
001 (A)	Small Rubber Farm Support	Agricultural Relief Services	\$65,080	Nov 1, 2006 – April 30, 2007	Nimba County	Met (slightly exceeded some)	3
002	Central Nimba Rubber Rehabilitation and Development	Catalyst	\$65,001	Nov 2006–April 2007	Nimba County	Met	2
003	Rehabilitation of Artisans Program	Organization for the Development of Agriculture and Farmers	\$395,694	Nov 1, 2006 – June 30, 2007	Grand Bassa and Rivercess Counties	Met	5
004	Rehabilitation of Artisans Program	Liberia Agro-Systems, Inc.	\$449,942	Nov 4, 2006–August 2007	Sinoe and Grand Gedeh Counties	Met	2

Grant No.	Name of Activity	Grantee Name	Total Disbursed Amount	Activity Period	Activity Location	Targets	Monitoring Visits
005 (A)	Ganta to Sanniquellie Road Sensitization	Special Emergency Activity to Restore Children's Hope	\$28,550	Nov 1, 2006 – June 30, 2007	Nimba County	Met*	1
006 (A)	Buchanan to ITI (Rivercess) Road Sensitization	Buchanan Child Community Based Care	\$43,797	Nov 1, 2006 – June 30, 2007	Grand Bassa and Rivercess Counties	Met**	2
007 (A)	Yarpa Town to Cestos City Road Sensitization	Evangelical Children Rehabilitation Program	\$37,478	Nov 1, 2006 – June 30, 2007	Rivercess County	Met [†]	2
008 (A)	ITI (Rivercess) to Greenville Road Sensitization	Liberians United for Rural Community Development	\$28,106	Nov 1, 2006 – June 30, 2007	Sinoe County	Met ^{††}	2
009 (B) [‡]	ITI (Rivercess) to Greenville Road Sensitization	Liberians United for Rural Community Development	\$8,965	Nov 1, 2006 – June 30, 2007	Sinoe County	N/A	As part of grant 008 (A)
010 (A)	Zleh Town Swamp Rehabilitation Project	Multi-Agrisystems Promoters	\$130,582	Dec 2006–July 2007	Grand Gedeh County	Did not meet (slightly under target)	3
011 (B) ^{‡‡}	Zleh Town Swamp Rehabilitation Project	Multi-Agrisystems Promoters	\$19,898	Dec 2006–July 2007	Grand Gedeh County	N/A	As part of grant 101 (A)
012 (A)	Rural Seed Multiplication Program	Project New Outlook	\$60,654	Dec 15, 2006 – July 16, 2007	Grand Gedeh County	Met	2
013 (A)	Rice Processing Machines	Catalyst	\$7,658	Oct 2006–Feb 2007	Bong, Lofa, Nimba, and Grand Gedeh Counties	Did not meet	1
Total	13 grants	10 grantees	\$1,341,405	Nov 2006–Aug 2007	7 Counties	9 Met (out of 11 with targets)	Average 2.3 per grant

* Specific target numbers were not included in the grant agreement.

** While specific target numbers were not included in the grant agreement, the grantee has reported individual activity targets for this grant activity—all of which were either met or exceeded.

† Ibid.

†† Ibid.

‡ Grant 009 (B) is a “grant in kind” to support the achievements of grant 008 (A), a fixed obligation grant. The activities supported by grant 008 were implemented with supplies and services procured by DAI LCIP I staff as part of grant 009 and distributed to the grantee in accordance to its grant agreement.

‡‡ Ibid.

OVERVIEW OF LCIP I IMPLEMENTATION FOR DFID ACTIVITIES

Throughout July 2006, LCIP I advertised the project activities (through requests for expressions of interest) in several newspapers to attract qualified and competent Liberian NGOs to carry out the work under the draft workplan submitted to DFID in May 2006.

The project team thoroughly reviewed these proposals to ensure that the proposed grantees were capable of delivering the DFID objectives and understood the activity scope of work. A series of field visits were undertaken during July and August to identify and verify the appropriateness of targeted beneficiaries (including communities, businesses, and farms) selected for the project.

Grants for all areas of programming were submitted to both DFID and USAID during August 2006 as part of a workplan and grant activities were initiated in November 2007, upon approval of the workplan (with modifications as requested by DFID).

All DFID-funded grants were completed in August 2007. The LCIP I ESR team believes that a crucial element to sustainable development and successful intervention is reinforced training. The original timeline for these projects projected completion in March 2007; fortunately, LCIP I was able to extend the life of the grants a few months within the same budget in order to buttress the project training.

GEOGRAPHICAL SCOPE OF DFID PROGRAMMING

DFID programming was focused in five counties—Nimba, Grand Bassa, River Cess, Sinoe, and Grand Gedeh (see Figure 6). This coverage included a mix of counties that were assisted under previous phases of LCIP I and an expansion to new counties. The counties in which the project focused were those also supported by USAID-funded LCIP I public works activities selected by the Liberian government. Figure 7 illustrates the specific interventions that were conducted under the DFID funding because not all interventions were carried out in all counties.

Interventions in rubber were focused in Nimba County toward the Ivorian border. Support to rice development was focused in Grand Gedeh in order to leverage LCIP I relationships developed through the USAID-funded activities. The rehabilitation of artisans program focused on the urban and peri-urban areas with large populations of unemployed youth and where small businesses were trying to develop. Finally, the sensitization program was based around the road reconstruction program efforts funded under USAID.

FIGURE 6: DFID-FUNDED LCIP I ACTIVITIES

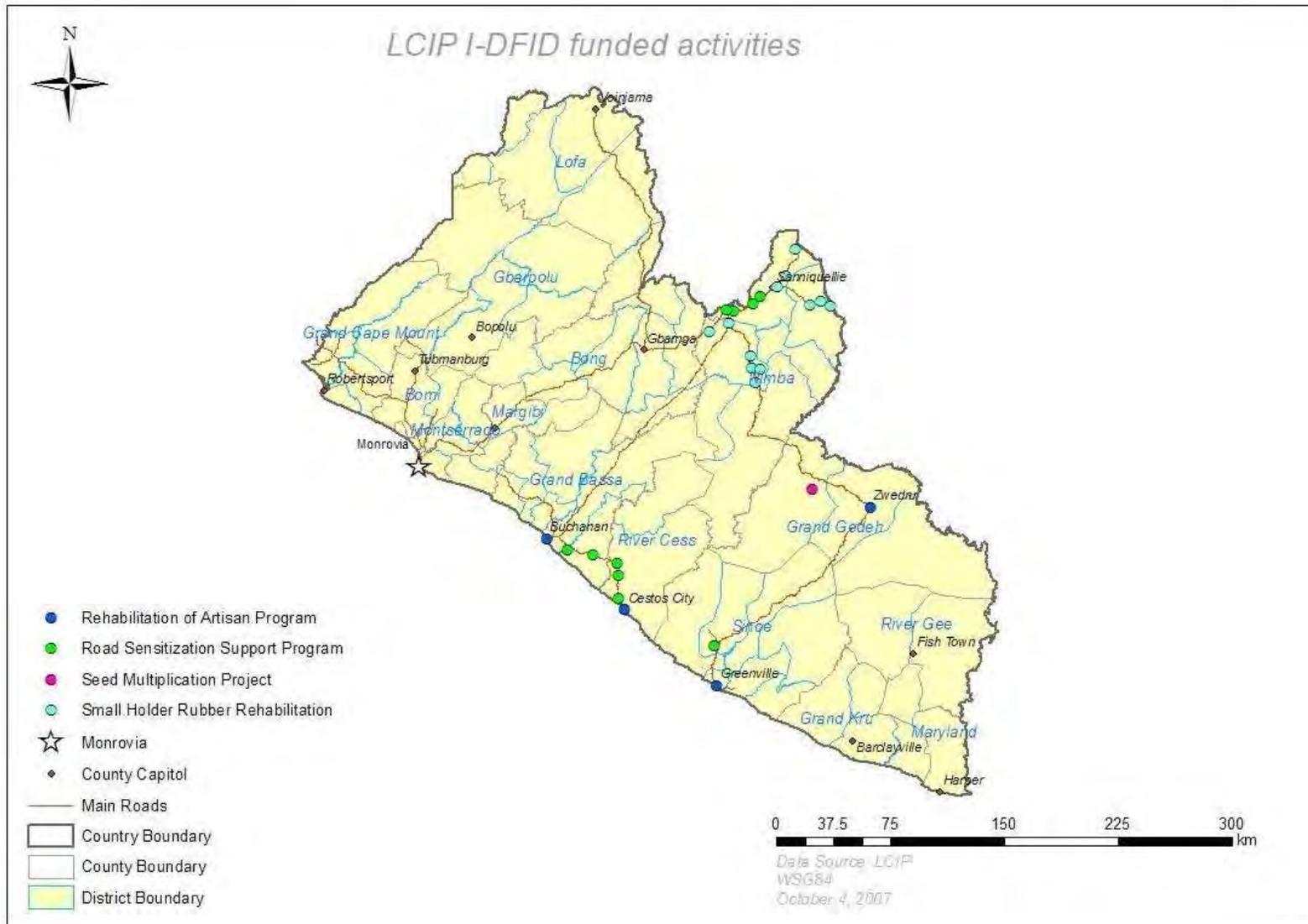


FIGURE 7: COUNTIES RECEIVING DFID ASSISTANCE, BY TYPE OF ASSISTANCE

**Counties Receiving DFID Assistance
Type of Assistance: Sensitisation and Counseling**



Map Data Source: HIC/Liberia (2005)
Map prepared by DAI/GIS
Rev. Date: 27-Jul-06

**Counties Receiving DFID Assistance
Type of Assistance: Rehabilitation of Artisans (RAP)**



Map Data Source: HIC/Liberia (2005)
Map prepared by DAI/GIS
Rev. Date: 27-Jul-06

**Counties Receiving DFID Assistance
Type of Assistance: Rubber**



Map Data Source: HIC/Liberia (2005)
Map prepared by DAI/GIS
Rev. Date: 27-Jul-06

**Counties Receiving DFID Assistance
Type of Assistance: Zleh Town Rice Project**



Map Data Source: HIC/Liberia (2005)
Map prepared by DAI/GIS
Rev. Date: 27-Jul-06

DISCUSSION OF MANAGEMENT APPROACH

In June 2006, LCIP I completed the implementation of the ex-combatant integration program (Phase I), and focused exclusively on implementation of both community-based programming (funded through USAID by DFID) that was geographically located near or alongside the road and other infrastructure work (funded by USAID). This co-location of donor efforts allowed LCIP I to leverage efforts for greater impact. The DFID-funded grant activities were expected to improve the economic status of the communities located near the USAID-supported infrastructure activities.

As well, operational costs within the LCIP I were leveraged, as the project's support offices and management team were shared. As a result, even though LCIP I had significantly reduced in size in terms of staffing (both expatriate and local) and several field offices had been closed by the time the DFID activities were initiated, DFID funding supported only Liberian program staff who were directly responsible for implementing the ESR grant activities. In the end, roughly 90 percent of the DFID funding was allocated toward grants, and 10 percent of the funding was used for operational support.

LCIP I DFID ACTIVITIES: IMPACT AND ACCOMPLISHMENTS

A summary of LCIP I’s DFID-funded grant activity accomplishments follows. The first section reviews the LCIP I grants management results and is included because grants were the key implementation mechanism to achieve DFID-funded program results.

DFID’s overall goal for the project employment and training components was 1,268 people. This target was exceeded over the course of 12 months of implementation: 1,367 people directly benefited from training and employment opportunities. The targets were exceeded primarily because the initial targets did not include as beneficiaries the business owners and the smallholder farmers, who actually benefited as much as, if not more than, the apprentices and farm workers/employees. Table 16 shows the initial targets compared with actual results by program area.

TABLE 16: PARTICIPATION SUMMARY AND FUNDING ALLOCATION

	Target Participation	Actual Participation
Apprenticeships	788	788 + 43
Rubber	230	260 + 26
Rice	250	250
Conflict Mitigation	10,000**	10,000+
TOTAL	1,268†	1,367

* The figure of \$1,343,000 is based on the July 2006 exchange rate of pound to dollar and the grant amount available under this funding. Adjustments may be needed depending on the actual exchange.

** The figure of 10,000 is an estimate of the people who will be affected by the conflict mitigation programs proposed. They may have direct contact with the program or receive information through word of mouth/radio. The program will provide a clearer estimate of the numbers of people reached through the cycle of the program.

† Totals of participation from apprenticeships, rubber, and rice activities only; the number of beneficiaries of the conflict mitigation effort is based on estimates of populations in communities near the USAID-funded infrastructure rehabilitation activities.

ACTIVITY AREA 1: DEVELOPMENT OF LOWLAND RICE AND SEED MULTIPLICATION

Rice is the staple food in Liberia. The price and supply of imported rice is volatile, and transport out of Monrovia is quite expensive, particularly during the rainy season—a fact that further increases rice prices in inaccessible rural areas. This project was designed to rehabilitate a 250-acre rice swamp in Grand Gedeh County that was initially developed in the 1970s. Grand Gedeh is located in a far inland corner of Liberia, close to the Ivorian border. The project included 250 cooperative members who would farm one-acre plots and be managed by the Amenu cooperative in Zleh Town. The grant also incorporated the renovation of a dam, also constructed in the 1970s, that functions as the only water supply for three of the swamp’s six zones.

This Zleh Town project was complemented with a seed-multiplication project in neighboring Gwein Town. The project intent was for the Gwein Town cooperative to develop a for-profit business around the multiplication of rice seed, vegetable seeds, and tuber cuttings to sell to surrounding communities. This

project also became a small pilot for a future cash-crop farming project. The limited emphasis on farm-as-business and management training, improved value chain, and cash crops has allowed the Gwein Town cooperative members to earn significant income from the sale of roots, tubers, and vegetables. The success of this cooperative and its continued sales prompted LCIP I to broaden support for Gwein Town in the form of training in business management, food processing and preservation, and improved value chain.

TABLE 17: ACTIVITY 1 SUMMARY – ZLEH TOWN SWAMP REHABILITATION AND DEVELOPMENT

Grant Number	Implementing Partner	Amount	Number of Beneficiaries	Location
LCIP/DFID/010	Multi-Agrisystem Promoters	\$130,582	250 rice farmers	Zleh Town, Grand Gedeh County
LCIP/DFID/011	Multi-Agrisystem Promoters	\$19,898	Redundant	Zleh Town, Grand Gedeh County
LCIP/DFID/012	Project New Outlook	\$60,654	80 members of Gwein Town farming cooperative	Gwein Town, Grand Gedeh County
LCIP/DFID/013	Multi-Agrisystem Promoters	\$7,658	Redundant	Zleh Town, Grand Gedeh County
Target/Actual Number of Beneficiaries			Target: 250 rice farmers Actual: 250 rice farmers plus 80 farmers in seed multiplication and a small pilot cash crop farming experiment	
Actual Duration			October 2006–June 2007	

OBJECTIVES

- Complete the development of 250 acres (101.21 ha) and plant with rice and 20 acres of seed multiplication.
- Create additional jobs for 250 people in the community.
- Train 36 members of the Amenu farmers’ cooperative in management and operation of the rice farm.
- Train farmers in simple rice agronomy and farm management procedures.
- Provide rice seeds, cassava cuttings, eddoe and plantation corms and hot pepper seeds to be supplied to farmers in the region.



Rice stored in Zleh Town for next planting season

DESCRIPTION

The premise was to rehabilitate a 250-acre rice swamp that was created in the 1970s and abandoned during the conflict. The project included 250 cooperative members who would farm one-acre plots. The project also provided for the rehabilitation of the dam, also constructed in the 1970s, that provided the irrigation imperative for three of the swamp’s six zones.

The project included a seed-multiplication component with a cooperative in the neighboring village, Gwein Town. Participants of the Gwein Town cooperative would learn about aspects of multiplication of rice seeds, as well as tuber crop cuttings.



Cultivating sweet potato in Zleh Town rice swamp during off-season

PRIMARY INDICATORS AND ACCOMPLISHMENTS

Zleh Town Rice Swamp

- The 250 acres (101.21 ha) were completely laid out and planted with rice.
 - The dam and supporting water control structures were constructed.
 - A core cooperative management group of 36 people was trained in farm management, cooperative management, rice agronomy, field layout, plowing techniques, plot leveling, rice nursing, and transplanting and rice submersion at appropriate levels/stages in all six zones.
 - Harvesting of rice in Zleh Town continues to increase post grant closure.
- Beneficiaries are investigating, with the help of LCIP II, the possibility of applying for microcredit to purchase a medium-sized rice mill that would increase the price of the Zleh Town rice sold.

Gwein's Town Seed Multiplication

- Gwein Town cooperative members have continued, since the grant ended, to sell vegetables and tubers for a profit and are demonstrating increased interest and proficiency in small-scale agribusiness.
- Ten acres (4.40 ha) were targeted for seed rice multiplication; 11 were developed.
- Two and a half acres (1.01 ha) of cassava cuttings were targeted; three were developed.
- One acre (0.40 ha) of sweet potato was targeted; 1.4 was developed.
- One acre (0.40 ha) of eddoes was targeted and successfully developed.
- Two acres (0.81 ha) of hot pepper were successfully developed.
- One acre (0.40) of yam setts was successfully developed.
- One acre (0.40) of plantain was targeted and 1.1 was successfully developed.
- One acre (0.40 ha) of bitter ball (eggplant) not originally targeted was successfully developed.

Anecdotal Successes

Toward the end of the Gwein Town project, LCIP I asked the beneficiaries and the implementing partner to participate in a demonstrative experiment not originally included in the grant; this pilot included producing, processing, and selling cash crop vegetables. The results proved to be quite lucrative for the cooperative: members have continued to sell peppers, dried peppers, pepper powder, tomatoes, and yams

for significant profit to buyers who travel one hour from Zwedru. Additionally, this success has generated interest in and support for a subsequent LCIP II project that focuses on cash-crop farming, contract farming, and improved value chain development. In Zleh Town, the cooperative organized to find extra labor to complete the hard labor in the field, supporting the many rice farmers who are elderly widows.

GENDER

Of the 250 cooperative members, 125 were women, many of them older widows whose children may have been killed or displaced during the conflict. They required extra help in preparing their fields.

LESSONS LEARNED

Both the Zleh Town and Gwein Town communities will need to locate a nearby rice mill in order to increase the rice sale profit margin. Additionally, the communities will need to access power tillers to assist in plowing. Both areas are producing rice, vegetables, and tubers and are researching options to access credit to purchase community rice mills and power tillers.

ACTIVITY AREA 2: SMALLHOLDER RUBBER PROGRAM

Rubber has been the most important cash crop in Liberia since its introduction to the country in the 1920s. Internationally, demand for natural rubber continues to grow, primarily because of the growth in the auto industry and high petroleum prices. Even during the civil crisis, rubber provided more income opportunities than any other industry in the country. In addition to the thousands employed on large rubber plantations, Firestone estimates that more than 5,000 Liberians operate 140,000 acres of smallholder farms. Companies such as Firestone, Weala, and LAC are purchasing between 40 percent and 100 percent of their latex from smallholders. However, most smallholder farms were inaccessible during the conflict and were therefore neglected or abandoned for years; in many cases, ownership was passed to widows, children, or siblings who have no experience in rubber farming. As a result, the current demand for natural rubber in Liberia far exceeds the supply.

To support these smallholder farmers, LCIP I managed a DFID-funded pilot project designed to rehabilitate smallholder rubber farms in Nimba County. From November 2006 through May 2007, this grant benefited 26 farms and 260 rubber tappers. The results showed that latex production in each farm increased significantly. Taking into account the success of and lessons learned from the pilot period, LCIP II plans to implement a second version on a larger scale.

TABLE 18: ACTIVITY 2 SUMMARY – SMALLHOLDER RUBBER PROGRAM

Grant Number	Implementing Partner	Amount	Number of Beneficiaries	Location
LCIP/DFID/001	Agriculture Relief Services	\$65,080	13 smallholder farmers and 130 youth	Nimba County
LCIP/DFID/002	Catalyst	\$65,001	13 smallholder farmers and 130 youth	Nimba County
Target/Actual Number of Beneficiaries			Target: 230 youth Actual: 26 farm owners plus 260 youth trained as rubber tappers	
Actual Duration			November 2006–May 2007	

OBJECTIVES

- Provide sustainable economic opportunities for 230 at-risk adults and youths in a region vulnerable to conflict and increasing criminal activity.
- Support 26 smallholder rubber farmers' efforts to recover their farms' economic productivity after years of neglect.
- Provide farm management and business training to new and smallholder farmers who inherited the farms as well as to their farm managers.
- Generate significant and sustainable employment opportunities in Liberia's rural areas.

DESCRIPTION

Liberia was previously home to the largest rubber plantation in the world. Rubber is a key economic opportunity for rural individuals and businesses. The rubber sector is of national importance not only because of its economic value but also because it was a source of revenue that funded the war and people's survival. Many farmers and ex-combatants slaughter tapped the trees during the war to earn a quick income. Slaughter tapping produces high outputs of latex but is not sustainable because it severely damages and ultimately kills the tree. Tapping the trees correctly gives the farmers and tappers a steady and sustainable income. This Program trained both farmers and farm laborers in the proper skills to tap trees. Rubber is currently at up to \$1,000 per ton; when this project began, rubber was purchased at \$800 per ton. Once the farms start producing, the farmers pay the tappers in U.S. dollars at a standard operating cost. Supporting the rubber sector in Liberia clearly fits into the broader economic context.



Nimba Mano woman farmer in rubber processing unit construction

The selection criteria for participating farms included the following:

- Name of smallholder;
- Town/city area;
- Number of trees planted;
- Number of trees in production;
- Year planted;
- Farm size;
- Number of tare;
- Planted distances; and
- Average income per month.

DAI's Monitoring and Evaluation (M&E) Specialist and Agriculture Advisor visited every farm to ascertain the required information and confirmed the selections considering the following:

- Level of slaughter-tapping damage on the farm;
- Age of the rubber trees;
- The farm's current activity; and
- The gender and ethnic diversity of participating farmers.

Our focus was to invest DFID funds in farms that have long-term prospects and will support the smallholders, their workers, and their entire families. DAI's concern was to invest DFID funds in farms that had a good foundation for sustainability instead of those that were probably going to have a short life span and/or would not survive for more than five years, or farm(s) that would soon be turned into charcoal fields.

The targeted area was spread out in four of the six districts of Nimba County, covering more than two-thirds of the county. These districts are Saclepea Mah, Zoe-geh, Sanniqueellie Mah, and Gbehlay-geh. The farms selected were spread along both the Bong and Nimba County borders and reached all the way to the Guinea and Ivorian borders. Focusing on farms in this geographic area not only positively affected the price of rubber but also allowed for the creation of greater awareness of the price for rubber. At the start of the grant activities, farmers in those districts near Bong County were getting their pricing information from the big buyers (where the prices were higher for the smallholders). However, the price for farmers near the Guinea and Ivorian borders was low, in part because of the lack of pricing information available to smallholders. As a result, the farmers farther away from the big buyers received a much lower price per ton from the brokers.

The LCIP I grantee ARS operated in these remote areas by interacting with the Ministry of Agriculture, the rubber planter associations, the rubber brokers, and representatives of the major concessions such as Firestone and Weala Rubber Concession for better pricing information for the small farmers. In the Catalyst-managed areas, the price per ton was well publicized and known by all smallholders in the project area.

Professional rubber tappers were in high demand as more smallholders returned to rehabilitate their farms. Proper tapping does not produce as high a volume of latex as slaughter tapping; however, it can provide a sustainable income and long-term employment. Although more acreage was brought back into production, the reduction in slaughter tapping slowed the volume of latex and balanced the market. As a key indicator of success, it was expected that the price of rubber would increase, at least in part because of the program.

Both DAI and the implementing partners worked closely with the Ministry of Agriculture and the Rubber Planters Association of Liberia (RPAL) in project design, implementation, and management. DAI's management fully briefed the Minister of Agriculture on activities planned for both rubber and rice.

ARS targeted 13 farms in the upper section of Nimba County, while Catalyst worked with 13 farms in the lower region.

As mentioned above, the implementing partners trained and sensitized all participating smallholders in ways of obtaining price information on a regular basis. This included radio broadcasts of the monthly

price for rubber, supported by agents of the big buyers, and the RPAL's production of monthly price lists as published by each big buyer. Smallholders' access to phone coverage was investigated so that they could contact RPAL for current prices.

Farm management topics—such as accounting, negotiating with brokers, negotiating with employees/tappers, overhead costs, and how to use pricing information for planning—were included in the LCIP I training. This training was focused on the smallholders themselves, not the tappers.

The tapping training was focused on tapping systems and included the tappers and the smallholders (the smallholders were included because they needed to understand the tapping systems being used on their farms).

The training referred to in the grant document included:

- Techniques in the construction and lining up (in sheds) of the wooden boxes used by smallholders to coagulate lumps and to pile “cup” lumps after collection from the trees.
- Matching the size of the wooden box with the amount/quantity of ammonium to add to the latex to speed up coagulation of the latex in the wooden boxes.
- Weighing of the rubber.
- The process of coagulating the rubber—making farmers aware of the danger of placing foreign matters in the latex and the effects additions have on the quality of the rubber and on the price paid for rubber exported from Liberia.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

- Two hundred and ninety acres (157.8 ha) of smallholders' rubber farms were rehabilitated (cleared twice; provided with rubber cups, spouts, holding wires and buckets for latex collection; supplied with drinking buckets with cups and rubber boots).
- Twenty-six weighing houses were constructed; each of these houses contained a one-room warehouse, concrete coagulation boxes and a weighing space in which the farmer will sell to customers.
- Two hundred and sixty young rubber tappers (10 from each of the 26 farms) were trained in new methods of tapping the rubber trees. Proper rubber tapping is a job skill in high demand in Liberia because the price of latex is commanding a premium and youth engaged in tapping during the conflict are only familiar with the destructive slaughter-tapping methods.

Anecdotal Successes

- The income information that the farmers provided to LCIP I indicates that the participating farmers' monthly net income increased in all cases and, in three cases, tripled.
- Once the farms were cleared, the rubber tappers received immediate employment, paid for by the farm owner, during the life of the grant.
- Of the 26 farms, one farmer was of the Mandingo tribe. The Mandingos are a migratory tribe primarily residing on the border with Guinea; the Mandingos are subject to extreme prejudice because of their real and perceived role during the conflict. The one participating Mandingo farmer was often overwhelmed with emotion when he expressed his gratitude for being selected. In the next phase of

GENDER

Of the 26 participating farms, one was owned by an older woman from the Mano tribe. During this pilot project, it became apparent that many farms were inherited by widows who have no experience in farm management. In the next phase of this project, LCIP II will continue to support these widows.

LESSONS LEARNED

The smallholder rubber program has become one of LCIP I's most successful, relatively inexpensive, and least complicated projects. Its success indicates that even more focus should be placed on helping smallholders to negotiate better with the rubber brokers as well as with the tappers; farmers who used these learned techniques are now enjoying more equitable relationships with both brokers and employees (tappers). In addition, one technique that allows farmers to negotiate successfully with rubber tappers is the provision of housing for normally transient workers. Farmers who have done this have benefited from a more stable workforce. The high price of rubber also allows farmers to make such investments in their farms out of their own profit. This creates a mutually beneficial situation for both farm owners and employees. In the subsequent projects that support the rehabilitation of smallholder rubber farms, more emphasis will be placed on farm management and business training.

Additionally, farmers are now required to submit monthly income and expense reports to help LCIP measure short-term project impact.

ACTIVITY AREA 3: SMALL BUSINESS SUPPORT AND APPRENTICESHIPS

In post-conflict Liberia, most businesses are currently owned and operated by foreigners from countries such as Burkina Faso, Sierra Leone, Ivory Coast, Guinea, Mali, Nigeria, Lebanon, India, and Ghana. Some foreign-owned businesses did operate in Liberia before the war because earnings in U.S. dollars offered favorable exchange rates for foreign entrepreneurs; however, the number of foreign-owned businesses in Liberia has increased exponentially since the war because there are few Liberian businesses offering basic goods and services. Those basic goods and services are subsequently offered at extremely high prices, and most profit is invested outside of Liberia.

The Liberian workforce is equally damaged. The 15-year education gap experienced by most Liberian youth has created a significant dearth of skilled workers. Vocational skills training programs are not sustainable if there are no employment opportunities for the graduates, and most Liberian-owned businesses have no resources with which to hire employees or to expand to a point that would generate that need.

Therefore, these grants combined microenterprise development, small-business incubation, apprenticeship, and vocational skills training. The grants were designed to support existing Liberian businesses that were damaged by the war but had growth potential and were needed in the community, while providing a more effective learning environment for vulnerable youth. The Rural Apprenticeship/Artisan Program (RAP) was in its third generation and benefited from experience gained and lessons learned from previous versions. RAP efforts implemented in other parts of the country have left significant positive impact in the beneficiary communities and have generated a demand for this

program. From the success and lessons learned from the previous projects, these grants were improved and modified to include other communities and trade sectors and to provide more emphasis on business development skills.

TABLE 19: ACTIVITY 3 SUMMARY – RURAL ARTISAN/APPRENTICE PROGRAM (MICROENTERPRISE DEVELOPMENT AND APPRENTICESHIP)

Grant Number	Implementing Partner	Amount	Number of Beneficiaries	Location
LCIP/DFID/003	Organization for the Development of All Farmers Related Association	\$395,694	360 apprentices and 20 businesses	Buchanan (Grand Bassa) and Cestos City (Rivercess)
LCIP/DFID/004	Liberia Agro-Systems	\$449,942	428 apprentices and 23 businesses	Zwedru (Grand Gedeh) and Greenville (Sinoe)
Target/Actual Number of Beneficiaries			Target: 788 Actual: 43 microenterprise owners plus 788 youth trained	
Actual Duration			October 2006–June 2007	

OBJECTIVES

- Support the renovation and expansion of 43 Liberian-owned microenterprises in Grand Bassa (14), Rivercess (6), Sinoe (11), and Grand Gedeh (12) counties in order to help these businesses provide improved goods and services to their communities and better compete with foreign-owned businesses.
- Provide a more effective training program through a combination of formal vocational skills instruction and on-the-job apprenticeships.
- Provide diverse sustainable economic opportunities for at-risk Liberian youth and young adults.
- Expand participating businesses in order to generate employment opportunities in rural areas.
- Support social reintegration of beneficiaries into civil life through the provision of economic opportunities, psychosocial counseling, and peace-building activities.
- Expand upon the experience gained from previous programs implemented in Bong and Nimba counties.
- Transfer ownership not only of skills but also of productive assets to the 43 artisans and 788 apprentices.

DESCRIPTION

RAP differs from other skills-related initiatives in Liberia because it provided the opportunity for skills/business training within an operating business rather than in a classroom-based vocational skills training course. As a result, from the start, the apprentices were working and operating in a business environment, dealing with customers and with the requirements to meet quality standards, cost controls, and timelines. Apprentices also built up practical and valuable experiences that would be of use to future employers or in setting up their own businesses. Additionally, there was an expectation that the apprentices would find immediate employment rather than if they came straight out of a vocational training program.

RAP was designed to select and provide limited support for existing Liberian-owned microenterprises damaged by the war. Viable businesses that showed evident growth potential and were owned by Liberians experienced in their respective trades were selected. No new businesses were formed. To contribute to the program, each business owner was requested to screen and select interested apprentices who would benefit from on-the-job training as well as formal vocational skills training. The vocational training component of the RAP activities trained the participants in technical skills. The apprenticeship component allowed beneficiaries to learn from practical application of their technical knowledge and to benefit from on-the-job training, which taught crucial skills such as customer service and practical applications of accounting. This integration of microenterprise development, apprenticeship, and vocational skills training in a viable business environment has been shown to be quite successful. The peri-urban cities of Zwedru, Buchanan, Greenville, and Cestos City were selected in order to provide business support, training options, and employment opportunities in rural cities for returning refugees or internally displaced communities. Most participating businesses with DFID grants provided basic goods and services for Liberia's recovering economy, such as building trades, basic manufacture of agricultural tools, home items, food, and basic welfare.

The business trainer assigned to the trade shops included instruction on how to start a small business and how to deal with customers. The implementing partners and DAI's technical advisors ascertained that basic training in business management skills, including record keeping, should be taught to the apprentices as well as to the artisans. From the beginning of the program, the artisans were required to keep the following record books:

- General ledger book;
- Cash receipt journal;
- Cash payment journal;
- Petty cash journal;
- Receipt books; and
- Payment vouchers.

Buchanan City is the second largest city in Liberia, with a population of more than 40,000. Like all rural cities, its population continues to grow as more opportunity encourages residents to return to their homes. Participating businesses have only started to fulfill the demand generated by the city's growing population. Therefore, additional services were required to satisfy this need, and local producers of goods and services, such as the program beneficiaries, were expected to offer more fair and reasonable prices. It was also expected that some of the apprentices would move to nearby towns to establish their businesses because the trade skills they acquired were virtually nonexistent there.

Cestos City is a small city with a population of about 5,000. There were only three formal businesses in Cestos City: two tailoring shops and one makeshift carpentry shop. The program initially selected these three formal businesses and three informal fishery artisan shops. The main emphasis was placed on the fishery industry in Cestos City because it is the primary source of income for this population. Based on the needs assessment conducted in this region, it was clear that those involved in the fishery business lacked basic business skills and knowledge of fish preservation techniques.

It was expected that at the end of the project the apprentices would be placed into five categories:

- Those who established their own businesses;
- Those who formed cooperatives with other apprentices;
- Those who were employed by other businesses;
- Those who stayed to work with the artisan; and
- Those who returned to other activities (it was hoped that this group would be minimal because the recruitment process focused on apprentices who were committed to learning).



Ms. Edith Toenah, a small business owner and master cosmetician located in Zwedru City, Grand Gedeh County, trained 24 apprentices (all female) as part of the LCIP RAP program. Prior to her participation in the DFID-funded activity, Ms. Toenah struggled to operate her business under a makeshift structure. As part of the project agreement, the beauty shop was rehabilitated and the participating apprentices received on-the-job training in hair care and other beauty processes. At the end of the training, 6 of the 24 apprentices joined Ms. Toenah's enterprise as full-time employees dressing hair. The rest of the apprentices have returned to their communities, with the skills, tools, and hope of establishing their own small businesses.

To allow the business owner to conduct business unhindered, certified vocational skills trainers were assigned to each shop. This allowed the artisans freedom to work and the apprentices opportunities to gain training from both a trainer and the artisan. The artisans were primarily professional people with many years of experience. The training of the apprentices through this short cycle of training was not expected to equip them with skills of a master tradesman; this training was only the first step, and the program aimed instead to encourage apprentices and artisans to work together after the program so skills could be further honed and trained.

The targets originally specified in these grants only included the apprentices, which ignored an integral component of RAP—micro- and small enterprise development. Few artisans in rural Liberia have strong business facilities. Many premises and tools were destroyed or looted during the war. One of RAP's objectives was to rebuild the productivity and capacity of the artisans, many of whom had the skills but did not have the means to rebuild their businesses. DAI worked with successful artisans to help them recover their businesses and share their skills and trades with the youth of Liberia. In addition, as discussed earlier, by matching artisans who need help in rebuilding their workshops with the apprentices, incentives for participation in the program were built into our activity design from the start.

The project was conducted over eight months; the training was held for six months. The first month of the project was dedicated to the rehabilitation of the business structures. The eighth month was used for the trade test, final evaluation of the training, and closing.

PRIMARY INDICATORS AND ACCOMPLISHMENTS

As evidenced by LCIP I follow-up visits:

- More than 50 percent of the apprentices have been retained as employees with participating business owners, although this number may vary over time.
- More than 25 percent of the apprentices have formed their own businesses as partners either with other apprentices or with the original business owner.

- After six months of intensive training, 685 of 788 candidates were tested. Six hundred candidates passed, representing 87.6 percent, and 85 failed, representing 12.6 percent; female participation was relatively good, representing about 44 percent. (See Table 20.) All apprentices who graduated from the program received a set of tool kits relevant to each trade sector.
- The participants were also supported by psychosocial activities conducted by a social worker, functional literacy and numeracy instruction provided by a literacy teacher, and microenterprise development courses conducted by a business trainer.

TABLE 20: TRADE TEST RESULTS OF APPRENTICES WHO COMPLETED PROGRAM, DISAGGREGATED BY LOCATION AND GENDER

Location	Number of Apprentices Who Finished the Program			Number of Apprentices Who Took the Trade Test in June 2007		
	Male	Female	Total	Male	Female	Total
Buchanan	179	86	265	160	83	243
Cestos	60	35	95	49	24	73
Greenville	114	98	212	81	93	174
Zwedru	112	104	216	92	103	195
TOTAL	465	323	788	382	303	685

Anecdotal Success

Anecdotal evidence shows that the program has been a tremendous success. These peri-urban cities are now bustling with economic activity well into the night. Business owners are still keeping records of their daily transactions. RAP business structures have raised the standard in participating areas, causing competing businesses to complete structural improvements. Some participants have gained lucrative contracts, including:

- A metal worker in Buchanan has gained several contracts with the second-largest rubber company in the country (LAC) to produce up to 500,000 tapping spouts; he is currently being evaluated for the LCIP II small-business incubator project, which will help him apply for a loan to purchase a machine to facilitate the spout production.
- A Zwedru cosmetology partnership composed of former apprentices recently opened a franchise in River Gee, a neighboring county.
- A partnership of Zwedru metal workers has successfully fulfilled several Food and Agriculture Organization contracts to produce rice and cassava mills.
- A Greenville baker has won several catering contracts through the word-of-mouth advertising spread by her former apprentices and their success.
- A Cestos City fisherman is able to compete in the Monrovia fish market with the use of the outboard motor.

At the beginning of the project, just over 50 percent of the program participants were illiterate; the functional literacy and numeracy provided motivation for many participants who can now read and write basic words.

All Buchanan businesses opened accounts with Ecobank through inexpensive deals negotiated by LCIP I; Ecobank will participate in the small-business incubation program by offering microcredit to qualifying businesses.

A trade fair held in April 2007 included participants from 52 businesses, 7 counties, and 12 business sectors; beneficiaries learned about competition, quality control, niche markets, and so on. The fair will be repeated in 2008 (with USAID funding), and participants in the 2007 fair will compete to attend.

GENDER

Of the 43 participating businesses, 7 were owned by women, and of the 788 apprentices, 326 were women. Many female apprentices participated in nontraditional trade sectors, such as engine repair, metal work, goldsmith work, and carpentry. In future programs, more female business owners will be supported.

LESSONS LEARNED

Procurement of quality training tools and equipment was challenging. Project monitoring and delivery of materials were challenging because of adverse road conditions. Additionally, future emphasis must be placed on enterprise development training for the business owners and trainers, as well as the apprentices.

One key lesson learned is that grants can provide initial support, but the importance and use of microcredit must be incorporated into the enterprise development training, and subsequent programs should support that transition.

ACTIVITY AREA 4: PSYCHOSOCIAL HEALING

The communities targeted in these four projects were selected in order to support the USAID-funded infrastructure activities, specifically the rehabilitation of road drainage on the stretch of road linking Ganta and Saniquellie in Nimba and the road connecting three counties and stretching between Buchanan, Cestos City, and Greenville. In earlier infrastructure projects, LCIP I found that community members often received incorrect information about objectives and therefore became angry when the finished infrastructure product did not meet the anticipated result. Consequently, these grants were designed to manage community expectations and disseminate accurate information about the USAID-funded infrastructure project objectives and timelines while providing psychosocial support activities for communities working to integrate returned refugees, internally displaced persons, and ex-combatants. These communities were intended to overlap with the other DFID-funded activities, as well as with the USAID-funded infrastructure activities, in order to create a development corridor. The premise was to leverage the DFID and USAID activity impact by co-locating at least a majority of the target communities.

The three implementing partners on the Greenville/Buchanan road collected data on basic economic livelihoods and on travel time. This information helped target specific grant activities and create baselines from which impact could be demonstrated once the road work was completed. Sensitization activities included 5,809 direct beneficiaries, generating an estimated 25,000 indirect beneficiaries, assuming a five-person family.

TABLE 21: ACTIVITY 4 SUMMARY – MITIGATING CONFLICT

Grant Number	Implementing Partner	Amount	Location
LCIP/DFID/005	SEARCH	\$28,550	Nimba
LCIP/DFID/006	BUCCOBAC	\$43,797	Grand Bassa and River Cess
LCIP/DFID/007	ECREP	\$37,478	River Cess
LCIP/DFID/008	LURCD	\$28,106	Sinoe and River Cess
LCIP/DFID/009		\$8,965	
Target/Actual No. of Beneficiaries			Target: 10,000 Direct: 5,809 Indirect: 25,000
Actual Duration			November 2006–June 2007

OBJECTIVES

- Disseminate accurate information about the LCIP I road rehabilitation projects.
- Mitigate conflict and manage community expectations surrounding misconceptions.
- Support community peace building in communities affected by the LCIP I road rehabilitation projects.

DESCRIPTION

The RSSP was designed to generate public support for and create an accurate understanding of LCIP I-funded road rehabilitation projects, including the roads connecting Ganta and Sanniquellie in Nimba County and Buchanan, Cestos, and Greenville across Grand Bassa, Rivercess, and Sinoe counties. The premise was to disseminate accurate information about the rehabilitation work in order to manage community expectations. Additionally, the objective was to help community members derive a sense of ownership of their roads and to solicit cooperation and support for the contractors. In this context, the project incorporated several mutually reinforcing psychosocial support strategies for social mobilization at the community level. The four local implementing organizations divided the sections as follows: SEARCH in Nimba County, BUCCOBAC in Grand Bassa and part of River Cess, ECREP in River Cess, and LURCD in Sinoe and part of River Cess.

PRIMARY ACTIVITIES AND ACCOMPLISHMENTS

- Sensitization meetings.
- Open-air sensitization.
- Distribution of 27 sets of recreational materials to community cultural troupes and youth sporting clubs.
- Facilitation of recreational activities—including major cultural performances in Nimba and 15 football and kickball games between and among project communities.
- Community-wide assessment of 121 towns and villages along the project route.
- Investigation of the potential impact and value of the road rehabilitating efforts.
- Capacity-building training workshops.

- Formation of community structures/road teams.
- Dissemination of awareness messages.
- Community radio programs.
- Publication of pictorials of project activities in local newspapers.

Successes

Raised community awareness, participation and support for the road project. DFID-funded grantees conducted numerous meetings and disseminated posters and leaflets with messages increasing community awareness and encouraging their support of the road rehabilitation efforts to sustain the interest generated in the previous quarter and ensure active participation of community members. Young people recruited by contractors worked cooperatively while communities provided assistance in the form of cooking utensils, cotton trees, and access to rocks and sand from the communities. The activities covered 146 communities: 23 in Nimba, 27 in Grand Bassa, 61 in River Cess, and 35 in Sinoe.



Community members in Sinoe at RSSP meeting

Sensitized communities about other USAID/DFID-funded projects. Messages disseminated by grantees informed communities that the road rehabilitation project(s) were funded by USAID and that the RSSP was funded by USAID with money provided by DFID. This sensitization helped to make the communities appreciate the fact that their road(s) were being improved through a partnership among donors, the Liberian government, and local business communities. The pictorials in the newspapers contained a photo of one of the yellow machines (Caterpillar) donated by USAID to the Government of Liberia/Ministry of Public Works that was deployed in Grand Bassa County to facilitate the government's road maintenance efforts.

Mobilized youth and others to participate. More than half of those sensitized and mobilized that directly participated in the projects (both RSSP and road rehabilitation) were youth. The estimated direct total number of beneficiaries reached during the project life is 5,809 people, including 3,575 men and 2,234 women; of that group, 3,607 were under the age of 35.

Strengthened community leadership structures. The identification of community structures, the revamping of dormant but relevant community groups, and the formation of 19 community road teams provided a useful conduit for the communities to undertake initiatives that will manifest community concern, commitment, and effort to take good care of the road during and after rehabilitation as well as to promote development and peace building at the community level. Twenty-seven Community Development Committees were supported, including training.

Promoted prevention of conflict and tensions. The work done by RSSP grantees contributed significantly to the level of understanding, peace and cooperation that occasioned the work of the contractors executing the fabrication of culverts and installation of culverts along the roads. Although there was concern and contention among some communities concerning their desire to be recruited, who should take ownership of logs that the contractors had removed from various cross drainages and the

burning of logs, the intervention of the DFID-funded grantees helped to keep these potential conflict issues from escalating beyond control, they were discussed and resolved peacefully.

Gathered socioeconomic data on project communities and compiled community profiles. To get a profile of communities along the roads being rehabilitated, the grantees gathered basic data on 121 communities: 3 in Nimba, 27 in Grand Bassa, 58 in River Cess, and 33 in Sinoe. The data collected included population, shelter/infrastructure, and basic socioeconomic information about each town or village assessed.

The grantees also assessed the socioeconomic impact that the rehabilitation of the Buchanan-Cestos/Cestos-Greenville road will have on the people and communities directly along the road and surrounding communities. The assessment indicated, among other things, the longest distances people travel due to vehicle shortages, especially during the rainy season, and how long it takes—sometimes 18 hours—to walk several miles. The assessment looked at the cost and time of travel and the availability of vehicles during the dry season and during the rainy season. It also assessed the cost of basic commodities such as rice, cement, and fuel/gasoline at various distances from Buchanan as well as the kinds of agricultural crops produced in the region.

Provided psychosocial support services. Psychosocial interventions including counseling and information sharing contributed to promoting the psychosocial well being of the project communities and made the environment conducive for the roads contractors to carry out their work freely and peacefully.

Built cordial relationships between and among stakeholders. The RSSP grantees participated in regular road contractor partner meetings, usually every two weeks. The meetings involved the road contractors, the consultant, county resident engineers, Ministry of Public Works representatives, and the DAI LCIP I team members. Follow-up meetings with the contractors and other stakeholders at the community and county levels facilitated understanding and cordial working relations among the project's stakeholders.

LESSONS LEARNED

The major challenge faced with these grants was that the actual road rehabilitation work was not completed when the grant activities ended. The information disseminated was accurate and correctly and successfully explained; however, the road work timeline was greatly underestimated. Consequently, the RSSP success created an expectation that, although accurate at the time, has not yet been met. LCIP II therefore plans to reinstate a similar project in order to help the infrastructure team disseminate current information about the engineering progress.

DFID LEGACY

From 2004 through 2006, LCIP I focused on crisis management and the initial short-term reinsertion of ex-combatants into civil life. The DFID grants provided an important transitional phase that helped LCIP I reorient its projects toward sustainable development and long-term reintegration and reconciliation of all war-affected populations. Currently, the DFID-funded projects have been incorporated into LCIP II on a larger scale, integrating modifications and improvements derived from the lessons learned during the DFID pilot phase. These programs have become flagship projects for the USAID Mission in Liberia; they will ultimately result in the benefits extending beyond LCIP II and beyond Liberia.

The LCIP II ESR project portfolio continues to provide diverse and successful economic growth opportunities for Liberia’s war-affected communities. The focus on rehabilitation of smallholder rubber farms has expanded to include rehabilitation of all four Liberian cash tree crops: rubber, oil palm, coffee, and cocoa. The RAP has evolved into one of the country’s most comprehensive workforce and enterprise development projects, incorporating microenterprise development, apprenticeship, and formal vocational skills training; the results of the program are currently being used for the reorientation of the National Commission on Vocational Education Training.

DFID’s most successful RAP participants—sole proprietors, cooperatives, and partnerships alike—are being evaluated for participation in a new LCIP II small business incubation project designed to support beneficiaries in the transition from grant assistance to microcredit. The seed-multiplication projects provided the basic information for the transition away from subsistence farming toward new cash-crop farming projects that emphasize improved value chain, farm-as-business management, and small-scale agribusiness training. The road sensitization projects provided the basis for other LCIP II projects that offer effective community reconciliation and psychosocial support in LCIP development corridors.

The DFID-funded grants supported a series of projects that provided the foundation for LCIP II’s transition from crisis management to sustainable development.

DFID: MONITORING AND EVALUATION

Both USAID- and DFID-funded activities were regularly monitored by LCIP I staff. The M&E system for DFID activities focused on the grant agreements, which included specific targets, performance indicators, and due dates for “milestone” reporting. Each grantee was trained to use the relevant performance indicators and to use a standard reporting template for each milestone report. The ESR team (which was responsible for managing the DFID-funded grants) worked closely with the local grantees on project management and implementation both in the field and through review, comments, and verification of monthly reports. LCIP I’s autonomous M&E team also conducted field visits at random, as well as when requested specifically by ESR and at the close of the projects in order to provide extra verification support.

Field reports from both M&E and ESR are attached to each relevant grant in the DAI Technical and Administrative Management Information System database. The relevant project development officer, team leader, or technical adviser discussed and addressed issues found to require follow-up. Based on this constant monitoring, the ESR and M&E teams constructed a list of important modifications and improvements to apply in the subsequent LCIP II ESR activities.

The M&E system for USAID infrastructure activities shifted slightly throughout the course of the implementation of these activities. Initially, all of the day-to-day monitoring was conducted by the A&E firm subcontractors, who would then report progress toward specific targets and other performance data to the Infrastructure team, and then to the LCIP I M&E team. On a regular basis, the Infrastructure team staff would monitor the rehabilitation activities that they were responsible for overseeing, in order to verify progress. Additionally, the M&E team would be in communication with the A&E firms, and even the construction firms, to collect and verify additional performance data. Toward the end of many of the rehabilitation efforts, much of the day-to-day monitoring was conducted by Infrastructure team members themselves. The M&E team also conducted field visits (often in tandem with Infrastructure team member visits) when requested specifically by the Infrastructure team or by senior project management.