



CityLinks Mali Final Report

Bamako, Mali & the Unified Government

of Athens-Clark County, Georgia

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TABLE OF CONTENTS

<u>Introduction.....</u>	<u>3</u>
<u>The Problem.....</u>	<u>4</u>
<u>CityLinks Partnership to Build Solid Waste Management Capacity.....</u>	<u>6</u>
<u>Activities, Accomplishments & Results.....</u>	<u>10</u>
<u>The CityLinks Model: ACC's Contributions.....</u>	<u>14</u>
<u>Continuing Activities.....</u>	<u>14</u>
<u>Challenges.....</u>	<u>15</u>
<u>Conclusion: A Foundation and Momentum to Build On.....</u>	<u>16</u>
 ANNEXES:	
<u>CityLinks Diagnostic Report.....</u>	<u>17</u>
<u>Memorandum.....</u>	<u>46</u>
<u>Transfer Depot Site Selection Criteria & Transfer Depot Specifications.....</u>	<u>49</u>
<u>Dumpsite Budget Analysis.....</u>	<u>50</u>
<u>Doumanzana Fee Analysis.....</u>	<u>52</u>

Introduction

The capital city of Bamako, Mali, was selected by the United States Agency for International Development (USAID) Mission in Mali for participation in the CityLinks program as the city was not able to effectively manage and control solid waste. Mali, an African country of more than 12 million people, is located in Western Africa. Mali is 1.24 million sq. km. in size or a little less than twice the size of the state of Texas in the U.S. Mali is a very poor country; it is rated 164 out of 173 countries on the UNDP Human Development Index. Between 64% -72% of Mali's population lives below the poverty line. In the capitol, 34% of the population works in the formal sector and 64% in the informal sector.

Political stability in Mali arrived in the form of a coup in 1991 led by Lieutenant Colonel Amadou Toumani Toure, which ended twenty-three years of dictatorship. One year later he refrained from running for President in a multiparty election. Alpha Oumar Konare was elected President and served the two terms in office allowed under the constitution. In 2002 Amadou Tourmani Toure was elected president, marking the first peaceful and democratic transition in post-colonial Mali.

The Bamako governance structure is extremely complex. It involves multiple layers ranging from the national ministries and a nationally appointed Governor (High Commissioner) to a local government which is both regional in nature, yet highly decentralized through relatively independent commune governments. Additionally, with limited public resources, there is an overarching governance philosophy of "privatization," which leads to the involvement of for-profit companies (GIE - Groupement D'Interet Economique) in the delivery of essential public services such as solid waste management. There are also traditional leaders (Traditional Chiefs of Quarters) at the neighborhood and Commune levels that play a critical role in mediation between ordinary citizens and the public and private sector institutions. A clearer breakdown of the national and local governance structure is noted below:

National Government: (Under the executive authority of the President)

- **National Ministries** - For example, the Ministry of the Environment, and its Pollution Control Agency, DRACPN (De L'assainissement et Du Controle Des Pollutions et les Nuisances)
- **Regional offices of National Ministries** that have governance responsibilities for Bamako. (For example the Regional Director for DRACPN).
- **Governor** (High Commissioner of the District of Bamako). The commune mayors and councils are responsible to the Governor/High Commissioner.

Local Government:

- **Bamako District** (city-wide, regional): The mayor of Bamako District has very little control over the Communes. There is active discussion about revamping the entire local government system and creating a strong mayor form of government for Bamako District. Under this proposed system, the Communes would then be accountable to the Bamako District under the executive authority of a strong mayor.

- **Communes:** There are six Communes in Bamako, each has a 23 member elected council and mayor, and these governments are accountable to the High Commissioner. In Commune 1, the High Commissioner disbanded the current council for mismanagement and replaced it with a 10 member appointed council and mayor.
- **Traditional Leaders:** Within each Commune there are traditional leaders (Traditional Chiefs of Quarters) who are respected elders that play an important mediation role between citizens and the various government structures. They are organized by Quarters. There appears to be approximately 66 Quarters in each Commune. The Chiefs are not paid, nor are they elected. It is unclear how one becomes a Traditional Chief of Quarters. However, their role is critical, especially in the area of solid waste management. They are organized into a Council of Chiefs and Quarters, with a Head Coordinating Chief, and meet regularly with government officials.

There are decentralization laws in effect and public service master plans that have been adopted, however; the governance system in Bamako functions without clear lines of responsibility and accountability. Combined with unprecedented urban population growth and poverty, the net result is an urban infrastructure that is deteriorating, thereby causing continuous erosion in already limited public services. No where is this more evident than in solid waste management arena.

The Problem

The first step in a CityLinks project is to conduct an on-the-ground analysis of the situation with a particular focus on priority issues. The diagnostic serves as the basis for developing project objectives and in identifying a US city to serve as partner. ICMA consultant and a former city manager, Tim Honey, conducted the diagnostic in Bamako September 8 through 10th, 2003. The diagnostic found the following challenges regarding various elements of the solid waste management system:

- *Trash collected from a limited number of households and businesses*—GIE's (Groupement D'Interet Economique), private companies that perform public services such as trash collection, collect waste from less than 45% percent of the households on there routes. Residents subscribe to a particular GIE in their area for service. A large number of residents in any given Commune cannot afford to pay for trash collection services or refuse to do so, thus waste is dumped in roadways, streams, vacant lots, and other public areas. This creates both aesthetic and public health problems that affect economic development and a sense of pride in the community. Even when households properly dispose of trash, it tends to still overflow because the containers are sometimes too small. GIE use donkey carts pulled by hand or in a few cases small tractors to collect the waste.
- *Trash is deposited in undesignated public areas*—The lack of transfer stations contributes to random dumping by residents and inefficiency of GIE's in collecting and transporting waste to the nearest disposal. Residents who do not subscribe to a GIE for collection services could dump their household waste at strategically placed transfer stations, thereby lessening the informal and unsightly waste dumps that can

be seen throughout Bamako. Transfer stations would also improve the efficiency and effectiveness of waste collection routes by shortening them, thus; allowing waste to be collected from a greater number of households.

- *Landfill is unreliable in providing final disposal services*—The area that serves as the landfill, which is located in Commune 1, was closed at the time of the diagnostic because it was overwhelmed by the amount of trash coming from other Communes. The lack of operational capacity has led to unsafe and unsanitary conditions for the neighborhood that surrounds the dump. Vermin that can cause disease is a rampant problem. In addition, pools of water created during the rainy season form an attractive play area for neighborhood children. These pools of water are directly related to the large incidence of drowning.
- *Bamako's solid waste management system does not function*—The system of waste collection and disposal is inadequate as a large portion of the population cannot afford it or will not pay for it. The waste that is collected is done so in an inefficient manner. The reason for this is inadequate financial and human resources, regulatory policies, equipment, and taxation or revenue generation mechanisms that are needed to support the system.
- *The solid waste management system does not provide for clear responsibilities and roles*—The major factor for the inadequacy of the solid waste management system is the lack of clear roles, responsibility, and accountability on behalf of government actors. Budgetary and human resources documents, such as job descriptions, do not exist, thus; it is difficult to establish who is or should be responsible for particular tasks.
- *Inefficient Collection*—Collection of solid waste is primarily the responsibility of the private sector through GIE's. GIE's are generally hard working as a group, however; they are inefficient. There is clearly a need for collection route analysis that will consider issues, such as appropriate equipment and needs, paying and nonpaying households and businesses, route size/length and route design. Better designed and managed routes can result in improved collection service and greater revenues for GIEs.
- *Outreach to residents nonexistent*—Residents represent both part of the problem and an important component to any solution. A well-functioning solid waste management system uses its customers as instruments in recycling and composting, as well as general solid waste collection. Thus programs must also provide outreach and education to ensure proper and efficient collection of waste and conformity in terms of recycling and composting programs. Government authorities do not have a formalized outreach or education program targeting residents. In fact, the closest thing to such an effort is the donor government's programs operated by nongovernmental organizations, such as Action Against Hunger (ACF). The solid waste project implemented by ACF on a neighborhood level was said to be successful.
- *Need for tangible results, not another report*—The need for tangible results from this project was noted in many discussions with USAID, Bamako officials, private sector workers, NGO's, and residents. The unauthorized dumping is a problem that can easily be seen and its impacts are obvious. Strategies that affect the cleanup of these sites can go a long way to instantly improve the community image and the belief in

the government. (Illegal dumping presumes that there are laws forbidding dumping in particular locations. From what ICMA has been able to learn, there are no illegal dumping laws; thus, the dumping was “unauthorized and not necessarily illegal.”). On-the-ground results would create momentum for more efforts in this area. Thus, the project must support and/or create products that citizens can see, feel, and touch, which would then positively impact the future actions of residents and public officials alike.

Beyond the challenges, the diagnostic report recommended that a small pilot or laboratory experience be implemented so that Bamako officials could learn about the elements and functions of a solid waste management system. A pilot would also allow participating government officials to experience a functioning solid waste management system in a small controllable area.

The U.S. partner needed to have a background in solid waste management both from an operational and administrative perspective. Additionally, the candidate needed to be practical and flexible in developing and implementing a solution that would fit Bamako’s environment. ICMA’s research led to the choice of The Unified Government of Athens-Clarke County (ACC). ACC was chosen for its award winning work in the areas of recycling and public education, a key need if behaviors such as unauthorized dumping are to be changed. ACC also brought significant experience in its Engineering Administrator, Jason Peek, who had served as a Peace Corps volunteer in Mali. Mr. Peek’s experience would help in the development of practical solutions. His ability to speak French and Bambara, the local traditional language, would serve as obvious advantages. Given ACC’s strong local government administration, especially in the area of solid waste management, Bamako was assured of an experienced and capable partner, a standard for the CityLinks Program.

CityLinks Partnership to Build Solid Waste Management Capacity

Tangible results for a city and population the size of Bamako would be outside the scope and abilities of the CityLinks project. The CityLinks Program, through long-term sustainable partnerships, brings together the best management practitioners from the United States with officials from developing and transitional cities and regions to share resources and technical expertise that ultimately improve the lives of urban residents. The project was initially budgeted at \$223,895. This budget was not sufficient to address the entire city, but provided sufficient funding to build and improve key elements of the solid waste management system.

Prior to traveling to Mali for the first exchange, ICMA’s project manager David George and ACC CityLinks project staff Jason Peek and Tyrell Jacobs reviewed and discussed the Diagnostic Report and the objectives that were to be achieved. It was decided that the following principles would guide the planning and implementation activities for the project:

1. Ensuring that the project results in tangible products that could be seen and heard;

2. Use a collaborative process to develop a solution so that all key players' may contribute.

Additionally, it was decided that the solution would be implemented at the commune level. This decision took into consideration limited project resources and the unwieldy nature of attempting to implement a citywide project in Bamako. The team further agreed to fully implement a solid waste management system in two specific communes that could be replicated to a greater area of Bamako.

Stakeholder Planning Session

The main objective of the first exchange was to develop a work plan that would serve as road map for building the pilot project. The aim of the pilot project would be the creation of an effective solid waste management system in a selected area within a commune that could be replicated to other Bamako communes. An important aim was to ensure that the planning process was collaborative and that all stakeholders were engaged in the laboratory experience. A two-day Stakeholder Forums (January 14 and 15, 2004) was hosted by ICMA and DRACPN, the national pollution control agency; was convened at their regional office in Bamako. Attendees included representatives from DRACPN, Mayor of Commune 1, Mayor District of Bamako, GIE's, ACF, and a women's community based organization. The collaborative session was facilitated by ACC and focused on developing an action plan for the creation of a solid waste management pilot project in Commune 1. The team identified Commune 1 as the existing dumpsite was located there. ACC and ICMA also decided to discuss and provide information on key components of an effective solid waste management system in an effort to steer planning efforts towards activities that were needed and tangible. The list of activities below, represent the results of a collaborative process to develop a learning laboratory in Commune 1.

ICMA's CityLinks Project Bamako--Athens-Clarke County Pilot Project Action Plan Activities

- ✓ **Activity 1.** *Create Beautification Slogan:* this activity involves the development of a campaign slogan that would be used to rally residents around a beautification or cleanliness theme. It is a specific part of an educational and public relations campaign that the stakeholders believe is necessary to establish.
- ✓ **Activity 2.** *Organize and Conduct Commune Clean-Up Day:* this activity involves rallying the community to focus on specific problem areas for clean-up. The benefits of clean-up days are numerous. First, it helps to build a greater sense of community among residents in a particular area. Second, it improves the overall appearance of the community. Third, coupled with the deployment of appropriately placed transfer sites, a working collection and disposal process, and added vigilance, these sites do remain clean. Lastly, it represents progress that residents can both see and feel. Cleanup days were included as part of an education and outreach campaign.
- ✓ **Activity 4.** *Conduct Education/Outreach campaign:* this activity represents the implementation of the educational/outreach campaign plan that will be developed in Activity 3. Note that community-based organizations will play a significant role in carrying out these activities. Athens-Clarke County will be able to provide sample campaign materials and expertise in the development of these components as needed.

- ✓ **Activity 5.** *Choose Location for Pilot Project (1 Quartier in Commune 1):* The DRACPN is responsible for determining the location of the pilot area. This decision will be driven by the location of existing resources such as the landfill in Commune 1.
- ✓ **Activity 6.** *Choose Locations for Transit Depots:* The DRACPN is responsible for this activity. The team envisions the transit depots as areas where trash sorting can be conducted but is also accessible to residents for self-dumping. This is especially important for those residents who cannot afford to pay for collection services. The team has advised that the transfer depots be strategically placed where illegal dumping now occurs, since the actions of the citizenry has already determined convenient locations.
- ✓ **Activity 7.** *Construction of Transit Depot:* the district mayor is responsible for the construction of the transfer depots. It is important that they be enclosed and manned during operating hours (these depots could possibly stay open 24 hours/day, however the operations cost will increase). This construction is another very visual, not to mention, functional aspect of the project. ACC will provide engineering assistance, if necessary, to support the construction project.
- ✓ **Activity 8.** *Operation of the Transit Depot:* The Commune mayor is responsible for the operation of the transit depots. The mayor should use GIE's for this activity. It is important that this activity actually comes to fruition and sustained over time. One of the problems within the solid waste system in Bamako has been the inability to commit to specific tasks due to the lack of funding. Funding for this activity must be identified, both at the initial operation phase and long-term. Funding would be used for both construction and staffing.
- ✓ **Activity 9.** *Collection from Transit Depot and Transportation to Landfill:* the mayor of the district bears the responsibility for this activity. GIE would be a logical choice to use in completing this task and funding must be identified to ensure the activity's effective implementation over time. ACC will provide technical assistance to the local government and/or the GIE's in collection routing efficiency.
- ✓ **Activity 10.** *Operation of the Landfill:* the proper operation of the landfill will require equipment and training assistance. Equipment such as dump trucks, tractors, bulldozers, lining and soil along with landfill operation techniques can transform the current dump into a certified landfill. While this transformation is outside the scope of this project, the training of landfill operators is not. ACC will provide training and training materials related to landfill operations and other information related to the development and maintenance of the landfill.
- ✓ **Activity 11.** *Management Training:* the need for management training is apparent throughout the various components of Bamako's solid waste management system; however, much has been done and is in the pipeline through existing projects and initiatives. For example, ACF has recently completed management training of GIEs'. ACC will work with the team in crafting training modules, including the development of training. Training related to subject areas, such as staffing and human resources, collection and routing, financial management, and other areas pertinent to Bamako's unique waste situation.

The activities above fall into three main categories, education and outreach, collection, and landfill management. The project budget was then rearranged to fit these activities,

applying estimates to each area. These components taken together form the laboratory or model solid waste management system.

One clear challenge that was discerned as the planning process proceeded was the need to secure a local NGO to oversee the implementation of the above project activities in between exchanges to Mali. During the exchange ICMA and ACF met to discuss a potential arrangement that would allow them to monitor, coordinate, and implement the project between exchanges, however; the high estimate offered by ACF prevented the creation of a contracting relationship between the two organizations. ACC and ICMA determined that there was also a need for a single project coordinator who would have project responsibilities as part of his duties as a government official. ACF could also fulfill this role given their close relationship with the government, however; in an effort to ensure local government buy-in, a local official who could “rally his/her troupes” was preferred.

Refinement of the Plan

During the second exchange to Bamako, it was clear that activities would not be followed through unless a local coordinator was chosen and specific officials tapped to head major project areas rather than representatives or heads of particular organizations agreeing to appoint a person(s). The Stakeholders Forum was reconvened, but only the key persons that we believed would be responsible for each activity were invited to meet one-on-one with the project team. These meetings resulted in the following:

- Bancouni and Korafina were selected as two pilot areas (quartiers) in Commune 1;
- The pilot project scope was reviewed, refined, and committed to through a formal memorandum of recommendations that was signed by the Haut Commissaire du District de Bamako (Governor of Bamako), ACC, and ICMA. The contents were developed by Bamako project participants, ACC, and ICMA;
- Guindo Housseini was nominated by the project team to coordinate the pilot project activities. Housseini was the Special Assistant to the Haut Commissaire du District de Bamako and was responsible for solid waste. This nomination ensured a well-placed team member charged with daily coordination of activities on-the-ground.
- ACF agreed to provide limited project management responsibilities, namely; the distribution of funds for procurement related activities. While ICMA hoped for a more intense collaborative effort, the funding was only enough to support very basic services.

Using the action plan that was developed in January 2004 as a starting point, the main aim of these planning meetings was to develop accountability by having the appropriate local officials discuss and agree to their area of responsibility. These sessions were very successful. Not only were the activities refined so that full buy-in was achieved, but project leaders were nominated to take responsibility for each area of activity. The following lists the activities, budgets, and project leaders:

1. **Education/Public Awareness & Outreach (\$25,000):** An educational/outreach campaign targeting the residents of two quartiers will be implemented to raise awareness about the negative impacts of unauthorized dumping and to promote individual responsibility in keeping Bamako clean. A key aspect of an effective solid

waste management system changes the behavior of customers such that their actions maximize system efficiency. The education plan includes activities such as, a project launch day, clean-up days that focus on particular problematic areas, and the creation of public service announcement for radio (Mr. Oumar Sidi Aly, 3rd adjunct to the Mayor of Commune 1).

2. **Collection (\$56,000):** In the pilot project area several evaluations will be conducted with an aim towards improving collection efficiency. Research that will provide an estimate on paying and nonpaying customers, equipment needs, and routing management will be conducted. In addition, new equipment will be procured to improve the overall collection capacity of the GIE's in the pilot area (Mr. Hamidou Berthe, Directeur de la Voirie).
3. **Landfill (\$80,000):** Resources will be dedicated to landfill improvements at the Doumanzana site, such as, walling the perimeter of the site, leveling and moving waste deeper into the dumping area, constructing a guard house, leveling the access road, and constructing a bar/gate across the entrance.

While ACC and ICMA initially planned to build transfer depots at several strategic locations, the Bamako project team felt it necessary to improve the landfill. There were two strong reasons for their opinion. First, fencing the landfill would prevent children from playing and/or scavenging in the landfill, which has led to injuries and death by drowning, especially during the rainy season. Second, the local members of the project team believed that any improvements to the operation of the landfill and any effort to improve the aesthetics of the landfill would also impact the community that surrounded the landfill. A barrier between the landfill and the community would prevent dumping and offer cover from wind strewn waste that littered the streets and houses that sit on the fringe of the landfill. Based on the strong arguments presented by the team, both ACC and ICMA quickly agreed that resources should be used for landfill improvements. This decision resulted in no resources being dedicated to transfer depots.

Each activity was assigned a budget based on estimated costs. The total budget for all on-the-ground activities totaled \$162,438. These funds were initially budgeted for travel by ACC to Mali; however, both ACC and ICMA decided that a better use of the funds would be to support tangible improvements, while still providing ACC's expertise and assistance through four exchanges.

The Project leaders were provided with a project work plan forms, which are documents that allowed a project manager to view objectives, resources, budgets, and tasks on a page or two. This tool was use to assist project leaders in managing the implementation of their tasks. Project Coordinator, Guindo Housseini was provided with explicit directions with regards to the logistics of communication and reporting to ICMA, procurement of goods and services, and general management to ensure complete of tasks.

Activities, Accomplishments & Results

The successful implementation of the following activities is due in large part to the good work of ACC and its main representative, Jason Peek, and the stewardship of Guindo

Housseini who ensured that tasks were completed between exchanges. The accomplishments of the project are as follows:

Education/Public Awareness

- ✓ ***Project Launch Day***—A project launch day was held to celebrate and raise awareness regarding the CityLinks effort. Dignitaries from the Malian Government and USAID along with community leaders and residents attended the event.
- ✓ ***Public Service Announcement (PSA)***—A PSA was developed under the project and ran on the Malian National Television station. Although created for the pilot areas the PSA was seen nationwide and has assisted solid waste efforts in all major cities within Mali. From discussions with team leaders, citizens, and other stakeholders it was evident that the PSA resulted in an increased awareness of solid waste issues. GIES and garbage collectors have noticed an increase in payments from existing customers as well as an increase in the number of new customers along their collection routes. The PSA included a sketch of two women carrying trash to the dump. A dialogue ensued about the importance of properly disposing of trash, **paying** for collection, and the health benefits of properly managing solid waste. It also included the general theme that it was important to recognize that it is everyone's responsibility to properly dispose of trash and maintain a clean Bamako.
- ✓ ***Cleanup Days***—Cleanup days are now a regular occurrence as they are held on a monthly basis in the pilot area. The first clean-up days were held to coincide with the launch of the PSA (sketch). Small tools procured by the project, such as, shovels, rakes, wheelbarrows, and gloves, were distributed to civic organizations within the pilot area. The community now uses the tools to assist with cleanup days. The garbage collection firms (GIEs) also donate their services by transporting waste to the dumpsite. These days are particularly popular with residents, especially since the project succeeded in upgrading landfill operations.
- ✓ ***Dedication Day***--An official dedication day was held for the project on in the fall of 2005 to celebrate accomplishments and attributes. The Governor of the District Bamako, the Country Director of USAID, as well as other elected official and citizens attended the ceremony.
- ✓ ***Morning News Broadcast***--The project received some free media coverage during the March 2005 exchange. The local market coordinator for Doumanzana participated in a morning news broadcast on one of Bamako's local radio stations to praise the work being done at the dumpsite. He personally thanked USAID and ICMA for the improvements to the dumpsite. In addition to the news broadcast the project's accomplishments were included in a documentary on solid waste issues in West Africa. This documentary was still under production when the program came to an end in December 2005.

Collection

- ✓ ***Collection Evaluation***—An evaluation was conducted to study existing collection problems, measured citizens' willingness to pay for collection, estimate waste

generation in the pilot area, and provide collection routing improvement recommendations. The project team discussed and provided direction to the project leader on conducting the studies. These evaluations helped to determine the collection equipment that was later procured. Given the lack of information about paying and nonpaying households, and waste generation. The project team believed it was important to do the necessary research, even if it was conducted in a small area.

- ✓ **Equipment Procured--** Four tractors and carts were procured in an effort to improve waste collection in the pilot area. The Mayor of Commune 1 provided the equipment to three existing GIEs' and one new enterprise. Each business is responsible for paying a monthly sum to the Mayor of Commune I as part of a replacement fund for the tractors. The equipment has been put to good use and has been active as shown below. Project funds also procured rakes (12), shovels (12), gloves, brooms, and wheel borrows (12)



Landfill Improvements

- ✓ **Master Plan for Doumanzana Dumpsite Improvements—**A master plan detailing the landfill improvements was developed and agreed to by the project team and the USAID. The plan called for a new wall around the dumpsite, a new guardian house, an access road, and delineation of five separate dumping zones that should be used to separate access between large trucks, small donkey carts, and other equipment.
- ✓ **Walled Doumanzana Dumpsite—**The walling of the Doumanzana dumpsite was an important objective of the CityLinks project. This particular activity had an

immediate impact on the community as young children were prevented from playing in the dumpsite. It is also more aesthetically pleasing. The initial plan was to fence the perimeter as it would be less expensive. However, given the demand for scrap metal in Bamako the project team decided that it was better to use a different type of material. ACC did the engineering necessary to construct the wall.

- ✓ ***Guardian House***—A guard house was constructed to regulate the in and out traffic at the dump site. This improvement will contribute to more efficient and effective operation of the dumpsite.
- ✓ ***Gated Dumpsite***—A pole arm was also placed at the entrance of the dumpsite for added capacity in regulating dumping. The arm will be operated by the guard stationed in the guardhouse.
- ✓ ***Construct Access Road to Dumpsite***—An access road was constructed to provide for more efficient traffic into and out of the dumpsite. This improvement allows for proper dumping into the appropriate cells or dumping zones for more efficient operation. ACC did the planning and engineering work necessary to complete the construction. Equipment such as a Surveyor's Rod, Tripod for Theodolite, and Surveyor's Transit were rented to conduct the work during the exchange.
- ✓ ***Moved Waste Deeper into Landfill***—Trash was moved deeper into the landfill in an effort to prolong the life of the site by more efficiently spreading the waste. Spreading of waste should be an ongoing dumpsite operation that is necessary if Bamako is to get the most out of the site. While this activity was performed regularly during the project, it most likely will not continue now that the project is over. This activity should now be the responsibility of the district mayor, Governor's Office, or DRACPN.
- ✓ ***Sprayed Insecticide/Pesticide Treatment***—In an effort to decrease the public health threat and general nuisance caused by insects and pests that infest the standing water found in the dumpsite was treated with pesticides/insecticides. This idea came from the local project coordinator and had a significant impact with the surrounding community. Proper landfill management and operations would have less of these issues because lining and ground cover requirements, however; this solution was appropriate for the local conditions.
- ✓ ***Collector's Association Building & Dumpsite Sustainability***—During the November exchange, the team learned that in response to the project success, the Association of Garbage Collectors requested that the new guardian house have one room designated as office space for their association. This space was provided and the group now meets weekly to discuss plans for the future of their industry and other issues related to collection services. This association consists of the individual businesses that provide collection services within Commune 1. The association has also submitted a contract proposal to the Mayor of Commune 1, requesting permission to manage the operations of the dumpsite and for the authority to charge a tip fee to users of the site. It is unclear, how they will determine the tip fee; however, it appears that it will be based on the ability of users to pay as opposed to the operational needs of the dumpsite. The contract was under review by the Mayor's Office. It is unclear if or what decision was reached prior to writing this report. While charging any tip fee is a good step forward, rates should be based on the operational costs at the site to ensure sustainability. ACC has developed the *Doumanzana Fee Analysis* in support of the

development of a tip fee. A crude analysis was conducted over two days by counting users and approximating weight of material dumped. This resulting fee is only an estimate and additional counts should be completed to more accurately determine an appropriate fee.

The CityLinks Model: ACC's Contributions

ACC's contributions to the project are what make the CityLinks Program unique among the development efforts supported by USAID and other donor governments. ACC provided expertise in solid waste management and engineering in the form of an Assistant City Manager, Tyrell Jacobs; Engineering Administrator, Jason Peek, P.E.; and Kevin Hamby, SPLOST Project Manager (Landfill expert).

During the first exchange ACC coordinated and facilitated the partner planning session that resulted in the first draft of the pilot project components. The planning session provided an opportunity for the stakeholders to contribute directly to the solutions in a way that allowed ownership. Both ACC and ICMA presented the attributes of an effective solid waste management system as a way of providing expertise and information prior to the solution development portion of the session. To assist local project leaders and stakeholder in understanding the elements of project management ACC reviewed each element during the planning session. Project elements such as objective, tasks and subtasks, resources, timeline, budget, and key personnel were reviewed and discussed. Further, ACC introduced one page project management forms that project leaders could use to track and communicate the elements of their projects.

As a result of stakeholders opting to spend available resources on dumpsite improvements, the transfer depots were never constructed as a part of this project. However, ACC developed transfer depot specifications that should govern the construction of these sites in the future. With an eye towards the sustainability of the dumpsite, ACC constructed a tip fee analysis that is used to charge persons who use the site. The tip fee analysis tool could be used as a good starting point should officials choose to begin charging or used once the new landfill is sited. ACC advised that there is a need to begin charging for final disposal services if the dumpsite operations are to become self-sustaining. There are significant challenges to this transformation, particularly in a situation where there has never been a charge for the service. ACC coordinated and directed general dumpsite cleanup during the third exchange, which was dedicated to dumpsite improvements. ACC conducted all of the necessary survey and engineering work needed to construct the access road and wall at the dumpsite. Further, ACC directed all construction activities ensuring the work met the proper standards for a well constructed road and mason wall. ACC planned and directed the initial construction work on the guardhouse and planned and directed the grading and construction work on the access road and pole arm. ACC developed a budget needs assessment for the Doumanzana dumpsite. The budget looks at both project funding and operational costs.

Continuing Activities

City officials have committed to continuing the implementation of several activities:

1. Develop Campaign Slogan – A slogan should be developed and included in the public service announcement that extols the virtue of a clean Bamako. The slogan should also serve as link between all project activities. It was also suggested that a graphic symbol for solid waste improvement be developed.
2. Redistribute Public Service Announcement (PSA) – Additional funding is needed to continue disseminating the PSA to radio and television media.
3. Continue Commune Clean Up Day – Cleanup days will continue and should be supported by Commune I government officials and community.

Challenges

Solid Waste Management System Sustainability

It will be difficult to sustain a solid waste management system that is based on a fee-for-service arrangement if large portions of its clientele cannot pay and/or will not pay for collection services. Commune governments should consider franchising collection routes to private collectors—individual GIEs enter into a contract with a Commune for the area they are to cover. Commune governments could then use those revenues to buy equipment and/or cleanup particular problem locations. Support for the landfill operations should come from tip fees and tax revenue, perhaps a targeted assessment. A system that guarantees revenues to ensure the full operation of collection and disposal services should be implemented. Without a system in place that is understood by all stakeholders, along with appropriate enforcement and encouragement mechanisms, sustainability will not be achieved.

Regulating the dumping at Doumanzana

During the November 2005 exchange, access to the *Doumanzana* dumpsite was severely limited by piles of garbage. ACC staff met with the Mayors Office of Commune 1 to discuss current and future efforts for management of the site. In response the Mayor's Office agreed to hire two guardians as government employees with responsibility for management of the site. These employees were to be issued appropriate authority to direct and sanction users of the site. Without written authority the current onsite guardians have not been able to command respect from users. If this issue is not permanently remedied by the Commune 1 Mayor's Office, the site's usefulness as a dumpsite will be short-lived.

On-the-Ground Project Management

This challenge turned into a success given the strong leadership of Guindo Housseini. ACC and ICMA were concerned that the plan that was developed would not be implemented sufficiently without an individual or organization to follow-up with local project leaders. While we had confidence in Mr. Housseini there was still some concern about how funds would be disseminated. In the end, ICMA contracted with ACF to disseminate funds and to act as a general overseer of the project in general. Given the amount of funds that were contracted for, ACF could not provide as intense an effort as they may have wanted. However, they did do a commendable job particularly in ensuring the appropriate types of equipment were purchased based on the evaluation

studies and the known needs. Housseini's competence was also a key reason for the success of the project.

Getting funds to Bamako

The biggest challenge by far was ICMA's slowness in getting the funding to Bamako to put the plan into action. After the first exchange, there were activities that local officials committed that were not implemented as per the original schedule. While this set the project back a few months, the second exchange brought new momentum because the plan was refined and the individuals were tapped to play specific implementing roles. The administrative action needed to contract with ACF and move the funds into the country delayed the project and created negative publicity. The project has recovered considerable; it is now recognized as very successful.

Conclusion: A Foundation and Momentum to Build On

The project achieved its objectives. A pilot project was implemented that created a learning laboratory for solid waste management in the City of Bamako. The education campaign raised an awareness within the community that resulted in the improved participation of citizens willing to pay for garbage collection, increased customers and revenues for garbage collection firms, less unauthorized dumping within the project areas, and the creation of monthly clean-up days within the communes. Project funds spent on physical construction at the dumpsite and on equipment, such as shovels and tractors, had multiple benefits. The equipment created additional capacity to provide garbage collection within the project area, improved participation in Clean-up Days by community organizations, and a controlled designated area to dispose of garbage.

The stakeholders understand that the lessons learned from this project can be used to ramp up to the developing Solid Waste Management Plan funded by the World Bank. This project has demonstrated that education is a key component of any effective solid waste management system.

Moving forward, the city of Bamako should consider the following as future projects to augment the existing learning laboratory:

1. Establish a waste transfer station(s) in another commune to develop collection procedures from transfer stations to final disposal.
2. Expand composting operations at the site to generate additional revenue and increase disposal capacity.
3. Methane mining of the site for power generation.

ANNEXES

CITYLINKS DIAGNOSTIC REPORT BAMAKO, MALI SOLID WASTE MANAGEMENT

September 23, 2003

EXECUTIVE SUMMARY

The capital city of Mali, Bamako, was selected by the USAID Mission for participation in the CityLinks program because of the growing concerns caused by the inability of the city to effectively manage and control the generation of solid waste. In April of 2003, President Amadou Tourmani Toure delivered a major policy speech, identifying the solid waste management issues confronting the capital city as a national priority. USAID, in response to this growing problem facing all urban centers throughout Mali, entered into a contract with the International City/County Management Association (ICMA) to utilize the CityLinks program to focus upon improving the Solid Waste Management System in Bamako.

The first step in the CityLinks program is the Municipal Diagnostic. This was performed by ICMA Consultant Tim Honey, and took place from September 8-10, 2003.

The recommendations emerging from the Diagnostic reflect the consensus views from all those involved in the Diagnostic process (See Appendix 1 for the summary reports on individuals and organizations involved in the Diagnostic). There was a unanimous desire for the CityLinks program to result in something concrete - which would have visible and real benefits to the citizens of Bamako.

However, there is clearly a need to link a concrete project with the key governance, public administration, and change management issues which plague the current and dysfunctional Solid Waste Management System. Therefore, it is recommended that the concrete project become the "learning laboratory" through which the overall Solid Waste Management System can be improved. In past experience, CityLinks has had substantial success being a "learning laboratory" based upon "on the ground realities," and has also achieved success involving all stakeholders, which will be especially effective in clarifying appropriate responsibilities for improving the Bamako Solid Waste Management System.

The individuals who participated in the Diagnostic spoke with great enthusiasm about what can emerge from the CityLinks program. These are knowledgeable and dedicated public and private individuals, who are committed to making the Bamako Solid Waste Management system work on behalf of the citizens. They are plagued by daily realities of poverty, uncontrolled urban growth, and totally inadequate financial resources.

However, in spite of all the obstacles, they believe that the CityLinks program can make a very significant contribution, resulting in a cleaner and safer community for the citizens of Bamako.

The following recommendations have emerged from the Bamako CityLinks Diagnostic:

- 1) The CityLinks program should focus on the Commune/Neighborhood level. With this focus, there should also be a commitment to use the CityLinks program to bring "value added" improvements to the ongoing development of a comprehensive and viable Bamako Solid Waste Management System.**
- 2) The CityLinks program emphasizes the implementation of a tangible project. This is especially relevant in Bamako, for achieving small successes will be critical to future success.**
- 3) A tangible, neighborhood focused CityLinks project should be undertaken in partnership with the key stakeholders, and should be used as a "learning laboratory" to focus attention upon key governance, public administration, accountability, and change management issues that are prerequisites for improving the overall Bamako Solid Waste Management System.**
- 4) The tangible, neighborhood focused CityLinks project may wish to build upon the success of Action Against Hunger's (ACF) project in Commune 1, and should consider ACF's proposed project for the Cross-Bordering Pond of Banconni between Commune 1 and 2.**

THE CITYLINKS PROJECT:

PRINCIPLES OBJECTIVES OF THE MUNICIPAL DIAGNOSTIC

The objectives for the Municipal Diagnostic were identified in ICMA's Program Description as follows:

- The diagnostic assessor will document the economic, social, and political context in which the partnerships will operate.
- The diagnostic will identify other relevant municipal strengthening activities in the vicinity, including other donor funded activities.
- The diagnostic assessor will be looking for opportunities of donor cooperation in order to establish effective linkages, increase impact, and leverage additional resources.
- The diagnostic assessor will build on field tested experiences rather than repeat the learning curve, especially those related to ACF.
- The CityLinks partnership should not be limited to 'assessing' or 'evaluating' current practices.
- The CityLinks partnership should assess and implement specific solutions.
- The CityLinks partnership should focus upon 2-3 discrete areas.

- The CityLinks partnership will work toward achieving 'quick wins' that visibly impact citizens' daily lives.
- CityLinks should build a foundation on which additional improvements that require longer term action can be made by the City of Bamako and the Ministry of the Environment.
- CityLinks should work closely with existing USAID-funded activities and programs as well as with other donors' solid waste management activities to maximize synergies and impact.

BACKGROUND

MALI (10,000,000 population)

According to the United States Agency for International Development (USAID) and the United Nations Development Program (UNDP), Mali remains one of the world's poorest countries:

- Mali is rated 164 out of 173 countries on the UNDP Human Development Index.
- Between 64 -72% of Mali's population lives below the poverty line.
- Life expectancy in Mali is 50 years.
- Mali has 4th highest rate infant mortality in the world.
- Mali has the 13th highest maternal mortality rate in the world.
- Mali's per capita income is \$230 per year.
- Mali's annual fertility rate is 6.7%.
- Mali has a very fragile environment with unreliable rainfall.
- Mali has a limited number of community based organizations with the ability to partner in a decentralized government system.

Political environment:

In 1991, Lt. Colonel Amadou Toumani Toure, staged a coup which ended twenty-three years of dictatorship. One year later he refrained from running for President in a multiparty election. Alpha Oumar Konare was elected President and served the two terms in office allowed under the constitution. In 2002 Amadou Tourmani Toure was elected president, marking the first peaceful and democratic transition in post-colonial Mali. President Toure, who has no political party, has selected a diverse, multi-party government of twenty-eight ministers.

Economic environment:

According to the World Bank:

- Mali suffers from limited natural resources, high vulnerability to external shocks, and acute social needs;
- Its exports in 2002 were mostly concentrated in three products: gold (56 percent), cotton (27 percent), and livestock (5 percent).
- From 1998-2002 Mali's economy grew by 5.5%. The performance of the Malian economy between 1998 and 2002 can be attributed to the effective

implementation of macroeconomic stabilization and economic liberalization policies since 1994, which encouraged private sector development. Between 1996 and 2000 overall poverty was reduced by 7.5%.

- The economy worsened in 2001, with only a 1.5 percent growth rate and a 5.2 percent inflation rate. While Mali experienced GDP growth of 9.6 percent in 2002, real GDP is forecast to decline by 0.4 percent in 2003 in view of the poor rains and the effects of the Côte d'Ivoire crisis.

CITY OF BAMAKO: (Footnote 1: Information and facts derived from October , 2001 report by UN-Habitat, Urban Management Program which conducted a Strategic Planning Project for Bamako Development)

The city of Bamako was founded in the 17th century. Modern day Bamako began at the end of the 19th century with the establishment of the French colonial administration. Bamako quickly became the principle urban center on the Upper Niger River. Bamako has grown from a population of 189,000 in 1968 to over 1,300,000 today. The magnitude of urban population growth has placed incredible pressure upon basic city services. Basic urban services appear to be actually deteriorating as a result of severe poverty and rampant population growth. For example, while the main streets of the city are paved, almost all the adjoining and neighborhood streets, even in the city center, are unpaved - marked with deep potholes, often filled with water, and impassible for larger vehicles.

Geographic Profile of Bamako:

The Niger River dominates the topography of Bamako. During the rainy season, the river is easily a half mile in width, and many streams and creeks from the surrounding urban neighborhoods flow into the Niger. The city covers an area of 18,000 hectares, and can be increased by estimated 27,600 hectares. It is comprised of 60 neighborhoods and 6 political subdivisions known as Communes. Each Commune has distinctive characteristics and is governed by an elected 23 member municipal council.

Socio-Economic Profile of Bamako:

- 50% of the population is under the age of 20.
- The urban growth rate was 5.97% from 1997-2000.
- 33% of the population lives below the poverty line.
- 34% of the population works in the formal sector and 64% in the informal sector.
- Bamako produces 24% of Mali GNP.
- Bamako produces 45% of Mali national imports.
- Bamako produces 25% of national consumption.
- Bamako is responsible for 70% of Mali's commercial activities.
- Bamako is responsible for 68% of Mali's industries.

Public Service Profile of Bamako:

- 77% of the population is without access to potable water.
- Only 1.5% of households are connected to a public sewer.

- 60% of houses are without access to electricity.
- 82% of the population has access to basic community health.
- 98.9% of the students are enrolled in the first cycle of education.
- 33.1% of the students are enrolled in the second cycle of education.
- 0.7% of the students receive a degree in higher education.
- Bamako's literacy rate is 18%

Bamako's Governance Profile:

The Bamako governance structure, especially when viewed through the Bamako Solid Waste Management System, is extremely complex. It involves multiple layers ranging from the national ministries and a nationally appointed Governor (High Commissioner) to a local government which is both regional in nature, but highly decentralized through relatively independent Commune governments. Additionally, with limited public resources, there is an overarching governance philosophy of "privatization" which leads to the involvement of for-profit companies (GIE - Groupement D'Interet Economique) in the delivery of essential public services such as solid waste management.

There are also traditional leaders (Traditional Chiefs of Quarters) at the neighborhood and Commune levels that play a critical role in mediating between ordinary citizens and the public and private sector institutions.

Finally, while there are decentralization laws in effect and public service master plans that have been adopted, the governance system in Bamako functions without clear lines of responsibility and accountability. Combined with unprecedented urban population growth and poverty, the net result is an urban infrastructure that is deteriorating, thereby causing continuous erosion in already limited public services. No where is this more evident than in solid waste management arena.

The following governance institutions comprise the governance structure of the City of Bamako (Bamako Region).

National Government: (Under the executive authority of the President)

- **National Ministries** - For example, the Ministry of the Environment, and its Pollution Control Agency, DNACPN (De L'assainissement et Du Controle Des Pollutions et les Nuisances)
- **Regional offices of National Ministries** that have governance responsibilities for Bamako. (For example the Regional Director for DRACPN.)
- **Governor** (High Commissioner of the District of Bamako). It was reported to the assessor that the Commune mayors and councils are responsible to the Governor/High Commissioner.

Local Government:

- **Bamako District** (city-wide, regional): The mayor of Bamako District has very little control over the Communes. There is active discussion of revamping the entire local government system and creating a strong mayor form of government for Bamako District. Under this proposed system, the Communes would then be accountable to the Bamako District under the executive authority of a strong mayor. To date, no legislation has been introduced to accomplish this change.
- **Communes:** There are six Communes in Bamako, Each Commune has a 23 member elected council and mayor, and these governments are accountable to the High Commissioner. In Commune 1, the High Commissioner disbanded the current council for mismanagement and replaced it with a 10 member appointed council with an appointed mayor.

Commune	Resident population			Households per compound	Persons per household	Population surveyed in 2001 ¹
	Men	Women	Total in 1998			
Commune 1	99544	95537	195081	1.9	6.1	233829
Commune 2	63565	62788	126353	2.6	6.8	137795
Commune 3	49618	50135	99753	2.3	7.2	122832
Commune 4	94196	92004	186200	1.9	6.7	197559
Commune 5	94933	92634	187567	1.8	6.0	236261
Commune 6	113111	108231	221342	1.5	6.2	250701
TOTAL	514967	501329	1016296	1.9	6.4	1178977

¹ Recensement Administratif à caractère électoral (RACE) réalisé par le Ministère de l'Administration Territoriale et des Collectivités Locales en juillet 2001. Source of Chart: Actions Against Hunger.

- **Traditional Leaders:** Within each Commune there are traditional leaders (Traditional Chiefs of Quarters) who are respected elders that play an important mediation role between citizens and the various government structures. They are organized by Quarters. There appear to be approximately 66 Quarters in each Commune. The Chiefs of Quarters are not paid, and are not elected. It is unclear how one becomes a Traditional Chief of Quarters. However, their role is critical, especially in the whole arena of solid waste management. They are organized into a Council of Chiefs and Quarters, with a Head Coordinating Chief, and meet regularly with government officials.

BAMAKO'S SOLID WASTE MANAGEMENT SYSTEM: (Organizational Capacity and Financial Systems, Transparent Budgets, Efficient Delivery of Services, and Effective Citizen Participation)

To better understand Bamako's Solid Waste Management System, two charts have been prepared based on the information obtained during the diagnostic.

1. How the System should be working - The Theoretical Model.
2. How the System is actually functioning - The Current Reality.

The Theoretical Model:

This model reflects the way the various governmental, non-governmental and private sector individuals described how the system should be functioning. This theoretical model appears to have emerged from practical realities, as well as extensive Master Planning work financed and supported by the World Bank. When asked if a comprehensive strategy is in place for the development of the Solid Waste Management System, the answer was always yes. (Note: The referenced strategy appears to be a comprehensive study which was first performed in the early 1990's by the World Bank, and officially updated and approved by the national in June 2003. This document is only in French, so it could not be reviewed by this consultant. An effort is being made to obtain an English version directly from the World Bank. The report is called: Etude de la Strategie de Gestion des Deshets a Bamako and was completed in September, 2001)

THEORETICAL MODEL OF HOW THE SOLID WASTE MANAGEMENT SYSTEM SHOULD FUNCTION

Service	Service Provider	Accountable Governmental Entity	Funding Mechanism
Trash pick up at individual household and business level.	Small private companies (GIE) authorized under national law to perform pollution control services.	Communes: The Communes are political subdivisions within Bamako. 6 Communes, each with a City Hall, Mayor, Council, staff, power to tax, and population base of approximately 250,000.	Individual GIEs enter into a contract with a Commune for the area they are to cover. Each GIE collects a service fee of approximately \$1.40 per month per household. The fee covers the cost of trash removal and transporting the fee to a Transfer Depot within the Commune. The Regional Director of the DRACPN (national government) has responsibility for monitoring and

			enforcing the contracts.
Temporary storage of solid waste at designated and official sites within each Commune. These sites are called Transfer Depots.	Commune	Commune, with coordination and oversight by Regional Director of the DRACPN	Commune general fund taxes or perhaps mandatory solid waste service fee.
Operation of Transfer Depots, including composting and recycling, and transfer of solid waste to final landfill.	Commune, perhaps in contractual partnership with GIEs.	Commune, with coordination and oversight by Regional Director of the DRACPN, and final accountability to the High Commissioner of the District of Bamako (The Governor - appointed by the President)	Commune general fund taxes or perhaps mandatory solid waste tax.
Final disposal of solid waste at an officially designated landfill. Composting and recycling to occur prior to final landfilling.	Bamako District government in partnership with the national Ministry of the Environment.	Regional District government in partnership with the national Ministry of the Environment. Final accountability would appear to rest with the High Commissioner of the District of Bamako	Landfill service fee for disposal of any material at the landfill.
Overall Coordination and Management of the Solid Waste Management System.	Regional Director of the DRACPN	Regional Director of the DRACPN	Ministry of the Environment

ON THE GROUND REALITY OF HOW THE SOLID WASTE MANAGEMENT SYSTEM FUNCTIONS

Service	Actual Services Provided	Consequences of Current Service Reality	Resources Allocated to perform current level of service
Trash pick up at individual and household and business level.	GIEs claim 45-50% of households participate. However, this figure is probably much, much lower. (See below under GEI meeting report). The trash is picked up by donkey carts, with a few small tractors now in operation.	While individuals keep the entrance to their premises tidy, there is trash in all the public areas, along streams, roadways, and vacant lots. Trash, when it is properly disposed at the household level, is placed in small, overflowing cans. Very few cans are visible.	No public resources are allocated for trash pick-up. It has been privatized to the GIEs. The GIEs collect and keep the solid waste service fee which is not mandatory. (No budgets or transparent accounting were available)
Temporary storage of solid waste at designated and official sites within each Commune. These sites are called Transfer Depots.	During my tour of Commune 1, we did not see an official Transfer Depots. While they may exist in other Communes, they are very, very limited at best. .	Without official Transfer Depots, trash is being deposited in illegal dumps in neighborhoods, next to markets, and along waterways. It is estimated that there are 98 illegal dumps in Commune 1.	Very little, if any, public resources are allocated to establish, maintain and operate effective Transfer Depots. (No budgets or transparent accounting were available)
Operation of Transfer Depots, including composting and recycling, and transfer of solid waste to final landfill.	Without designated Transfer Depots, there is no controlled and managed space for depositing the trash. Composting or recycling at the neighborhood level is not occurring. There is no transfer of the trash to a permanent landfill. The trash continues	Since there is no system for the transfer of the trash to a permanent landfill the trash continues to accumulate in illegal dumps throughout the Communes	In Commune 1 there was no organized system for transferring trash to a permanent landfill. Therefore, no public funds appeared to be allocated for this function. The situation may have been slightly better in other Communes. However, since there is no final

	to accumulate in illegal dumps throughout the Communes.		landfill, it appears that most of the trash that is removed, either formally or informally, from the neighborhoods is being dumped in the Niger or out in the countryside. (No budgets or transparent accounting were available)
Final disposal of solid waste at an officially designated landfill. Composting and recycling to occur prior to final land filling.	The only landfill, which is within Commune 1, has been closed. This was closed because the other Communes were transporting their trash to this landfill and it was overwhelmed. There is no landfill for any of the Communes. Obviously, the very limited composting that was being done at the Commune 1 landfill has ceased.	Trash continues to pile up at the hundreds of illegal dumps in the neighborhoods, and any trash that is removed from the neighborhoods is going out to the countryside for illegal dumping or into the Niger. Within neighborhoods there are very significant health, safety, and environmental issues, especially for children.	Unclear if public funds are being used in connection with illegal dumping. (Note: there are two officially designated landfill sites, approximately 25-30 kilometers outside of Bamako which have not been built. Unclear, if there are strategies and resources to make one of these sites operational. Certainly not in the immediate future.)

ON THE GROUND REALITY OF THE SOLID WASTE MANAGEMENT SYSTEM: CONCLUDING OBSERVATIONS.

- **Overall functioning of the system:** The system does not function in any way similar to the theoretical master plan approach identified in the first chart.
- **Role of Government:** Governmental roles are not being performed as a result of inadequate financial and human resources, and inadequate regulatory/taxation systems. Lines of responsibility and accountability do not exist. Budgetary documents were not available.
- **Role of the Private Sector:** GIEs play an important, but inefficient and ineffective role in solid waste pickup. However, this appears to

vary significantly from Commune to Commune, and there are GIEs performing at a higher level. (i.e. Sema Saniya, a GIE which employs 35 people and handles both solid and liquid waste. See below)

- **Role of the NGOs:** Action Against Hunger (ACF) is playing an important role in providing effective, action oriented models/solutions at the neighborhood level.
- **Role of Citizens :** Citizens must live with trash and litter that fills their neighborhoods.

ANALYSIS OF DIAGNOSTIC FINDINGS

OPTIONS FOR CITYLINK PROGRAM:

In the program description created for the Diagnostic the following examples were used as possible tasks that could be performed through the CityLinks program. In examining each of these suggested issues, the recommended framework for the CityLinks program became more focused.

Issue 1: Explore the feasibility of consolidating some of the 120 dumps around the city.

Response: There is not an accurate inventory of the number of legal Transfer Depots or illegal neighborhood dumps. Without legal Transfer Depots or a final landfill, there is nowhere to legally and environmentally consolidate any neighborhood dumps. The task of consolidation on a city-wide or even a Commune-wide basis is clearly beyond the scope of the CityLinks program. However, a demonstration project within a given neighborhood would be able to tangibly show the necessity, and the benefits, of consolidating and removing illegal dumps.

Issue 2: Assess plastic bag waste management and available technologies in the city; identify problems with disposal.

Response: There is no plastic waste management implementation. There is no separate disposal or recycling of plastic bags. Since September is the rainy season in Bamako, and there was little wind or dust, plastic bags were not observed as a major solid waste problem. However, in the dry season, they are apparently everywhere. There have been numerous studies and strategies performed, the latest one being: "Plastic Waste Management in Bamako Mali (AID Project: 688-Q-00-03-00042-00)." However, due to resource limitations, there was no discussion of implementing any of the recommendations emerging from these studies. There was some interest expressed in better understanding how South Africa has effectively dealt with this issue. Apparently, through national legislation, they banned the most objectionable types of plastic bags.

Issue 3: Improve management of the dumpsites:

Response: This is a critical issue. There are several aspects to it: First is creating, and managing, viable Transfer Depots within the Communes. This is the responsibility of the Communes and it is not being done for lack of both human and financial resources. Next,

there is the final landfill. Currently, the only landfill is closed with no prospects of reopening. Two landfill sites have been identified 25-30 kilometers outside of the city, but there are no imminent plans to finance, build and operate. In fact, it was very difficult to determine what public entity has lead responsibility for the final landfill. (Responsibility would appear to reside with Bamako District, the High Commissioner of Bamako, and the Ministries of the Environment and Development.)

Issue 4: Develop and introduce a new solid waste management plan including implementation of new policies and procedures for the collection and disposal of solid waste:

Response: The World Bank has financed, completed and updated a Solid Waste Management Master Plan. This has been adopted as official government (national) policy. It appears to be the plan that has the support of the national government, but there are very limited resources to implement it. Repeatedly, the assessor was told that another planning document was not necessary. It would be a waste of both human and financial resources. Instead, the message was clear from all the stakeholders - **The CityLinks partnership should undertake a specific project which can result in tangible and positive change for citizens.** (Note, the assessor is attempting to obtain an English version of the World Bank Master Plan. This could be a very important document for the CityLinks program.)

Issue 5: Implement new fleet and route efficiency standards to the extent possible given the potential need for capital costs associated with acquiring fleet equipment.

Response: While this is clearly an important component of implementing a comprehensive Solid Waste Management Strategy, it is simply not in the realm of possibilities. There is no public "fleet," since solid waste pick-up is performed by the private GIEs through the use of donkey carts. There appears to be little, if any data, on routes or even neighborhoods for collection. Everyone is in agreement that donkey carts need to be replaced by tractors, but this is an expensive proposition and the resources are not available.

Issue 6: Identify appropriate disposal strategies including reviews of landfills, recycling, composting, etc. The appropriate disposal option or mix of options will be a primary component of the Solid Waste Management Plan.

Response: Appropriate disposal strategies are likely to be contained within the World Bank financed Master Plan. In addition, USAID has funded a comprehensive study regarding plastic bags. Since the Master Plan has been recently updated and approved by the government, it is presumed that the desired information is contained in this report. The assessor is attempting to obtain an English version of this Master Plan.

Issue 7: Identify new management processes and requirement needs and conduct training. When appropriate, provide targeted training in the areas of collection and disposal.

Response: Training should be an integral part of the CityLinks program and will be discussed below under "Recommendations."

Issue 8: Develop a cost recovery strategy that is both a component of and consistent with the solid waste management plan. The strategy would be aimed at recovering costs associated with the collection, disposal, and/or recycling of solid waste in part or whole.

Response: Developing and implementing an effective cost-recovery system should be an integral part of the CityLinks program and will be discussed below under "Recommendations."

Issue 9: Develop and implement a citywide public relations campaign aimed at beautification of the city through increased community pride by both businesses and residents.

Response: A public relations campaign focused upon citizens and businesses should be an integral part of the CityLinks program.

ADDITIONAL ISSUES AND OPTIONS EMERGING FROM THE DIAGNOSTIC:

Based upon the interviews conducted, the studies that were reviewed, and the first hand observations of the assessor, there emerged other priority issues and options that need to be considered when setting forth recommendations for the CityLinks program. These additional issues and options are reviewed below, and specifically relate back to key requirements outlined as set forth in the Program Description.

Other Key Issues and Options.

Issue 1: Should the CityLinks program be focused citywide or should its focus be at the Commune level, and perhaps within a given neighborhood within the selected Commune?

Issue 2: How can the CityLinks program build upon previous successes, and accomplish the specific goals that have been identified through the diagnostic?

Issue 3: How can the CityLinks partnership create the foundation upon which longer term action can be made by the City of Bamako and the Ministry of the Environment?

RECOMMENDATIONS

MAJOR RECOMMENDATIONS:

1) The CityLinks program should focus on the Commune/Neighborhood level. With this focus, there should also be a commitment to use the CityLinks program to bring "value added" improvements to the ongoing development of a comprehensive and viable Bamako Solid Waste Management System.

2) A tangible, neighborhood focused CityLinks project should be undertaken in partnership with key stakeholders, and should be used as a "learning laboratory" to focus attention upon key governance, public administration, accountability, and change management issues that are prerequisites for improving the overall Bamako

Solid Waste Management System. The key governance and public administration issues are:

- **Who has responsibility for the trash pick-up at the household level, and how is this paid for?**
- **Who has the responsibility for providing and maintaining effective Transfer Depots, and who pays for this?**
- **Who has responsibility for recycling and composting at Transfer Depots and who pays for this?**
- **Who has responsibility for removing the solid waste from Transfer Depots to the landfill, and who pays for this?**
- **Who has responsibility for closing illegal dumps, and transforming them into sites that have public benefit (open space, flood zone, park, playground, gardens, etc?)**
- **Who has overall responsibility for organizing, monitoring, and implementing the overall Solid Waste Management System?**
- **Who has the responsibility for developing and implementing an effective and realistic cost recovery system for trash pickup (including transportation) and for legal disposal sites including transfer depots and the landfill?**
- **Who has responsibility for dealing with issues of "change management," especially as they relate to citizen attitudes and behavior, intergovernmental relationships and political accountability?**

4) The tangible, neighborhood focused CityLinks project may wish to build upon the success of Action Against Hunger's (ACF) project in Commune 1.

APPENDIX ONE: MEETINGS CONDUCTED DURING THE DIAGNOSTIC:

A) Organization: USAID

Name: Augustin Demble, Environmental Officer and Project Manager

- **Role within Bamako Solid Waste Management Structure:** USAID project manager and point person for solid waste management. Excellent contacts and relationships with all the organizations/individuals involved in the Diagnostic
- **Philosophy and Strategy:** Action is required; USAID is losing its credibility with the key stakeholders by simply contracting with consultants who write reports. Need to effectuate change on the ground that will have a visible and tangible impact.

B) Organization: USAID

Names: Pamela White, Mission Director and Kevin Mullally, Deputy Mission Director,

- **Major Challenges relating to the Bamako Solid Waste Management System:**
 - * Governance and accountability - who's in charge and accountable?
 - * Changing behavior of citizens to take more responsibility for the disposal of solid waste.
 - * Should USAID resources be applied city-wide or within targeted areas?
 - * Partnerships very important, especially those that demonstrated tangible and positive outcomes. Example: Action Against Hunger project.
 - * Project must produce tangible and positive outcomes that can be scaled up.

C) Organization: Action Against Hunger (Action Contre La Faim - ACF)

Names: Felix Leger, Chief of Mission and Thierry Metais, Technical Coordinator

- **Role within Bamako Solid Waste Management Structure:** Conducted very successful Solid Waste Management project at the neighborhood level. Project took about three years and resulted in tangible and concrete benefits (See Attached report for specific objectives and results) Funded through USAID - OFDA. Project had just completed a two day workshop (Popularization Campaign). Project now working on a 25 minute film that will be used in the Popularization Campaign.

- **Philosophy and Strategy:** Partnerships with accountability; scale up successful projects; must have cost recovery for tractor maintenance and replacement; need long term support/strategy for changing behavior, but can't change behavior unless citizens see trash situation improving.
- **Human Resources:** Smart, committed to Mali, long term experience, speak French.
- **Financial Resources:** Very credible; should be able to attract additional donor funding. Working currently with Cities Alliance on another proposal.
- **Partnerships:** Commitment to work in partnership.
- **Strengths of Office:** On the ground, successful, vision of scaling up demonstrations; credible with USAID and other stakeholders.
- **Weaknesses of Office:** Financial resources to scale up successful project.
- **Major Challenges relating to the Bamako Solid Waste Management System:** Tractors are key - if they can't be maintained and replaced the whole system falls apart; need long term strategy for behavior change; lack of coordination and accountability; training needs must reach all levels (from citizens to those responsible for solid waste management system); current project is not sustainable because there is no cost recovery for the tractors. Cost recovery key, but can only increase fees if citizens see results;
- **Recommendations to TH:** Very interested in being partners in CityLinks and using the results of their successful project to undertake another project at a higher level (Scaling up).

D) **Organization:** Regional Bamako Office for the Administration and Control of Pollution (Direction Regionale De L'Assainissement Et Du Controle Des Pollution Et Les Nuisances (**DRACPN**). This office is a national office, under the Ministry of the Environment.

1) Names: **Amadou Tandia**, Regional Director for Pollution Control within Bamako, (DRACPN)

- **Role within Bamako Solid Waste Management Structure :** DRACPN has been established within the Ministry of the Environment. It appears to be the most important office in dealing with solid waste management system. Its role is coordination, partnerships and regulation - in charge of organization of the Solid Waste Management System - it does not have a direct role in service delivery. Oversight of GIE's (private companies), Communes, Traditional Quarter Leaders (66). Plays principle role in Solid Waste with the Governor (High Commissioner of Bamako - appointed by the President).
- **Philosophy:** The public sector does not have the resources to address the solid waste management crisis facing Bamako. Therefore, privatization must occur through the GIEs (Groupement d'Interet

Economique) small scale private companies. The role of DRACPN is to coordinate, strengthen the GIEs, and develop partnerships. While it has a regulatory role (oversight of GIEs for example) this role is unclear and not being implemented. The GIEs are supposed to have a contract with DRACPN. The contract requires that tractors can only be used for sanitation; monthly reporting on maintenance of tractors; performance monitoring. Done of this appear to be taking place. There are no computers, reports, secretary or files in the office.

- **Strategic Framework:** Master Plan does exist. First developed in 1991 by the World Bank: Strategies for Solid Waste Management in Bamako (not translated). Three parts: 1) Pre-collection and collecting from the households. 2) Reorganization of the collection to the final landfill 3) Final landfill (25-30 km outside of Bamako) Key components of the Master Plan: Cooperation among all the players; Clean House = Clean City; Services must be paid for through service fees; Stakeholders must be trained. 1991 - Master Plan first prepared
 1993 - DRACPN created by Environment Ministry
 1998 - Bamako DRACPN Regional Office created
 1999 - Bamako DRACPN operational
 2001 -2003 - Master Plan Updated and financed by

World Bank (need to get copy). Where does this document stand with the Bank? Is the Bank involved in financing a new landfill? Two sites have been designated. Not clear who within the Solid Waste Management System is interfacing with the World Bank - maybe the Minister of Development.

- **Human Resources:** Two Supervisors in addition to the Director. One assigned to Operations and the other appears to be the person in charge of the strategic plan/technical issues. Each Supervisor has three agents - roles of agents unclear, but appears to be assigned to enforcing illegal dumping.
- **Financial:** Very murky. No hard figures on any expenditure related to his office or any of the other stakeholders. No reports, documents, etc.
- **Equipment:** No computers. No administrative support. Three very modest offices, with central meeting room with table and chairs. Director does not have an operational vehicle. Two supervisors appear to have transport, but not clear.
- **Partnerships:** Excellent relationships with USAID, Action Against Hunger, GIEs (active coordinating council), 66 Traditional Quarter Leaders (coordinating council), High Commissioner, Ministry of Environment, 6 Communes. Unclear about relationship with Bamako Regional Government (overall city hall)
- **Strengths of Office:** Director and Supervisors are professionals, not politicians. Committed to their mission; committed to working in

partnerships; committed to involving all the stakeholders, including citizens;

- **Weaknesses of Office:** No financial resources to make things happen; Regulatory system not in place; No clear lines of accountability and responsibility between the stakeholders.
- **Major Challenges relating to the Bamako Solid Waste Management System:** Too much solid waste to manage - situation getting worse, not better; Need for composting and appropriate tools/technologies to undertake effective composting; lack of equipment - must move from donkey carts to tractors; lack of training; lack of appropriate technology for recycling and composting; no end landfill that is now operational; not agreement on who should own equipment - GIE's or Communes; no solid waste taxes being collected - voluntary collections through the GIE's and money stays with GIE's. Therefore no public fee- for- service revenues appear to be generated for solid waste. Apparently Communes allocate resources for solid waste from their limited general funds; Need to continue to strengthen role of GIE's. Appear to be 120 illegal dumps, with very few legal Transfer Depots (I never saw a legal transfer Depots), and no final operational landfill. Waste being dumped in countryside, in Niger, and left at illegal dumps all over city. Major health, environmental, and flood problems; must build a new landfill; must have viable Transfer Depots; must close illegal dumps; must have public education and awareness once service is improving. Needs: garbage cans, computers, tractors and trucks and equipment for sensitization program. Must find a way to stop illegal dumping.
- **Recommendations to TH:** No more studies and consultants. Need to have concrete actions and results. People must see that waste situation can improve within their neighborhoods. Action not words. Equipment is key. Will not happen if donkey carts are only means of collection. Must have tractors, trucks, and other equipment.

E) Organization: Groupement D'Interet Economique (GIE) Coordination Council for the GIE's.

1) **Names:** Seven member council. (chaired by a woman)

- **Role within Bamako Solid Waste Management Structure :** Representative Council on behalf of the GIE's, which are the small scale private companies that have been organized under national law to perform certain services/functions. One of these functions is pollution/sanitation control. Coordination Council includes Chair, Treasurer, Secretary,
- **Philosophy and Strategy:** As government has pulled out of pollution control, the GIE's have assumed more and more responsibility. Commenced in 1991, and Coordinating Council started in 1996. Many unemployed young men - way to create jobs and clean neighborhoods.

- How They Function:** Each GIE will be owned by 3-5 individuals. Must pay worker salaries (no social security benefits), salary of owners, maintenance and food for the donkeys. GIEs will have a geographic area that is allocated by the Communes. There are 6 Communes and 70 GIE's that are members of the Coordination Council. Total number of individuals employed = 700.

Approximately 4-5 donkey carts used by each GIE. There are approximately 14 tractors, but 8 were bought by Action Against Hunger. Tractors belong to GIE's. Each GIE is a private business employing individuals to perform work and collect fees for the work. Donkey carts pick up the garbage on the household level. There is a fee that is charged of 1000 cf per month. (\$1.40). Garbage is placed in cans, but this doesn't always happen. No good quality garbage cans. It is not compulsory for households to contract with GIE's.

Approximately 45-50 % of households contract with GIE's. Lack of participation compounds illegal dumping. Each GIE as an agent that attempts to collect. If fee not paid, can stop service. However, before this happens the Head of the Quarter (traditional leader) plays a mediating role to resolve situation. All fees belong to the GIEs. Fees pay for donkey cart driver plus maintenance and equipment. Donkey cart drivers are paid 15,000 -20,000 cf per month. (\$25-33.00). Each GIE has approximately 50 households. (You can see the math does not match the population. (50 households X 7 per people per house hold = 350. 70 GIEs X 350 = 24,500 individuals, but population is 1.3 million. Tractor drivers make \$50 per month. GIE's are established by the Communes. Letter sent to City Hall requesting designation and land area that will be covered. City Hall contacts GIE Coordinator for the Commune to determine if land is available. City Hall makes the final decision and enters into contract. The staff person at City Hall is the third assistant to Mayor in charge of sanitation. The Regional Director of DRACPN has responsibility for enforcing performance of service level and the contract. There are no sanctions if service levels are not met. Doesn't appear as if a formal contract is ever in place. The donkey carts and the occasional tractor take the waste to a Transfer Depot. City Hall (Communes) theoretically own and maintain the Transfer Depots. This function is not being performed. City Hall lacks means and resources to do the job. Theoretically, City Hall takes waste from Transfer Depot to final landfill. City Hall does not have the equipment or means to do this job, and there is no final landfill. It has been closed for the past two weeks - no immediate plans to reopen. Theoretically, City Hall gets its resources from the different taxes it collects. Each Commune Council determines allocation for solid waste - 5 year plan. Theoretically, Commune 1 budgets 23,000,000 cf (\$38,000 for 200,000 plus individuals) However, no one appears to know if this money is ever spent by City Hall. The Regional Director of DRACPN appears to have no

knowledge of how much is spent or where it is allocated. In Commune One, the sanitation committee was disbanded because the entire Council, including the Mayor, were removed by the President for misconduct. The final landfill is the responsibility of the Bamako District government, but clearly great confusion about this. Also appears that the Ministry of Environment also has responsibility for the final landfill.

- **Human Resources:** Coordination Council meets on regular basis with Regional Director of DRACPN.
- **Financial Resources:** Very limited. GIE are small scale, but they also have potential which will be sited later in visit to a GIE that is performing both solid and liquid waste services.
- **Partnerships:** Works closely with Regional Director of DRACPN, but not with Communes.
- **Strengths of GIE System:** Employment, entrepreneurship,
- **Weaknesses of GIE System:** GIEs can't get the job done. No real strategy; no accountability, no measurements of what is really happening on the ground. Only serving small % of the actual population, no resources to buy tractors and scale up, no financial or equipment help from City Halls.
- **Major Challenges relating to the Bamako Solid Waste Management System:** Very difficult to see how the continued privatization of Solid Waste Management to the GIEs will ever solve the problem. A partnership approach would work, but this must also include all the government stakeholders who must bring resources to the table. Communes not meeting their existing responsibilities for Transfer Depots. No one meeting responsibilities for landfill.
- **Other issues:** Mayor of the District of Bamako told each Commune to allocate 500,000 cf (\$833) towards a bulldozer. They refused and it didn't happen. Commune Mayors see themselves reporting to the High Commissioner (Governor) and not to the Mayor of the District of Bamako. There is no enforcement power by the Mayor of the District of Bamako. A strong mayor form of government is being seriously considered by the National Government. No timetable could be determined. Also, there appears to be tension in Commune 2 where the Mayor wants the Commune to have its own garbage fleet. GIE's want to be the owner of the equipment and provide the service. GIE's want to keep the politicians out of Solid Waste Management System. Claim politicians are corrupt.
- **Recommendations to TH:**
 - * GIEs should be well equipped
 - * GIEs should be given more responsibility within the Solid Waste Management System, especially in regards to the Transit Depots.
 - * Want the law to reflect that the GIE's should have full partnership with the Communes.

* The GIE's see themselves as accountable to the Regional Director of DRACPN. They want to have contract with the Communes, and then to have the contract monitored and enforced by the Regional Director of DRACPN

* Want City-City-Cooperation to result in something concrete.

F) TOUR OF COMMUNE ONE:

- 240,000 population
- 98 illegal dumps
- landfill closed
- approximate cost to clean-up dump (s) along waterway = 500,000,000 cf (\$83,000)

G) Organization: National Director of DRACPN (Within Ministry of the Environment)

1) Name: Famoussa Bagayoko

- **Role within Bamako Solid Waste Management Structure:** Bamako Regional Director of DRACPN reports to him. He is the interface with the Ministry of the Environment, and has overall responsibility for pollution control
- **Philosophy and Strategy:** 2003 National Government adopted World Bank Master Plan (Need to get copy in English) All stakeholders have been involved and will be involved in implementation. Communes have responsibility for cleaning up illegal dumps, and providing for Transfer Depots. But City Halls don't have resources, and there is no landfill to take the garbage to. City Hall must levy taxes for waste, but national legislation must be passed. (Confusion about this - need to clarify). But before taxes can be increased there must be an increase in services. (Clearly a Catch 22)
- **Major Challenges relating to the Bamako Solid Waste Management System:** No landfill and many, many illegal dumps. Huge health and pollution problems, especially relating to children. Problems getting worse. So many players. Also liquid waste, factories dumping in Niger, and behavior of people must change.
- **Recommendations to TH:**
 - * do something concrete - show people that situation can improve. Clean up illegal dumps, improve service and people will pay higher fees/charges.

H) Organization: High Commissioner of the District of Bamako (Governor - appointed by President)

1) Name: El Hadj Mamadou Issa Tapo, chief administrative officer to the Governor.

- **Role within Bamako Solid Waste Management Structure:** Appears to be the most powerful office. All the Commune Mayors report to the

Governor. Liaison with the President, and the President in April announced that solid waste management is one of his top national priorities.

- **Major Challenges relating to the Bamako Solid Waste Management System:** Transit Depots for Solid Waste are the biggest issues. They are not being taken care of. Terrible effect. Financial means not there to solve the problem. Bamako spends = 800,000,000 (\$133,000); Dar es Salaam spends 8,000,000,000 cf (\$1,330,000) Abidjan spends = 12,000,000,000 cf \$2,000,000) for solid waste. Land fill must be built. Incineration not an option. Went on a study tour to France and saw incineration. Much too costly for Bamako to build and operate. Landfill is the only solution.
- **Recommendations to TH**
 - * Assistance to Transit Depots - do something concrete.

I) Organization: Traditional Chiefs of Quarters

1) **Names:** 6 Chiefs and one advisor, including the Head Coordinating Chief

- **Role within Bamako Solid Waste Management Structure:** The Traditional Chiefs play a very important role. They represent the interests of citizens; they mediate between citizens and the public/private institutions; respected leaders within their neighborhoods.
- **Major Challenges relating to the Bamako Solid Waste Management System:** Sanitation #1 priority. April 12th President made a speech on sanitation. Very important - people are now taking this issue seriously. Major problems: 1) Lack of equipment. Must replace donkey carts with trucks/tractors. 2) Must get garbage from transfer depots and illegal dumps to a landfill 3) No final landfill - 4) How to recycle - compost, fertilizer, gardens, agriculture. 5) Population growing - falling further and further behind. 6) Floods - made much worse because of trash.
- **Recommendations to TH**
 - * Mali saying: "Better to see something in action once than hearing it

10 times."

J) Organization: Commune II City Hall

1) **Names:** Mayor was called away. Met with newly appointed council member.

- **Role within Bamako Solid Waste Management Structure:** Previous Council and Mayor (40 members) removed by the President. 7 new Council members and Mayor appointed by the President. Action occurred because of mismanagement. 26 Sanitation workers for the Commune. Could not determine what they do.

K) A) Organization: GIE Sema Saniya

1) Names: Marc Jeuland, Peace Corps volunteer and project coordinator, and Ben (did not get last name), will be project manager.

- Role within Bamako Solid Waste Management Structure: - See attached Project Status Report for "Construction of a treatment station for wastewater sludge."
- Philosophy and Strategy: Private sector, through GIE's can address public service issues effectively. Reinvest from solid waste management into liquid solid waste.
- Resources: Self-supporting private enterprise
- Strengths of Office: Liquid solid waste treatment facility under construction. Will serve 5,000 households upon completion.
- Major Challenges relating to the Bamako Solid Waste Management System: How to scale up this success.
- Recommendations to TH: This is an excellent model of a tangible project that will have a major impact on the lives of citizens.

L) Organization: USAID Exit Meeting

Names: **Augustin Demble, Pamela White, and Kevin Mullally**

- **Major Challenges relating to the Bamako Solid Waste Management System:**
 - *Kevin: Partnership approach: ICMA, Action Against Hunger.
 - * Augustine: action, equipment a priority need - not another report.
 - * Pam: Lack of management capacity - no accountability and responsibility. Something must change From CityLinks project build capacity. Wants to see tangible results.

REPORTS AND DOCUMENTS:

- ICMA CityLinks Program Description for Bamako
- Summary Report on Accomplishments Action Against Hunger's Commune One Demonstration Project funded by USAID (OFDA)
- Action Against Hunger proposal for Solid Waste Management in Cross-Bordering Pond of Banconi between Commune 1 and 2. (Possible CityLinks project funded by City Alliance)
- Report on Construction of liquid waste treatment center by GIE Sema Sanya
- Master Plan: Etude de la Strategie de Gestion des Dechets a Bamako
- Bamako District Development Strategic Planning Project, October 2001, UN-Habitat.
- Strategic Planning Guide for Municipal Solid Waste Management: World Bank, 2001.
- Plastic Waste Management in Bamako Mali, April 2003, USAID

- Plan D'action Antidechets Plastiques
- Improving the Stakeholder Involvement in Solid Waste Collection in Bamako, March 2003 workshop presentation.
- Tax Collection: Mali Style <http://www.usaid.gov/regions/afri/ss02/mali4.html>

A local civil society organization of the rural commune of Ngoura received training from a USAID-funded Private Voluntary Organization(PVO). The training was designed to help the organization to: (a) analyze the strengths and weaknesses of the populations living in the commune of Ngoura and; (b) better understand the decentralization laws and processes. As the result of this training, the community organization conducted an assessment and found out that the major obstacle to local development in this rural commune was inadequate and improper tax collection. Based on follow-on training received from the PVO directed at the problem, the local civil society organization developed and implemented an action plan to help the commune increase its tax revenues. They organized various workshops to better explain the importance of paying local taxes and held a feedback session involving local populations and local elected officials. The objective of those sessions was to establish a more formal chain of communication between communal elected officials and their constituencies. They also educated local populations and businesses about the importance of paying local taxes. As the result of these interventions, the following was achieved: 80% of local tax revenues was collected (double the previous year);the local population better understood the importance of paying local taxes and the local civil society organization has served as the problem-solving link between elected officials and the local population; and, the local population has become much more active and interested in community activities.

- City Alliance:
<http://www.toolkitparticipation.com/vervolg/searchresult.asp?url=searchdetail%5Ffsq1%2Easp%3Ffromsearch%3Dtrue%26CaseId%3D601>

Mali, Bamako, Commune III, Opération Assainissement

3. Short description of the case	The experience aimed at improving people's living conditions through sanitation activities involving all actors in the <u>municipality</u> . The whole process was achieved through sensitizing.
4. Region and Country(ies)	Mali
5. Name of the locality(ies) of the experience	Commune III, Bamako
6. Scale of the experience	? Smaller cities

7. Possible other scales of the experience/initiative	
8. Size of the population in locality of experience	12,526 people
9. Number of directly participating people in the experience/initiative	Half of the population was involved
10. The most important focus areas	? Social Development and poverty alleviation
11. Possible other Focus areas of this experience	Democratization
12. Main actors involved	? Governmental institutions ? Women's organizations ? Youth organizations
13. Other Actors	Citizens
14. General information on the budget of this experience	Unknown
15. Time of actors involved	The time of actors involved Was permanent and voluntary. It was the long term basis.
16. Start of the project	1999-09-01
18. General aims of the experience/initiative and specific objectives to promote and realize citizen's participation	General aim of the project was to project the environment by keeping the municipality clean for the well being of the community. Specific aims included changing people's attitude by getting them involved in concrete sanitation activities and reinforcing local democracy in commune III.
19. Some Quotes from the most important actors involved	
20. Brief overall, narrative, description of the experience	Short description of the experience : Commune III municipality, located in the heart of the capital city, Bamako, was facing a serious degradation of its

environment caused by rainwater stagnation and lack of sewage drainage in the town.

According to researchers, this situation was very detrimental to life in the commune. So, in order to overcome the issue, the local council, headed by the city mayor, Mr. Abdel Kader Sidibé, engaged discussions with his population to analyze the consequences of the situation..

Assisted by his councilors, technical advisors, he set up a sensitizing team targeting all youth and women's organizations in the municipality.

This programme focused on the necessary involvement of all actors in the experience : through meetings and general assemblies to draw people's attention on basic principals of the issue and through radio programmes to widespread the information.

After large comment on the programme calling for active participation of the population, the mayor fixed the day for the execution of the activities. Early in the morning, the local council, women's and youth organizations assisted by technical services headed for sewage drainage with company of a drummer's team and young girls offering for refreshment.

"This was a day of participation in the

	<p>municipality³ claimed the happy mayor who made it one of his priorities during his campaign.</p>
22. Other Tools	<p>Tools : Meetings public hearing</p>
23. Explanation of the tools used	<p>Sensitizing</p>
24. Phases of participation	<p>The success of the experience was achieved because all parties involved actually showed up and participated in to sanitation activities, which was exactly the objective that the local council was aiming at by holding meetings. As for public hearing, it was achieved through radio programmes and people's feed back on the issue. These tools could be used everywhere.</p>
25. Levels of participation	<p>Analysis preparation execution Analysis of the issue was promoted through discussion with population. Preparation was reached through sensitizing. As for execution of policy, it was promoted through concrete participation of population and technical services on the field.</p>
26. What was the central issue/goal/problem of this experience and who defined it:	<p><u>Information consultation</u> In order to give as much information as possible, local council made use of radio programmes-sensitizing sessions to call for active and concrete participation of all actors. Consultation was achieved by</p>

	the participation of technical advisors through discussion with councilors and other member actors.
27. What are strong points/critical factors of success of the experience (and what were lessons learned and solutions found)?	The central issue of the experience was to find a solution to deteriorating environment in the municipality. It was defined by the local council.
28. What are the weak points/critical factors of failure of the experience (and what were lessons learned and solutions found)?	The capacity and commitment process led to the involvement of all actors in the municipality ; actors who were the ones to take responsibility in the execution of sanitation activities.
29. Main results of the experience specifically in relation to participation	Weak points : Lack of financial resources and the fact of resorting to other professional technical advisors were limiting factors of the experience.
30. Concrete measures and signs of the sustainability of the experience	The experience had enabled local council, technical professionals (advisors) and the citizens to speak with one voice to come up with concrete solutions.
31. Related to previous or other examples of other cities/countries	Concrete measures for <u>sustainability</u> The availability of funds for the experience and the strong determination of population to improve their environmental conditions were positive signs for sustainability.
32. Experiences in other cities/countries partly or mainly based on this example	Commune IV, a municipality located in Bamako, is initiating a similar experience.

33. Information available on this experience and its context and background	Information is available at municipality level.
34. For further information, contact number 1	Abdel Kader Sidibé
	Mayor of commune III
	Avenue Kassé Keita PO Box E 1346
	22 62 76

- City Alliance: <http://www.toolkitparticipation.com/>

Citizen participation in local governance is an important theme in policy and development debates. This website aims to contribute to this debate.

The toolkit offers information on tools which promote citizen participation in local governance. Over hundred of cases are described and analyzed. The site also presents articles and links for further reference.

MEMORANDUM

TO: Colonel Ismaila Cisse, Haut Commissaire du District de Bamako
FROM: David George, Partnership Manager, CityLinks Program, ICMA
Jason M. Peek, Engineering Manager, Athens-Clarke County
RE: Bamako Solid Waste Project CityLinks Program
Agreements of the July 20, 2004 Meeting
DATE: July 23, 2004

Introduction

A meeting was held on July 20, 2004 at the office of the Haut Commissaire to define implementation responsibilities and scope of the pilot project. The following participants were in attendance:

1. Bokary Diarra, Assistant Conseiller a la Mairie
2. Alphamoye Traore, CTAC
3. Amadou Tandia, Directeur de DRACPN
4. Famoussa Bagayoko, Assistant du Directeur de DRACPN-DB
5. Sanoussi Coulibaly, SACPN.CI
6. Oumar Sidy Ali, 3rd Adjunct CI
7. Idy Sall, Interpreter
8. David George, Partnership Manager, ICMA
9. Jason Peek, Engineering Manager, Athens-Clarke County
10. Ali Cisse, USAID
11. Hamidou Berthe, Directeur de la Voirie
12. Housseini Guindo, Governor's Office

Results of Meeting

The purpose of the meeting was as follows:

- Selection of 2 quartier where the pilots will be held within Commune I
- Discussion of pilot project scope
- Identify and nominate personnel responsible for coordinating pilot project activities

Selection of Quartiers in Commune I

The participants recommended selecting Bancouni and Korafina as the two quartiers within Commune I in which the pilot projects will be implemented. The participants recommended these quartiers because of the existing work done in Bancouni and its more traditional style of residents. Korafina was selected because it represents a more modern quartier and maintains a close proximity to the dumpsite.

Pilot Project Scope

The participants recommended revising the scope of the pilot project to abandon the focus on transit depots within Commune I, at present, and address the existing problems with the dump in Commune I. The pilot project cannot address all concerns with the dump, but will focus on improvements within the available budget to address immediate

needs. All participants agreed to the following activities as components of the pilot project:

4. Education/Public Awareness: An education plan will be developed for the two quarters in Commune I that will focus on education of general public, creation of campaign slogan, coordination of clean-up days, and the creation of a radio or media campaign.
5. Collection: The pilot project will focus on evaluating and addressing equipments needs to improve collection as well as management training to improve capacity of current process.
6. Landfill: The pilot project cannot address all concerns with the dump, but will focus on improvements within available budget to address immediate needs.

Responsible Persons

In an effort to ensure project success, team leaders were chosen for each element of the project scope. These team leaders will be responsible for defining specific activities for each project component, identifying resource needs, and pushing the project forward. In addition to the team leaders ICMA and Athens-Clarke County staff recommended that a local coordinator be chosen to monitor challenges and progress of team leaders and activities, along with assistance with general coordination. The following team leaders and local coordinator were nominated:

- Education: Oumar Sidi Aly, 3rd adjunct to the Mayor of Commune I.
- Collection, Amadou Berite,
- Landfill, Amadou Tandia, Director, DRACPN District of Bamako
- Local Coordinator: Housseini Guindo, Special Assistant to the Haut Commissaire du District de Bamako

A follow-up meeting was held on Thursday July22, 2004 to identify specific project activities and implementation dates. Attached is the available budget for each project element and a list of activities to be funded by the project. M. Guindo is to work with each team leader over the next week and provide realistic costs for each item. Included with this attachment are copies of the activity lists submitted by each team member. The first of which is to begin on August 9, 2004.

The participants of the July 20, 2004 meeting to the CityLinks Bamako Solid Waste Management Project requests that the High Commissioner approve the recommendations of the project team.

1) For the Bamako District

Haut Commissaire du District de Bamako
Officier de l'Ordre National

2) For International City County managers Association (ICMA)

Partnership Manager, CityLinks Program
ICMA

3) For the Unified Government of Athens-Clarke County

Engineering Manager, Department of Transportation & Public Works

Bamako, Mali Solid Waste Management Project City Links Program

<i>Pilot project elements & activities to be funded by project</i>		<i>Available Budget</i>	
		<i>Costs (\$US)</i>	<i>Costs (CFA)</i>
1. Planning Coordination and Implementation of Education and Media Campaign		\$25,000	12,500,000
	Create Beautification Slogan		
	Project Launch Day		
	Education Campaign		
	Commune Cleanup Day		
2. Collection		\$56,000	28,000,000
	Evaluation and Study of Bancouni & Korafina Collection Rtes. & Households Collection Choices		
	Purchase of Bins for Households		
	Purchase of tractors		
	Purchase of additional equipment		
3. Landfill Improvements		\$80,000	40,000,000
	Fencing		
	Moving Waste Deeper Into Landfill (Bulldozer Rental)		
	Construction of Guard House		
	Access Improvements		
Pilot Project Activities Budget Total		\$161,000	80,500,000

Transfer Depot Site Selection Criteria & Transfer Depot Specifications

Site Selection

1. Ensure sufficient drainage at the location.
2. Review surrounding occupants to determine if location is suitable for transfer depot.
3. Estimate site preparation work and costs necessary for constructing and operating transfer depot.
4. Determine proximity to collection routes, Commune 1 landfill, and current illegal dump sites. Transfer sites should maintain a balance between these three factors.
5. Ensure site is accessible to carts, donkeys, tractors, and other transport vehicles and equipment. This may include appropriate ramps, roads, etc.
6. Choose a site that can be secured if necessary. For example, a security measure may involve the implementation of fencing around the site—ensure that the site can accommodate the necessary fencing.
7. In locating facility, officials should take into consideration sensitive environmental areas that may be surrounding the site, such as, aquifers, riparian areas, etc.

Depot Specifications

1. Determine hours and days of operation.
2. Determine if the site should be manned. This should be based on factors, such as, the need to separate incoming waste, security needed, and arrangements related to the collection of waste from the transit depots.
3. Determine if the process of composting will be conducted at the transfer site or will there only be separation and collection of compostables and non-compostables (Appropriate sifters/trammel necessary for separation process.).
4. Transfer depots should accept waste from both GIE's and residents (individuals).
5. Ensure facility is accessible to various types of hauling vehicles and equipment—plan accordingly.
6. Determine agency/department(s) that is responsible for oversight, construction, and operation of the transfer depot. Where will funding for construction and operation come from? How sustainability be ensured.
7. Build appropriate security for the facility.

Equipment Rental (Actual)	Rate	Qty	500CFA=1 US\$ CFA Costs	US\$ Costs
Delivery	150,000	1 charge	150,000	\$300.00
Loader	300,000 CFA/day	10 days	3,000,000	\$6,000.00
Fuel 200 liter/day	450 CFA/liter	2000 liters	900,000	\$1,800.00
Bulldozer	300,000 CFA/day	10 days	3,000,000	\$6,000.00
Fuel 200 liter/day	450 CFA/liter	2000 liters	900,000	\$1,800.00
Operators			40,000	\$80.00
Equipment Rental Subtotal			7,990,000	\$15,980.00

Wall Costs (Estimated)

Masonry Wall (1.5 m High)	42,000.00 meter	293 meters	12,306,000	\$24,612.00
Barbed Wire or Chain Link Fence	2,500.00 meter	85 meters	212,500	\$425.00
Pole Arm Gates	75,000.00 Ea.	2 gates	150,000	\$300.00
Wall Costs Subtotal			\$12,668,500	\$25,337.00

Other Dumpsite Improvement Costs (Actual)

Guardian's House Construction	Estimated Total Construction Costs	1 LS	3,000,000	\$6,000.00
Includes material & labor				
Guardians Salary (1-year) Jan -Dec 2005				
Existing Guardian	30,000 month	12 months	360,000	\$720.00
New Guardian	30,000 month	9 months	270,000	\$540.00
Relocation of Existing Market Structures	1000 ea	20 structures	20,000	\$40.00
Police (Onsite for security during work)	2000 day	15 days	30,000	\$60.00
Other Expenditures				

DOUMANZANA FEE ANALYSIS			
Estimated Avg. Daily Load = 280 m ³		Cost per m ³ of waste = 66000/280 =235CFA/m ³	
User	% of Users	Avg. Load per User (m³)	Proposed Cost per User
Single Person w/basket	22%	0.1	25 CFA per trip
Push Cart	4%	0.6	150 CFA per trip
Donkey Carts	43%	1.0	250 CFA per trip
Tractor Carts	22%	2.5	625 CFA per trip
Large Trucks	9%	7.0	1725 CFA per trip