

MEMORANDUM

TO: Honorable Stephen Kalonzo Musyoka, M.P.
Minister for Environment and Natural Resources

FROM: Jennifer Usas, Water and Sanitation Consultant, Harvard School of Public Health

RE: Mityana Water and Sanitation Project

DATE: 3 March 2005

INTRODUCTION

The town of Mityana represents an important opportunity for the provision of improved water and sanitation services. Mityana residents indicate both a willingness and ability to pay for these improvements. Upon securing a long-term (~ 25 years), low-interest loan from a Kenyan development bank to ensure sufficient investment capital, I recommend establishing the Mityana Water and Sanitation Utility (MWSU), responsible for the oversight and regulation of water and sanitation services in Mityana. The success of the MWSU will rest upon utilizing the current water vendors' organization, appropriate pricing, and fostering community participation. While demand for improved sanitation is lower in Mityana than that for water services, the MWSU can initiate construction of several ventilated improved pit (VIP) latrines in areas of higher interest and promote community interest in improved services.

CURRENT STATE OF WATER AND SANITATION IN MITYANA

A demand-driven approach to water and sanitation improvements is warranted. Results from recent surveys and group meetings indicate that Mityana residents believe that access to an adequate, safe water supply and improved sanitation are the two *most important* social and environmental issues facing their community and require immediate attention. This demand is underscored in residents' willingness to pay (WTP) for improved water services (i.e., public taps) and current plans to improve existing sanitation facilities.

Water

Mityana residents currently obtain water from two primary sources: fetched water from eight springs collected for free, and from vendors who typically charge 100 shillings per 20-liter jerrican. In addition, a majority of the households collect some amount of rainwater.

Mityana's dependence on water vendors is evident and of concern. During the dry season, over 40% of Mityana residents purchase all or almost all their water from vendors. While this number falls to 24% during the rainy season, households are spending between an average of 10,800 and 12,000 shillings per month on vended water depending on the season (rainy vs. dry). Moreover, poorer households in Mityana relying on water vending as their primary source of water spend a disproportionate amount of their income on purchased water as compared to other

households. This network of well-organized water vending enterprise represents an important group of stakeholders considered in the current set of recommendations.

Sanitation

Shared pit latrines are the predominant form of sanitation for Mityana households (70%). As expected, respondents' demand for improved sanitation services is lower than for water services. Seventy-nine percent of Mityana residents sampled indicated being "very satisfied" or "satisfied" with their current sanitation system. However, approximately one-third of Mityana households interviewed have current plans to improve their existing latrine situation using private funds. This signifies a baseline level of motivation to improve existing services among residents.

WTP for a public, shared, VIP latrine is relatively low: only 37% of respondents said they would use a new shared latrine at 25 shillings per visit while 69% said they would *not* use the VIP latrine at that price. Even when the price was reduced to 10 shillings per visit, 45% of the respondents would still not use the VIP latrine. It should be noted however, that among Mityana Central and Geregere, 58% and 47% respectively were in favor of the improved, shared latrine. Thus, while observers noted fewer than 500 people visiting the four public latrines, the relatively high percentage of users willing to pay for an improved latrine in these two RC1s warrants consideration.

RECOMMENDED ARRANGEMENT: DEMAND-DRIVEN, PUBLIC-PRIVATE APPROACH

Mityana Water and Sanitation Utility

I propose the establishment of the Mityana Water and Sanitation Utility (MWSU). As a separate but related entity of the Mityana Town Council, the MWSU will develop and manage a series of public taps to improve water service provision in Mityana. At this time, investment in private connections is not warranted – the first priority should be a network of public taps as an intermediate strategy and shift towards private connections over time.

Initially using funds secured from a low-interest, long-term loan, MWSU will be a public utility bearing the commercial risk associated with the capital investment needed to engineer and construct metered public taps in each RC1. The MWSU will also assume responsibility for operation and maintenance tasks, the determination of a fixed price-per-jerrican, and management of the public tap attendants. To ensure an adequate level of convenience to and coverage for Mityana residents, appropriate institutional arrangements for management and oversight, and sustainable cost recovery over time, three elements are proposed: leased public taps to the existing water vendors, suitable user fees, and community group participation.

Vendor Leasing

The proposed recommendation plan urges the newly established MWSU to utilize the current network of water vendors in Mityana. Evidencing motivation and organization, over half of the

water vendors report involvement in one of two vendor associations. In an effort to maintain *and* improve employment for the existing water vendors, the MWSU could offer vendors the opportunity to lease the new, metered public taps for an annual fee of 13,000 shillings. This is the same licensing fee currently paid to the Town Council. A proportion of the fee should be distributed to the Town Council to preserve the joint partnership with the MWSU. Vendors would then sell water at a fixed price-per-jerrican dictated by the MWSU.

While the MWSU is in charge of the formal operation and management, tap attendants will monitor daily functions and administration. Moreover, leasing vendors will manage the public taps on a rotational basis which serves to limit the risk of misappropriation and avoids any inequality in payment between water vendors. To further ensure that these public tap vendors have a commercial investment in the project, promoting both efficiency and cost-recovery, the MWSU should pay a fixed percentage commission of total water sales at the public taps.

By incentivizing vendors and inducing competition, this system could garner increased public demand for the public tap system. Vendors will be responsible for collecting user fees and paying the utility; commission will be disbursed to the vendors only when tap revenues have been paid to the MWSU. Moreover, the recruitment of current vendors lowers hiring costs for the MWSU, preserves and improves vendors' employment current situation, and enables pursuit of commercial interests. In turn, this private-public partnership encourages efficiency, transparency, and adequate cost recovery for the MWSU.

User Fees and Cost Recovery

MWSU's pricing policy will play an important role in ensuring access to *all* Mityana residents. As stated above, households are spending between an average of 10,800 and 12,000 shillings per month on vended water. This is more than double what it would cost to implement an improved water source outside the home (i.e., approximately 4,750 shillings per household/month for a public tap). Moreover, results from well designed, contingent valuation surveys indicate that almost half of the respondents agreed to pay 100 shillings per 20-liter jerrican from a public tap although they currently pay the same amount for water delivered to their door. When the price-per-jerrican is decreased to 50 shillings, 78% of survey participants demonstrate a WTP. Thus, Mityana residents in all RC1s appear to be both willing and able to pay for improved water services.

I recommend MWSU charge 80 shillings per 20-liter jerrican. This will unload some of the current burden purchased water bears on lower-income residents of Mityana. However, the water is appropriately priced for the remaining wealth groups. If residents continue to purchase water from the public taps at the same rate they purchased vended water, MWSU will collect an average of 8640 shillings per household/month in the rainy season and 9600 shillings per household/per month in the dry season. To ensure the validity of these purchasing patterns, springs should also be protected (e.g., construction of a simple and inexpensive fence to limit access to free water). Given the relative homogeneity of residents' wealth categories and the

comparatively similar responses to the contingent valuation survey eliciting WTP for improved water services, I do not propose tariff structures at this time. Nevertheless, efforts to design additional pro-poor pricing policies such as cross subsidies could be considered in the future if feedback from community groups suggests payment obstacles.

Community Groups

Given the proposed changes in water delivery in Mityana, sustained community involvement is paramount to meeting residents' needs. Therefore, the MWSU should consult with community groups on a regular basis regarding the current operation and management of public taps, future planning, thereby offering an open forum for feedback. Elected delegates from each RC1 could comprise these groups which would meet on a monthly basis with both MWSU staff and leasing vendors. A transparent and open dialogue is critical to providing responsive and adequate services to the Mityana residents. Delegates would be responsible for meeting with neighborhood residents and collecting feedback for the monthly meetings. Attending to issues such as distance/proximity of the public taps, service coverage (e.g., water is available at various times of days without long queues), price, and volume requirements could take place in these community forums. As evidenced in the small group participatory meetings, lively discussions about both water and sanitation services ensued with proper facilitation. Maintaining this level of discussion and debate among residents and between all the stakeholders (e.g., MWSU, tap lessees, etc.) is crucial for an iterative process of service delivery improvements.

Fostering Demand for Sanitation Improvements

Given that demand for improved sanitation services is lower than for water services, the MWSU should be cautious in its latrine upgrading plans. While it is possible that the low demand is an artifact of the high percentage of renting residents in Mityana who are not in the position to make changes without permission of the rental group or landlord, fewer than 500 people visited four combined latrines over two days of observation. Thus, any immediate improvements made in Mityana's provision of sanitation services should be on a small scale. However, as mentioned above, the relatively high percentage of users willing to pay for an improved latrine in Mityana Central and Geregere necessitates attention.

Because one-third of Mityana residents are using traditional pit latrines, I recommend the MWSU make initial efforts to increase demand for improved sanitation services. To this end, the MWSU could use revenues from the metered public taps and construct several ventilated improved pit (VIP) latrines in Mityana Central and Geregere. Approximately half of survey respondents in these two RC1s are willing to pay 25 shillings per visit. Complementing this pilot project, community groups, in cooperation with the MWSU, could initiate a series of health and hygiene awareness seminars coupled with information about improved sanitation technologies. Research indicates a positive relationship between improvements in education, health, and hygiene awareness and the demand for sanitation facilities. While current residents planning to improve existing sanitation facilities suggesting an already-present awareness and knowledge of health implications related to poor sanitation services, using community and neighborhood

meetings as vehicles for information dissemination could further increase demand – especially among those without the funds or ability to improve their existing system.

CONCLUSION

I urge the Ministry to take advantage of Mityana’s collective interest in improving water and sanitation services.

- This demand-driven effort promoted by a public-private partnership and community participation attends to the important stakeholders involved in Mityana planning policy and water and sanitation service provision.
- The lease agreement between the MWSU and water vendors could model an effectively viable option for improved water services in additional “secondary towns” in Kenya and Eastern Africa.
- User fees and appropriate pricing schemes address the needs of all income groups in Mityana.
- Community groups involvement helps maintain an open and important dialogue with planners and implementers.
- Fostering demand for improved sanitation services via VIPs and education campaigns could better the existing sanitation system.

Striking the necessary and fine balance between technical, institutional, social, financial and economic constraints will prove to be a challenge for the Ministry and all vested bodies working towards the overarching goal of improved water and sanitation services. It is my hope that the current recommendation plan provides practical guidance in working towards this objective.

Jill Baumgartner and I discussed the Mityana case and tried to answer any questions the other person may have had. However, we developed our own recommendation plans.