

## CHAPTER 3

# Project Operations

### Project management structure

The project management structure for the MVP is based on a partnership model involving three institutions, each playing a complementary role: the Earth Institute at Columbia University, Millennium Promise, and the United Nations Development Programme (UNDP). The Earth Institute (EI) is the lead partner responsible for the development of the project's strategy. The EI has two Millennium Development Goals (MDG) Regional Centers, one in Bamako, Mali covering West and Central Africa and other located in Nairobi, Kenya covering East and Southern Africa.

20

*Millennium Promise (MP)*, an international NGO, managed private and public sector donors. MP also provided management, operations, and logistical support.

*The UN Development Programme (UNDP), World Agroforestry Center (ICRAF) and Millennium Development Ethiopia (MDE)*: UNDP has been instrumental in the financial management, administration, contracts and procurement aspects of project implementation through its offices in eight of the ten MVP countries. Two international research institutions, MDE and ICRAF, perform similar roles in Ethiopia and Kenya, respectively.

### THE INFRASTRUCTURE TEAM IN THE FIELD

The MVP field team has a leader who is responsible for planning, budgeting and implementing activities. He/she receives technical support from the MDG regional centers and the Earth Institute in New York and operational support from UNDP and MP. Each site has a senior infrastructure coordinator, and most sites also have a senior water coordinator. They work in close collaboration with staff for other sectors (health, education, community development, etc.). As infrastructure activities expanded, the MVP incorporated two regional infrastructure coordinators, based in Bamako and Nairobi, to assist with procurement, logistics and technical issues. These regional coordinators have been instrumental in expediting the implementation of large civil works projects. In addition, consultants were hired to support sites in areas that required short term but highly specialized expertise (lanterns, stoves, SharedSolar off-grid programs, etc.)

### IMPLEMENTING AN INFRASTRUCTURE PROGRAM

Infrastructure programs in the MVP have generally been implemented in five phases:

## 1. SITE ASSESSMENT AND GEOGRAPHIC SURVEY

The first step was to carry out a detailed assessment and geospatial survey, including: key qualitative questions regarding prevailing technologies and local practices (types of fuels and stoves used for cooking, etc.); quantitative information generally applicable locally (such as retail prices of different energy technologies and carriers); and a detailed specification for the collection of spatial data using a combination of maps, local knowledge, and hand-held GPS units. The information included population points, markets, institutions (schools, clinics, government offices), roads, electricity lines, water points, and other existing infrastructure, key resources, or locations of importance.

Consulting with the government and tapping into complementary local knowledge greatly improved results, since detailed assessment may have been already collected. With the rapid development of mobile applications, data collection tasks and mapping are becoming easier even in remote rural areas. Once a good map of the area was completed, there was an initial assessment of existing infrastructure (type, standards,

quality, condition, ownership, etc.) to create a solid baseline for planning. The MVP team was then ready to create a five-year overall plan that was reflected in the subsequent annual work plans and budgets.

## 2. PLANS AND BUDGETS

These are developed annually by the MVP site teams in consultation with partners and communities.

Annual budgets have three points of reference:

- MVP model budget annual allocation by sector (see table below)
- EI technical advice on MDG-related targets and best practices
- Adaptability to local circumstances (consultations with community and local partners)

Teams have consultations with communities and local partners facilitated by a team leader. Ideally, they coordinate with local governments to make the most effective use of limited resources, particularly for ex-

**Table 3.1: Financial Allocation by Sector**

MVP Financial Guidelines: Allocations by Sector		
Sector*	Percent Allocation (%)	Per Capita Allocation (\$)
1. Agriculture and Nutrition	15%	\$7.50
2. Education	15%	\$7.50
3. Health	35%	\$17.50
4. Water and Sanitation	7.5%	\$3.75
5. Environment	2.5%	\$1.25
6. ICT	2%	\$1.00
7. Energy	10%	\$5.00
8. Transport	10%	\$5.00
9. Community	3%	\$1.50
<b>Sub-total: Interventions</b>	100%	\$50
<b>Sub-total: Management</b>	—	\$10
<b>Totals</b>	—	\$60

tension of infrastructure (roads, electricity and water). However, the focus on multi-sectoral, MDG-related objectives implemented on an accelerated timeline, and the small geographic area targeted may not coincide with those of the local government. Some MVP strategies to overcome this include:

- Developing contingency plans in case government contributions are delayed or not forthcoming (i.e. SharedSolar as an alternative to grid extension).
- Working with governments on their efforts to meet “natural” targets, while addressing other areas that are less of an official priority.
- Train community members for labor-based implementation where appropriate.

### 3. TECHNICAL DESIGN

It is crucial to include documentation defining the technical, economic and institutional framework of projects, including ownership, operation and maintenance plans. When possible, the designs for MVP have been done by the local infrastructure coordinators with support from the government engineers. Sometimes external consultants have been hired to complement local expertise. The primary challenge the MVP has encountered is overdesign. This is often caused by an effort to meet high national standards, or the perception that as an international NGO, the expectations and budget of MVP must be extremely high. Technical design should, of course, be based on sound standards, but it also must be adapted to local circumstances as well as the priority of reaching the largest possible population for a given investment. For example, spot improvements of roads (i.e. fixing culverts, steep slopes and other problems that prevent access) is an excellent, cost-effective strategy for rural areas. The construction standards of schools, clinics and staff houses is sometimes overly ambitious. The MVP has tried to adapt to local circumstances in order to strike a balance between efficiency and economic feasibility.

### 4. PROCUREMENT OF EQUIPMENT AND CIVIL WORKS

There is a need to balance the priorities of ensuring transparency and accountability and the timely and efficient execution of projects. When conducting procurement and awarding of construction or civil works projects, the basic thresholds used by the UNDP, have been:

- Up to \$30,000 → Invitation to Bid (ITB)  
Simplified process
- \$30,000—\$100,000 → Open bid, nationally advertised (three quotations needed)
- More than \$100,000 → Open bid, internationally advertised

Delays in procurement have mainly occurred during the evaluation of the financial and technical capabilities of bidding companies. The limited capacity and/or experience of various participants together with the tight regulation of some of these processes have resulted in long delays. One partial solution that has sometimes worked well is to conduct a prequalification of companies so they are effectively pre-vetted and, for a period of time, can bid with simplified checks mostly based on economic offer.

Regarding the procurement of international equipment such as water pumps, solar panels, batteries and LED lanterns, weak supply chains, customs delays and high transport costs are still very common in the MVP intervention areas, resulting in high prices and long delays in delivery. The MVP has found that bulk international procurement reduces costs and delivery time by almost half. The MVP has started to purchase most of these items internationally and send them in bulk containers to sites, reducing costs and expediting the implementation of projects.

## 5. IMPLEMENTATION/OVERSIGHT

In most cases, infrastructure and water coordinators, with support from the district engineers, have acted as project supervisors for infrastructure projects. In countries like Mali, an external consultant reinforced the supervision and quality control of all the civil works construction.

**Quality Control of Materials:** To ensure the use of good quality materials for the civil works, suppliers and manufacturers were asked to provide certificates of test. Where such certificates are not available, representative samples of the material were tested to ensure quality.

**Cost Control and Payments:** The MVP Infrastructure Coordinator is responsible for the assessment of the economic, technical, administrative and financial effectiveness in the use of resources on civil works projects.

**Coordinating Community Labor-based Implementation:** Community contribution gives beneficiaries a greater sense of project ownership. Tasks include maintaining small feeder roads, digging trenches for water pipe installation, brick making and constructing facilities.

### Maintenance and Sustainability

As with most projects targeting poor, rural areas, maintenance and sustainability of interventions are two of the MVP's biggest challenges. Where possible, the MVP is handing over maintenance and existing infrastructure to communities, local governments, utilities or other authorities. For public works such as roads, clinics and schools, funds must be in place to ensure their proper maintenance and function. Since there is little capacity at the local level for tax collection, most of these funds have to be gathered via government transfers. The MVP and other projects should lobby the government on behalf of the site to ensure that adequate funds are allocated for new facilities. When necessary (i.e. local support is not sufficient,)



Dilapidated school, since replaced by MVP, in Sauri, Kenya

budgets should be allocated to the continued support of large infrastructure works.

In the case of water and electricity, local cost recovery is possible for both initial costs (e.g. households' fees for electricity connections) and recurring costs (e.g. electricity tariffs and user fees for drinking water). Building capacity for small operators or local communities is key for the long-term sustainability of the infrastructure. New mobile applications can help to improve collection of payments as well as the provision of lifeline services for the poorest. ■