

Multi-Sector Disaster Risk Reduction as a Sustainable Development Template: The Bamako Flood Hazard Mitigation Project

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Bamako, Mali, is perhaps best known as the center of a vibrant music scene. Less well known is that portions of the city haven't flooded in nearly nine years, in part due to a flood hazard mitigation project funded by the USAID Office of U.S. Foreign Disaster Assistance (OFDA) shortly after the devastating floods of 1999.

That's the good news. The bad news is that precious few know about the project, or how it might serve as a template for sustainable development, which is the subject of this article.

Background

Flash flooding throughout Bamako in August 1999 resulted in death, destruction and significant economic losses for several thousand families. OFDA responded by providing funds to Action Contre La Faim (ACF) for local purchase and distribution of relief supplies to flood victims. Subsequent OFDA analysis of the causes of the flooding resulted in the October 1999 approval of a four-year, \$525,000 mitigation project in the city's most affected commune, which was implemented by ACF.

One of the primary causes of flooding in Bamako and cities in many countries is the disposal of refuse in waterways, which compromises the ability of those waterways to safely absorb floodwaters. Efforts to reduce flooding risks are thus linked to improvements in urban service provision (e.g., improved retention, drainage, and refuse collection and disposal), a typically mundane development activity that becomes an extremely useful disaster risk reduction (DRR) tool when linked directly to hazard mitigation.

Project Objectives

The project focused on five objectives:

1. **Watershed management**, including retention strategies (e.g., slip trenches and diversion efforts) and waterway bank restoration;



Photo: courtesy of Charles A. Setchell

2. **Refuse removal, collection, and disposal**, including removal of backlogged refuse in waterways, and the establishment of a refuse collection system and landfill operation;
3. **Livelihood generation** related to drainage/retention improvements, refuse collection and disposal, and the initiation of a composting operation;
4. **Public health and sanitation improvement** through enhanced water management, training and awareness raising; and
5. **Decentralization support** to promote democratic governance by engaging local government authorities and project area residents in a process of identifying needs and priorities throughout the project cycle.

Results

In addition to promoting decentralization, other project outcomes included:

1. Restoring channel volume in key project area waterways through the removal of several hundred tons of accumulated refuse and debris, which improved drainage capacity and reduced flood risk;
2. Improving water retention capacity in selected sites throughout the project area by constructing slip trenches (a.k.a., soak pits), thereby reducing both runoff volume and flood vulnerability;
3. Establishing a refuse collection and disposal service through the creation of eight collection routes, each served by a collection team using tractor-trailers, with disposal at a nearby landfill established by ACF. (This service generated numerous livelihood opportunities for unemployed youth, and became self-sustaining, in that collection fees soon more than offset costs.);



4. Garnering the attention of the national government and other donors, which resulted in the project's replication elsewhere;
5. Reducing the incidence of selected water- and mosquito-borne illnesses in the project area by 33-40 percent; and
6. Changing development policy. After the project was completed, USAID/Mali requested that OFDA review its development policies to better reflect DRR concerns. The review remains an excellent example of integrating DRR and development policy, thereby enhancing prospects for sustainability.

Summary

The Bamako project was much more than just reducing flood risk: it demonstrated that such an effort can also be a cost-effective means of promoting several other objectives. At a time of constrained project budgets, the multiple benefits of DRR in Bamako should be recognized, appreciated and considered as a model for DRR programming activities elsewhere. When these activities include public service provision or other inherently developmental efforts they can become templates for the pursuit of the broader objective of sustainable development.

Why Is The Bamako Case Important?

At least two reasons come to mind. First, water-related disasters such as floods, cyclones and droughts are not at all trivial. According to the International Federation of the Red Cross and Red Crescent Societies World Disasters Report 2007, 98.5 percent of the 2.7 billion people affected by natural disasters during the 1997-2006 period and 85 percent of the \$788 billion in economic losses during the same period were caused by hydrometeorological events. Given these daunting totals, promoting Bamako-like DRR projects on a wide scale seems more than prudent.

Finally, Bamako also serves as a good example of addressing DRR issues where most human beings now live: in cities. Often located in "harm's way," cities in developing countries are projected to double in population and triple in physical area in the coming years, thereby placing even more people in "harm's way." Thus, the need for multi-sector DRR in urban areas reflecting the multi-faceted character of those places has never been greater.

It seems then that Bamako has a whole lot more to offer the world than good music. ●●○

**The views expressed in this article are the personal views of the author and do not necessarily represent the official views of the United States Agency for International Development.*