



**Guide to Key Principles and Interventions
in the Millennium Villages Model**

June 2009



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Key Steps for Establishing a Millennium Village

This document provides guidance for establishing an integrated rural development project based on the MV approach. Because various stakeholders — governments, international agencies, or NGOs — will be consulting this document, some instructions may not be relevant to all stakeholders. More detail on the process and sectoral interventions is available in the *Millennium Villages Handbook*, available at www.millenniumvillages.org.

What is a Millennium Village?

The MVs focus on delivering interventions to achieve the Millennium Development Goals (MDGs) and promote human security in impoverished rural areas through community-based investments and capacity building. The MVs are a proof of concept for achieving the MDGs in hunger hotspots of rural Africa and subsistence farm communities in other parts of the world.

The MVs emphasize practical mechanisms to implement (1) integrated rural investments, (2) local leadership and community participation, (3) long-term institution building and capacity development, and (4) professional training for community-based staff.

Integrated Rural Investments. The MVs carry out integrated targeted investments at the community level in four priority areas: agriculture, health, education, and infrastructure. Agricultural investments support an increase in food production and a transformation from subsistence to commercial farming. Health interventions target child and maternal survival and the control of major diseases. Education interventions support universal primary school completion, improvements in school facilities, and school meals programs. Infrastructure investments focus on electrification, feeder roads, and water and sanitation. Environmental sustainability underlies all interventions.

Local Leadership and Community Participation. The approach assumes that the community, in concert with local and district government institutions (or the next higher level of political authority) and civil society organizations, will take the lead in implementing and sustaining the integrated investment package.

Long-term Institution Building and Capacity Development. The MV emphasizes three kinds of long-term institution building at the local level: (1) the formation or support of an already existing community-based management team, (2) the formation of producer organizations, notably farmer cooperative groups, and (3) the introduction or spread of microfinance institutions, including both saving and lending operations.

Professional Training for Community-based Staff. The MV approach emphasizes professional training by the multi-sector team and community based-staff in management.

Main Principles of the MV

- Science- and evidence-based interventions, implementing technologies, and practices
- Community-based orientation, with a participatory approach to planning, implementation, and monitoring
- Local capacity development in technical, managerial, and participatory skills
- Integrated multi-sectoral interventions geared toward gender equality and environmental sustainability
- Links with district, national, and global strategies
- Partnerships with other development groups
- Cost-sharing by the community, government, and donors
- Increased national financing of public goods in line with increased official development assistance for African governments.

What are the Key Steps for Establishing a Millennium Village?

Identify Development Partners and Create Alliances for Implementation

Work with the government: If the MV is not being implemented by the government, integrating the MV(s) into government structures is integral for long-term success and sustainability. It is imperative that steps are taken early on to engage with stakeholders and link the MVs to government systems at all levels. Alignment between the MV project and government priorities, strategies, and procedures is important. Government officials at all levels should be invited to discuss the scope of the MV concept, with particular emphasis on how this approach can be scaled up nationally.

It is imperative to clearly communicate with all stakeholders around MV activities, roles and responsibilities.

Encourage formation of a local government steering, advisory body, or regional or local steering committee: Facilitate convening of partners responsible for coordinating and managing development planning and implementation at the local level. If the MV approach is being implemented at the national scale, the creation of units or focal points within government structures with appropriate linkages or representatives from other stakeholders is suggested. The committee, which will increase overall coordination at the local level among development partners, government institutions, and NGOs, can be tasked with the planning, execution, and monitoring processes. It will also ensure proper and timely government support at the local and regional levels. Finally, it will help sensitize other government institutions about the MV concept and results obtained at the local level.

Develop a communications strategy: It is imperative to clearly communicate with all stakeholders around MV activities, roles and responsibilities. This includes local communities, other local stakeholders, and national policy makers. Local communities must understand the MV concept and interventions as well as their role in these. Policy makers, as well, must be aware of MV goals and operations. The communication strategy may include translating documents into the local language, holding workshops around the MV concept, lessons from MVs in other countries or regions, or other related activities. Communication with communities will be an important part of all local assessments, planning, and intervention activities.

Develop Tools and Formulate an Overall Strategy for Implementation

Assessing needs and capacities: Comprehensive and participatory biophysical, institutional, and social baseline assessments should be conducted to identify local priorities and assess existing resources and capacities relevant to addressing these priorities. This includes an analysis of technical competencies, human and financial resources, and capacities that will determine the needs and processes necessary to strengthen and build the capacities required to implement the MV concept.

Conducting participatory technical needs assessments for key sectors (agriculture, health, education, and water and sanitation) is critical to determining priorities at the local level. Participatory assessment may already be part of national decentralized planning systems. Moreover, sectoral assessment tools and models have been developed to formulate national-level MDG development plans. These can usually be adapted to the local level. Key steps of the assessments include: setting objectives, choosing appropriate tools, training facilitators in the assessment tools, facilitating the assessment and analysis, data entry, and verification of results with communities. Another important issue is the need to collect separate information for men, women, girls, boys, and marginalized and vulnerable groups. It will also be important to build up a cadre of skilled facilitators.

Elaborate and implement MV planning: Implementation of the MV model will incorporate and coordinate plans and support provided by different development partners at the local level, including the

community, government, NGOs, and UN agencies. The plan should include: (1) five-year targets and goals, (2) a monitoring and evaluation system, and (3) five-year work plans and budgets with specified contributions and other commitments from different development partners.

Village-level stakeholders should be involved in this process, and government technical staff should provide technical support to the planning process. In some cases, these local plans are linked directly with resource allocations that are given to the decentralized committees to implement priority activities. In other systems, plans are aggregated at higher levels, and priority activities are integrated into local government development plans for implementation and budget allocation.

Community action plans (CAP) can also be used for planning and implementing the MV model. CAPs are participatory planning tools that facilitate diverse groups in a community in planning and implementing development activities. Special consideration should be given to vulnerable groups, and, in some cases, it may be preferred to have separate plans for marginalized or vulnerable groups. The CAP includes the responsibilities and contributions of different partners, including local administrative bodies, interest groups, user associations, self-help groups, or entrepreneurial groups that could play important roles in implementing interventions. An assessment of representation and managerial and technical skills of these existing structures is required to better understand capacities and needs.

Capacity building for planning, implementation, and monitoring: The delegation of new responsibilities in participatory planning, service delivery, or monitoring to lower levels of government or to village level organizations may require support for community organizations and local governments in building new skills or strengthening existing systems. Determining the gaps in capacities for planning, delivery, and monitoring and addressing these gaps is a crucial part of ensuring the success of MV activities.

Create mechanisms to monitor and evaluate progress toward MDGs: To ensure that the MV project is making progress toward the MDGs, a self-performance evaluation system must be developed. The Millennium Villages Project has developed a set of activity, output, outcome, and impact indicators to monitor performance of work plan implementation, cost-sharing contributions, and budget spending as well as progress towards achieving the MDGs. This system should be adapted to local conditions and based on local data collection and monitoring of relevant targets and indicators.

Implementation of the MV Model

Core operations activities revolve around ensuring successful project implementation. These activities include project planning, budget preparation, financial tracking and analysis, activity monitoring, procurement systems, and contract review. While the MV model prescribes key priorities in each sector, flexibility to account for local conditions is important.

Work plans should state sector goals, objectives, and activities and how these contribute to achieving the MDGs. It should also provide for cost-sharing among the government, communities, private sector, and development partners. It is important to prioritize, organize, plan, and focus on intervention activities and their sequencing, taking into consideration timelines, budget constraints, and partner contributions. Finally, all interventions should be linked to indicators, which allow monitoring and evaluation as well as the possibility to correct interventions and work plans throughout the year.

A Community-Based Approach to Achieving the MDGs

Many rural development programs have hindered their potential for success because local stakeholders did not participate adequately in the development process. A community-based approach — in which communities plan, act, participate in, monitor, and manage the development process — is essential for the success and sustainability of the MV model. A community-based approach is embodied in the principles of participation, social and gender inclusion, equity, and local stakeholders' ownership of the decision-making and development processes. This approach entails targeted action at the local level that accounts for local needs and priorities, garners political commitment and local ownership, and utilizes the most appropriate level of government.

Strategic Priorities

Institutionalize participation in local development processes in a manner that enables an inclusive process at all stages of designing and implementing village-based action plans. Participation starts with an analysis of intra-communal and gender differences via community assessment and design phases. Effective participation relies on a division of roles and responsibilities among stakeholders and institutions at each stage of the project cycle. To avoid conflicts, relationships among stakeholders should be clearly defined, and feedback systems enhanced. An effective participation strategy works to identify and reconcile varying interests and priorities within communities — both within and across sectors. Participatory planning should be part of national decentralized planning systems.

- | Strategic Priorities |
|--|
| <ul style="list-style-type: none">• Institutionalize participation• Strengthen communities' capacity for collective action• Develop a community-based information system• Build up a cadre of change agents and develop their capacity• Enhance an enabling policy environment that supports community development |

There are many suitable approaches to improve equity in participation. These approaches include promoting non-traditional leaders; encouraging champions of equity among the elite, local leadership, and managers of the MV project; advocacy and awareness raising of national rights-based policies; changing policies and norms; social protection mechanisms for the poorest community members; and creating new avenues for participation and collective action. Communication strategies for the MV project, sectors, and interventions should also be designed to ensure that key messages reach different groups.

Strengthen communities' capacity for collective action to manage a self-determined, multi-stakeholder development process. Capacities must be strengthened at the individual, organizational, and system levels, including by developing institutional strategies with local stakeholders. An institutional strategy must be based on an analysis for capacity development activities at these levels and within each sector. The strategies lay out the critical functions to be performed, strengths and weaknesses at each level, and capacity gaps. The assessment may make use of such tools as asset inventories, stakeholder analysis and influence mapping, and barrier analysis.

Decentralized political and administrative units are key entry points for building capacities. Understanding the roles, responsibilities, and capacities of local institutions leads to identification by village and by sector of appropriate structures and mechanisms for service delivery. These structures may be community managed, small- or large-scale private service agents, intermediate technical agents, NGOs, or government institutions. Community-based groups, committees, or associations must be strengthened to interact and collaborate with local governments.

Localized MDG strategies must be linked to long-term national MDG planning processes and policies. An institution such as a millennium advisory board at the district or municipality level, which should include community representatives and institutions, can coordinate investments and serve as a technical advisory board and stakeholder forum.

Develop a community-based information system (CBIS) to enable communities to generate, utilize, and manage information tools and services. The CBIS allows communities to access, create, and manage information on project activities and the development process. An effective CBIS can strengthen civil society and improve public participation, including of youth, women and other marginalized groups. The information must be readily available and in formats and media that can be used by various social groups.

Participation starts with an analysis of intracommunal and gender differences via community assessment and design phases

Community radio programs and other multimedia education programs or information services can provide access and information on issues such as farming practices, market information, and opportunities for adult education. In addition, it can serve as a forum for public debate and feedback. A space such as a community center is appropriate for storing information in an accessible manner. Community fairs can also provide information services and raise awareness. Links can also be established with local government reporting and monitoring systems.

Build a cadre of change agents and develop their capacity in areas critical to achieving the MDGs, as well as develop expertise in participation and gender relations. Extension agents, outreach workers, local leaders, and facilitators from partner institutions must be included in efforts to scale-up services in areas critical to the MDGs.

At the district and sub-district levels, there are structures for technical support agents and extension workers in community development, natural resources, health, education, and water and sanitation. These types and scopes of these structures vary with national institutional arrangements and policies. For instance, in recent decentralization policies, community development assistants have played a central role in building capacity for participation, assuring effective participation in decentralized forms of governance. These agents facilitate creation of the village level structures, linkages to the decentralized planning system and awareness of roles and responsibilities of different stakeholders in the system.

Enhance an enabling policy environment that supports community development at multiple levels within communities, the MV project, and local government. The MV approach to enhancing an enabling environment addresses these issues in three main focus areas: within communities, within local government, and within the MV project. Within the community, key constraints are social factors such as social harmony, leadership, and equity. Enhancing this enabling environment involves facilitating attitudes, norms, and practices that stimulate people to take collective action, include marginalized groups and women, in decision-making and enables them to successfully take control of institutions and decision-making processes that govern their lives.

Within local government, the institutional, socio-economic, policy, and legal environments are critical. Creating an enabling environment within the government can be achieved partly by helping remove barriers to participation, institutionalize mechanisms — such as new by-laws — for community participation, and supporting open and accountable structures for community participation in local governments. Within MV project management, the administrative environment is critical. MVP's central role in creating enabling conditions is to facilitate support for community-defined priorities in development through joint planning and actions at the community level.

Monitoring and Evaluation in the MV Model

The following summarizes the M&E program of the MVP and can be used as the overarching paradigm to design an M&E platform for projects using the MV model, with particular features chosen that are most relevant and feasible with available resources. In the MVP, some of these methods are being undertaken in a smaller research site, which usually consists of 5,000 people, while others are being conducted in the larger MV area, which is known as the cluster.

The M&E platform responds to four key questions:

- What are the components of the MV package? What is the timing, sequence, uptake, and outcomes of these interventions?
- Do MV interventions contribute to achieving MDG targets?
- What are the inputs (priced and non-priced) into the project? How do the total realized costs relate to the projected \$120 per capita threshold outlined in the MV model?
- Process/Implementation research: Is the MV model cost-effective, relevant, efficient, and sustainable? What are the key barriers and facilitators to implementation? What lessons can be learned for scale up and transfer to other contexts?

QUARTERLY INDICATORS: *What are the components of the MV package? What is the timing, sequence, uptake, and outcomes of these interventions?*

The introduction of various components of the MV package varies depending on factors such as existing infrastructure, community priorities, national policy, local economic opportunities, and the disease burden. A standardized approach to documenting the timing, sequence, and uptake of interventions is critical to defining the contents of the package and will assist in generating hypotheses to explain observed effects on MDG-related outcomes.

Methods: A quarterly report system for performance indicators, which is based on sector strategies, includes performance indicators in nine sectors, their definitions and unit of observation, and the person responsible for reporting each indicator. These are measured for the entire MV cluster and are compiled at the end of each quarter. An information system for recording this remotely is also being developed. Additional indicators that are monitored annually are also being added to this mix. Indicators also include a qualitative component. This can include reporting on challenges and next steps. In addition, a community based information system, which helps record information on community perceptions and ensures participatory learning and evaluation, is also being developed.

SURVEYS: *Do the MV interventions contribute to achieving MDG targets?*

Detailed social, economic, and health surveys are a critical tool to assess changes in MDG-related outcomes.

Methods: The MVP is underpinned by a robust evaluation platform with longitudinal survey systems in place among 300 randomly selected households, stratified by income, in each research village area. Detailed socio-economic and health surveys are being conducted at years 0, 3 and 5, alongside anthropometric measurements among under children under five and biological monitoring of dis-

ease surveillance (malaria, NTDs). To more confidently attribute observed changes to the MV intervention package, matched comparison communities have also been introduced. Full survey tools are available on request.

COST: *What are the (priced and non-priced) inputs into the project? How do the total costs relate to the \$120 per capita threshold outlined in the MV concept?*

There are several sources of inputs into the MV sites, including funded program inputs, support from governments, private providers and partner organizations, material resources from the community, and in-kind support. The nature of these inputs will differ substantially from site to site.

Methods: An economic costing evaluation monitors the cost of all inputs — priced and non-priced — that contribute toward MDG related progress in the cluster in any way. A full methodology and simplified template for this economic analysis has been generated and involves documenting the following: all MVP project expenses by sector; all major donations to the project or local community, such as fertilizer or bednets; examination of budgets of government departments by sector and collating gross aggregate amounts spent (prorated by cluster size); assessing major community in-kind contributions such as labor or produce for school meals programs; and assessing specific donor contributions such pro-rated donor budgets around specific inputs such as HIV care and support services.

PROCESS/IMPLEMENTATION RESEARCH: *Is the MV model cost-effective, relevant, efficient, and sustainable? What are the key barriers and facilitators to implementation? What lessons can be learned for scale up and transfer to other contexts?*

In a complex multi-sector intervention, systematically documenting the process of implementation and the factors that act as barriers and facilitators are equally important to impact assessment.

Methods: This line of inquiry is focused on conducting and documenting qualitative assessments that are regular and robust. The main objectives are to assess the following:

- Feasibility and effectiveness of the program: Did it achieve its goals?
- Relevance: What is the full inventory of interventions undertaken? Were they appropriate for the context?
- Efficiency: Where the interventions undertaken in the right way?
- Sustainability of various components of the MVP package

Key informant interviews will be conducted periodically with community members and leaders, implementers and project managers. A methodology and field guide for conducting these assessments is being developed, and implementation will be coordinated through the community development coordinators at the MV sites. Similar to the economic evaluation, tools and methods will be piloted and adapted for other sites.

Agriculture in the MV Model

Most of the Millennium Villages are located in hunger and poverty hot-spots where crop yields are low because of lack of access to affordable inputs and improved agricultural practices. The lands are also often degraded and cannot support crop production, leading to a vicious poverty-environmental degradation cycle. Reduction of poverty in these rural settings depends on an agricultural revolution following the principles of the African Green Revolution. Increasing and sustaining agricultural production, reducing malnutrition, and generating income from agricultural activities are among the key priorities in this sector.

The first priority for agriculture is increasing staple crop production. In order to achieve this, a package of technologies, including affordable or subsidized fertilizers, improved germplasm, and improved crop, soil and water management practices, and post-harvest handling, is identified for local conditions in consultation with the communities and agricultural expertise in each area. Once productivity and caloric food security have been increased, communities need to diversify crops both for nutritional security and income generation.

Improved water management and storage is essential for assuring crop production in these drought prone areas. Rain water harvesting and storage at the farm and landscape can increase water availability for irrigation for income generating crops such as vegetables and trees and for supplemental irrigation to sustain cereal crops during periodic dry periods.

Managing agriculture in an environmentally sustainable way is also a key component. Integrated soil fertility management practices that combine mineral and organic fertilizers lead to increases in soil organic matter and more efficient use of costly nutrients. Inclusion of leguminous plants into the cropping systems provides a free source of nitrogen through nitrogen fixation and also a source of organic materials and even fuel wood, in the case of leguminous tree fallows.

Post-harvest losses can account for as much as half of the harvest; therefore as cereal crop surpluses are stockpiled it is essential to build appropriate storage facilities and to treat the surpluses to control damage by insects, rodents, and microbes.

Recommendations of the

UN Millennium Project Hunger Task Force

- Double or triple staple food crop production
- Diversification of crops for nutrition and income generation.
- Decrease malnutrition by half in five years; eliminate micronutrient deficiencies; provide school meals with locally produced foods
- Rehabilitate the environment by improving soil fertility, protecting watersheds, and planting trees.
- Increase in income generated from agricultural activities
- Improvements in input and output markets for agricultural products

Core Interventions

- Access to fertilizers and improved seeds
- Soil rehabilitation techniques
- Small-scale irrigation systems
- Grain storage facilities
- Strengthened agricultural extension services
- Crop diversification for nutritional security and income generation
- Create and support farmer organizations
- Financial services for credit and savings

Although great strides in reducing hunger through increases in cereal productivity, the number of malnourished children has actually increased. While the increased staple food production may impact food security, dietary diversity is required to ensure adequate nutrition and hence reduce malnutrition, which is prevalent in sub-Saharan Africa. Agriculture interventions in the Millennium Villages have made efforts to:

- Introduce and promote home gardens to increase dietary diversity of micronutrient-rich non-cereal plant food sources, thus enhancing nutritional status, but also to provide income to allow for the purchase of animal and higher quality plant products. Green leafy vegetables and fruit trees are grown by smallholders and can increase micronutrient intake including iron, zinc, calcium, and vitamin C and A.
- Promote small animal rearing in conjunction with home-gardening.
- Introduce food legumes to farming systems to improve soil health through nitrogen fixation and increases protein and micronutrient intake in the diet. Food legumes may also provide an additional source of cash income for smallholders.
- Introduce single -nutrient rich foods to increase key micronutrients into the diet, such as orange-fleshed sweet potato, which is a good source of vitamin A and energy, is easy to cultivate, and is drought tolerant with potential high food security.

In the medium and longer term, a package of services and institutions is crucial to the economic viability of agriculture. These include:

- A functioning private sector of agriculture input dealers for timely supply of fertilizers, improved seeds of staple and high value crops, as well as improved livestock, and equipment for water harvesting and small-scale irrigation.
- Financial institutions that supply credit and savings for agriculture in rural areas.
- Enhanced capacity and coverage of agricultural extension agents.
- Establishment and strengthening of farmer organizations.
- Public policies that provide incentives and regulations for building input and output markets.
- Strengthened rural infrastructure.

Education in the MV Model

Universal primary education and gender parity in primary and secondary education are key goals in the education sector. Key interventions to achieve these goals are provision of adequate functioning primary schools and incentives for attracting and retaining students, particularly girls. There are multiple reasons that children are not attending school, including inadequate facilities and teachers, cultural and gender barriers, and a small possibility of advancing to secondary school. In addition to providing a full course of accessible, quality, and relevant primary education to all children, the MV approach seeks to prepare children for the transition from primary to secondary school.

The education sector must also include strategies and interventions to improve functional literacy and/or marketable off-farm skill sets for out-of-school youth and women of child-bearing age. Other groups that should be targeted include children with special needs, orphans and vulnerable children, marginalized populations, and girls.

Communities and schools are the primary means to promote education. Parent teacher associations and school management committees should be involved from the beginning and serve as a liaison between the community, school administration, and the Ministry of Education in the effort to build sustainable education systems.

Education Targets

- 100% primary school enrollment
- 40:1 pupil teacher ratio
- 10% or less repetition rate
- Gender parity in primary and secondary education
- 80% pass rate on national exams
- 90% attendance rate

Core Interventions

- School construction
- School meals programs
- Sanitary napkins for adolescent girls
- Improved quality of education
- Increased attendance in secondary schools
- Non-formal education
- Community involvement in promoting education and monitoring school, teacher,

Attracting and Retaining Children in Primary Schools

The education sector's main goal is to ensure that children are enrolled in and complete primary school. A variety of interventions can be implemented to attract and retain students, including community mobilization, advocacy and awareness campaigns, incentives for attendance and enrollment, improving the quality and infrastructure of schools, and providing school meals.

School construction: Classroom construction and rehabilitation or creation of new schools should be conducted through collaboration with local governments, NGOs, and communities to ensure that children have access to safe schools within a reasonable walking distance. Schools should have infrastructure that is conducive to learning, such as safe drinking water and hand-washing facilities, single-sex improved latrines or toilets, and sound school construction.

School meals programs: The provision of a nutritious daily school meal is a key intervention across the

MVs, targeting hunger, health, and education MDGs. This meal increases enrollment, attendance, and concentration levels of students. Purchase of locally produced foods for the meals also provides a market for farmers to sell their production. A school meals program usually requires collaboration with key stakeholders, including the community, international partners such as the World Food Programme, and Ministries of Education to provide technical, capital, and management assistance and cost-sharing.

Sanitary napkins for adolescent girls: The onset of menstruation and the high cost of sanitary napkins is a significant barrier for the attendance and completion of primary school by girls. Provision of sanitary napkins, as well as gender-sensitive latrines, will increase attendance rates during the menstrual cycle, allowing adolescent girls to complete school. When possible, it is preferred to use locally produced and reusable napkins.

Increase promotion to and attendance in secondary schools: Strategies to promote and enable eligible students to enroll and complete secondary school include improving the quality of primary education to allow students to pass qualifying exams, providing scholarships to advanced and needy students, especially girls, and the providing boarding strategies for access to secondary schools that are too far away for daily travel.

Strengthening school governance and management at all levels is a key component to the MV education goals.

Quality education: Interventions to improve the quality of education focus on four key areas: teacher development and training, access to learning resources, infrastructure improvements, and strengthening school management and community involvement in schools. Teacher development may include capacity development through peer-to-peer trainings and Ministry of Education trainings. Resource allocation of materials such as textbooks, visual aids, school supplies, and computers are also key to increasing the quality of education.

Non-formal education: Due to the overall lack of resources for education and the large population of over-age, out-of-school youth, formal state-sponsored education systems are not sufficient to reach the MDGs. As a result, non-formal education programs are an important strategy. This can include community schools, literacy programs for adults and out-of-school youth, accelerated learning programs to capture out-of-school youth and non-educated adults, classes at the community resource center, radio programming, vocational schools, and mobile schools for nomadic populations.

Community involvement in promoting education and monitoring school, teacher, and pupil performance: Finally, strengthening school governance and management at all levels, including ministries of education and parent teacher associations, is a key component to the MV education goals. Monitoring and evaluation of school-level performance, such as student attendance and performance and financial management, will yield important information on the effectiveness of education interventions. Training workshops for these groups can focus on action planning, generating income, and accessing resources from the Ministry of Education and/or NGOs. The community can also be engaged to identify marginalized populations, mobilize support for school construction and for non-formal education, and mobilize crop surplus and resources for school feeding programs.

Gender Equality and Women's Empowerment in the MV Model

Enhancing women's economic status is critical to achieving gender equality and empowering women. In addition, the social and economic empowerment of women and girls is critical to achieving the MDGs and subsequently achieving sustainable development. The multiple burdens on women's time and labor, limited access to economic assets and post primary education opportunities, exposure to health risks, denial of women's property and inheritance rights, gender-based violence, limited political participation as well as high fertility rates oppress women and contribute to the poverty trap exhibited in developing countries.

The social and economic empowerment of women and girls is critical to achieving the MDGs and achieving sustainable development.

Studies have illustrated that as adult women's economic status improves, they tend to invest in their families' well-being and encourage their children's education. But improving women's economic status requires that economically targeted initiatives be accompanied by improvements in women's health and that of their families, reductions in their household-related burdens in terms of time and physical effort, physical safety, access to land, and social capital and addressing violence against women and girls.

Implementation Strategy: The MV concept adopts a dual lens strategy, which intends to both mainstream gender into all sectors while also ensuring that attention is paid to gender specificities. Gender thus constitutes a cross-cutting sector, requiring a dedicated staff tasked with both promoting gender-specific initiatives and ensuring mainstreaming of gender issues into sectoral interventions.

Core Interventions

- Mainstreaming gender equality into work plans and community action plans
- Enhancing women's and girls access to and participation in education at all levels
- Increasing women's control over health, physical and psychological integrity, sexuality, and fertility, thus realizing sexual and health rights and reproductive rights for women
- Increasing women's participation in the formal and non-formal economy
- Reducing women's time burden
- Women's participation in key decision making bodies
- Ensuring property and inheritance rights
- Addressing gender based violence

Monitoring and Evaluation: Gender-based needs assessments must be conducted, and appropriate programming and monitoring and evaluation systems developed. In addition, the dual lens perspective requires that sectoral interventions are analyzed, monitored, evaluated, and revised in relation to their gendered impacts; that sectoral teams are trained to recognize and address gender-related issues; and that gender staff are included in sectoral planning. The gender staff must also be empowered to design, implement, and monitor specific initiatives that do not fall within a sector, such as activities regarding gender-based violence or inheritance rights.

Sustainability Mechanisms: In the long term, sustainability depends on women's ability to promote, mold, and ensure implementation of programs that are supported by the community, including, importantly, men in communities. It is crucial that gender equality and women's empowerment objectives also have male cooperation and active involvement to ensure project ownership/

Health Systems in the MV Model

Health interventions in the MVP have a three-fold purpose: 1) Implement and sustain and a free package of core interventions that are evidenced and high impact, while continually improving quality of care; 2) Facilitate community based management of health through the management, supervision, and appropriate integration of services through a network of professionalized community health workers; and 3) Ensure that health information systems are interoperable within the health sector and compatible with other MV sectors to maximize feedback and decision making capacity in communities.

The MV health system is comprised of five crucial features that facilitate these goals:

- A fully staffed and well-supplied clinic that can provide support for core health interventions while extending primary care support
- A paid, full-time cadre of community health workers (CHWs) who provide educational, preventative, environmental, and curative health services at the household level
- Robust community engagement with the health system via CHWs, feedback on clinical care, training and empowerment of village health committees, discussion of collective financing priorities and responsibility of maintaining community health information
- An emergency medical response (EMR) system for acute medical emergencies that employs appropriate transportation, mobile communication, and clinical skills to address major causes of medical emergencies
- Integrated information technology, supervision/training of personnel, supply chain management, financial knowledge and quality care approaches to facilitate a culture of regular process improvement by all members of the health system

Health Interventions

The MV model implements a set of core health interventions that effectively address main causes of morbidity and mortality in extremely poor communities as the minimum components of a basic healthcare package. As health care costs are one of the reasons why communities continue to be poor, basic preventive and curative services including emergency obstetric care must be made available free-of-charge in order to increase utilization.

Implementing core interventions in nutrition, hygiene and sanitation and reproductive health require significant behavioral changes in the community. For this to happen, it is important to work sectors such as agriculture, water, education and gender.

The requisite infrastructure, including equipment, and service delivery mechanisms must also be in place to deliver these core health interventions as well as primary care health services. This requires significant engagement with ministries of health and local governments to identify gaps in policy and capacity and working together to find solutions that create the environment for sustainability and scalability.

Community Based Management of Health (CBMH)

The CBMH platform aims to provide the tools, support, and resources required to develop human resources capacity in the community and clinic. For example, the MV model aims to professionalize CHWs by providing appropriate remuneration along with well-structured supervision and management guidance. According to the MV model, a CHW manager supervises and manages senior CHWs who, in turn, train and supervise the community health workers. This feedback loop will improve process performance. The CBMH platform provides the training, process quality indicators, management techniques, and financial tracking tools to ensure high quality service delivery.

The CBMH platform will also feature information management through improved data feedback. This will be achieved by collecting information that is essential for health decisions in the community and in the clinic, often through the use of mobile phone technology. Using data for decision making will help strengthen linkages between the households, the clinic, and CHWs, and, in the process, creating a functioning health system.

Ultimately, the MV model will develop a common core for the CBMH platform that can be standardized. At the same time the platform will establish a common core of adaptations that will allow for the model to be adapted to other contexts. This platform is being developed with Ministries of Health in anticipation of national scale up.

Health Information Systems

The appropriate use of information technology is changing the landscape of health in low-resource environments. The MVs are at the forefront of these efforts in four areas:

- Clinical case management (such as electronic medical records)
- Clinical decision support (such as RapidSMS)
- Enabling management and supervision (such as RapidSMS for CHW communication)
- Health Education (such as mLearning for CHWs)

Each of these critical areas represents implementation solutions for pre-existing evidenced-based services. Furthermore, the technical development of each is tethered to high priority, MDG-based goals that require innovation in implementation. For example, the identification of high-risk pregnancies is known to be crucial for improving maternal and child health. However, often, this identification does not happen because it can be difficult to identify the appropriate user of this information to make health management decisions.

Health Interventions in the MV Model

The following puts forth guidelines for key interventions to address diseases and conditions. Together with the MV healthcare model, these interventions address the disease burden in developing countries and support progress toward the MDGs, especially those concerned with hunger, maternal and child mortality, malaria, tuberculosis, and HIV/AIDS. For each intervention, this section puts forward information on proposed approaches to help guide implementation. Further details on providing specific treatments are provided in disease-specific national and international guidelines and protocols.

HIV/AIDS

National protocols provide primary guidance for the HIV/AIDS response; in addition, all programming must be planned in the wider context of the district since treatment for HIV/AIDS often takes place at the referral hospital. But while ARV therapy is often provided at referral facilities, key aspects of the HIV/AIDS response should also be delivered at the village level, in local clinics. This includes prevention messaging, adherence support, initial and follow-up testing, basic wellness care, the prevention of mother-to-child transmission (with exclusive breastfeeding and antiretrovirals), post-exposure treatment, and long-term anti-retroviral therapy provision where the capacity exists. In addition, certain populations must also be targeted. In particular, vulnerable groups such as youth, women, and girls must be at the center of the response to the epidemic, including services such as VCT and prevention activities. It is critical to integrate HIV services with family planning services and vice versa, especially at the primary care level, since this not only helps to address unmet family planning need and prevents unwanted pregnancies, but also can help prevent sexually transmitted diseases and HIV among sexually active groups.

Core HIV/AIDS Interventions

- Stigma reduction
- Clinic-based counseling and testing, including community-based voluntary counseling and testing if possible
- Prevention of mother-to-child transmission

Core Maternal and Child Health Interventions

- Routine pediatric care
- Immunization for children under 2
- Deworming
- Routine obstetric care, antenatal care, skilled attended delivery, and postnatal care
- Emergency obstetric care
- Contraception and family planning
- Routine gynecologic care
- HIV-PMTCT services

Maternal and Child Health

Improving maternal and child health requires that financial, geographic, and cultural barriers to free clinic access are removed, that clinics are properly equipped and staffed, and that women have free access to comprehensive emergency obstetric care services linked with efficient referral system. In addition, women should have access to antenatal clinics provided through the primary care clinic and be encouraged to deliver in a

health care facility under the care of a skilled birth attendant. The centerpiece of these interventions is the family planning program, which ensures that women have access to information and services that allow them to have the number of children they desire, at a time interval that is healthy for the woman and her family.

Malaria

A key priority of the malaria strategy is universal coverage of the population at risk with preventive and therapeutic interventions. To reduce malaria transmission, all sleeping sites in every household need to be protected with a long-lasting insecticidal net (LLIN). In addition, some MVs have started the use of indoor residual spraying (IRS) where feasible and cost-effective to further decrease transmission. Prevention of malaria in pregnancy in highly endemic areas is achieved through intermittent preventive treatment during pregnancy (IPTp) as a part of antenatal care. Prompt diagnosis and effective treatment is essential for malaria control, and the MV model includes the availability of artemisinin-combination therapies (ACTs) in all health facilities at no cost. To expand access to diagnosis and treatment, the MV is promoting home-based management of malaria through community health workers able to diagnose malaria with a rapid diagnostic test (RDT) and treat the disease with ACTs.

Neglected Tropical Diseases (NTDs)

The MV model is based on a detailed mapping of the distribution of the seven most prevalent NTDs in order to develop a package of preventive chemotherapy with four drugs tailored to the prevalence of the NTDs in the community. The targeted diseases are schistosomiasis, soil-transmitted helminthes or STHs (hookworm, ascariasis, and trichuriasis), trachoma, onchocerciasis, and lymphatic filariasis. Mass drug administration for STHs and schistosomiasis should be conducted once or twice a year depending on prevalence. In addition to school-aged and preschool children, adults should also be treated. The MV model promotes the integration of mass drug administration with other health interventions to optimize the use of resources.

Nutrition

Reducing general hunger through increased food availability is a main driver of the food and nutrition security response. With increased food availability, increasing diet diversity and quality of diet is emphasized. An integrated approach to nutrition is essential -- targeting clinical, community, school, and food-based approaches, and should promote equity and reach all vulnerable populations. Nutrition goals cannot be achieved without the partnership of other relevant sectors, including agriculture, education, community, and infrastructure.

Core Nutrition Interventions

- Nutrition education and counseling
- Child growth monitoring and antenatal nutrition care
- Supplementation and fortification programs
- School meals programs
- Food and nutrition interventions for vulnerable populations including people living with HIV and AIDS, TB and severely malnourished children
- Diversification of food crops

Tuberculosis

The TB strategy includes access for all to high-quality TB care, which includes interventions against TB linked with interventions against HIV. For TB diagnosis, sputum examination by microscopy is the cheapest diagnostic method for detecting pulmonary TB. Wherever TB diagnostic centers are not available, sputum transport systems from local clinics should be put in place to increase case detection rates. Treatment should follow current WHO guidelines, which vary by country. Because of the synergy between HIV and TB, the two interventions must be closely linked, and all TB patients should systematically be screened for HIV and vice versa.

Environmental Sustainability in the MV Model

The environment is integral to development and crucial to achieving and sustaining the MDGs. Better management of natural resources and the environmental services they provide can enhance human well-being and livelihoods. For example, improving the management of water resources and protecting water catchment areas can provide increased water supplies for increasing crop production as well as increased quantity and quality of water for domestic consumption.

The environment in many developing countries is degrading or already degraded because of removal of woody and herbaceous perennial vegetation cover through deforestation, agricultural intensification, overgrazing, and unsustainable fuelwood harvesting. This loss of vegetation can lead to accelerated soil erosion and runoff, loss of carbon stocks and net greenhouse gas emissions, biodiversity declines that can contribute to loss of pest and disease control, and expansion of invasive species. The low yields of agricultural crops in many developing countries have been attributed to environmental degradation with the loss of soil organic matter and soil fertility.

The MV approach promotes activities that enhance, rehabilitate, and protect the environment and its associated ecosystem services while seeking to minimize negative environmental impacts of activities and interventions in other sectors.

The MV approach promotes activities that enhance, rehabilitate, and protect the environment and its associated ecosystem services while seeking to minimize negative environmental impacts of activities and interventions in other sectors. Activities that improve farming or sustain individual households can have negative environmental impacts elsewhere in the landscape. To address these impacts, it is important to identify the activities at the farm, landscape, and community levels that cause the problems. For example, applying too much fertilizer and failing to control erosion on farm plots can pollute downstream waters with sediments and nutrients. In addition, some environmental interventions require action at the landscape level, such as protecting native habitat or rehabilitating gullies. This will require collaboration among neighbors and within the community.

Core Environment Sustainability Interventions

Many of the environment intervention activities are the same as those promoted for increasing agricultural production, sustainable energy supplies, water management, and conservation. Specifically, these include:

- Rehabilitation of soils through combined use of mineral and organic fertilizers and erosion control
- Planting trees for sustainable fuelwood and timber supplies, agroforestry, erosion and water control, and reforestation/afforestation activities
- Plot, farm, and landscape level management of soil, vegetation and water
- Facilitating collective agreements among the community and other local stakeholders to protect existing forests, woodlands, wetlands, and grasslands and rehabilitate degraded landscapes and watersheds

At the village level, the project empowers community members to manage their agriculture and wood plots, farms, businesses, and landscape in ways that promote more trees, biodiversity, and carbon storage; improve the fertility, organic matter, water infiltration and storage capacity of soils; filter water for clear streams and rivers; stabilize slopes; and develop renewable energy supplies. In addition, actions are taken to ensure that large-scale land use and management changes required to

meet the MDGs are implemented in ways that do not destroy wildlife and natural ecosystems.

Interventions in the environmental sector also require collaboration from the community, specifically in the assessment phase. A landscape-level environmental assessment provides baseline information on the status of soils, vegetation, and other resources. Community participation in this environmental assessment is crucial, including planning beforehand and discussing the results afterward. The environmental assessment can use a combination of remote sensing analyses, rapid ground surveys, and participatory techniques. The selection of methods will depend on data availability and costs of the assessments.

A participatory assessment with the community is essential for revealing information on the past trends and current status of the environment, evaluating the environmental components and services derived from them, identifying the driving forces behind these changes, and interpreting the cultural and economic aspects of land management and resource use and their role in degradation and rehabilitation of natural resources. Based on this participatory assessment, the project and the community can work together to prioritize activities and target paths to environmental rehabilitation.

Most interventions take place at multiple scales -- plot, farm, or landscape. In general, the plot and farm level interventions, such as soil fertility replenishment and boundary tree plantings, start sooner than landscape level interventions, which include reforestation and grazing control. In general, though, the benefits of environmental interventions tend to emerge over a longer time frame than those aimed at increasing agricultural production.

Often the costs of environmental protection and rehabilitation are perceived to be too high at the individual level; therefore it may be necessary to include incentives for such activities. As compared to direct interventions with benefits that may be realized in the short term, environmental management also requires investing more time at the project's initiation, including for creating community awareness. This is especially true at the landscape level, which typically requires community-based action.

In general, the benefits of environmental interventions tend to emerge over a longer time frame than those aimed at increasing agricultural production.

Energy, Transport, and Communications in the MV Model

Making the transition to modern energy services can help improve people's health and reduce environmental degradation. In many resource poor countries, the main use of energy is for cooking, and this energy is primarily provided by biomass such as fuel wood and charcoal. Thus a high priority of this sector is introducing new energy sources, increasing the efficiency of fuel use and reducing indoor air pollution and its health impacts. Other priorities include improving community access to transport and information and communication technologies (ICT).

The Millennium Villages approach is to identify modern energy, transport, and communication services and prioritize community-level access -- defined as access within two kilometers of all homes -- to these services. Providing community-level access -- such as in schools, health facilities, offices, and market centers, rather than to individuals or households -- can help reduce barriers to access and will transform rural communities by improving livelihoods, health, education, and business skills.

Energy Targets

- Electricity services at the community level
- Affordable mechanical power at the community level
- Affordable, clean, and efficient cooking at the household level and at key institutions
- Household level access to small-scale electricity services

Core Energy Interventions

- Electricity for institutional use at the community level
- Solar power for isolated energy demands
- Fuel for household and institutional cooking
- Affordable mechanical power for grinding grain and lifting water

Energy

While it is desirable that modern energy services be available at or near households, this is not typically affordable. It is more cost-effective to invest first in infrastructure that serves the community and later provide access at the household or individual level.

There are a number of interventions and guidelines to guide progress toward these targets. As an important first step, overall energy requirements should be calculated for clinics, schools, offices, and community centers. Institutions should be connected to the existing grid if possible and cost effective. But other solutions -- including off-grid energy services such as solar power -- must be considered if costs of connecting to the grid are too high or if services are needed sooner than this connection will permit. When planning an off-grid system, such as solar power, it is important to have a thorough understanding of the energy needs of key appliances or systems, such as vaccine cold chain requirements or computers for schools and community institutions. Other off-grid systems include small scale hydro- or wind-power, both of which require thorough planning and coordination with governments.

There are many ways that poor, rural populations who rely on biomass as fuel for cooking can benefit from improvements in both biomass availability and stove technology. Novel household stove designs can offer increased efficiency in daily cooking. Greater efficiency, in turn, reduces the burden of collecting fuel wood or other biomass and may lower the levels of indoor air pollution. In addition to choosing stove models shown to be efficient and desired by communities, it is im-

portant to educate communities about the benefits of improved stoves and management practices. Finally, as communities make the transition from traditional energy services, there will be a need for mechanical power for grinding grain and lifting water. Mills, which may be operated by community groups or private sector providers as local conditions permit, should be within two kilometers of 90 percent of households.

Transport

Key targets in this area include road improvements to increase access to services, free ambulance services for transport to medical facilities in case of emergencies, and reasonably priced transport for carrying bulk goods to and from markets. For road improvement, it is important to engage both government institutions and communities in planning, constructing, and maintaining roads in order to build capacity and institutions that can maintain the infrastructure. In addition, while spot road improvement should be undertaken in the immediate term, continued road improvement and maintenance must be undertaken in the medium- and long-term to ensure sustainability.

Information and Communication Technology (ICT)

The main objective is to provide institutional access to ICT while developing affordable, sustainable telephone, email, and Internet services at the community level. This has many benefits, such as allowing better management of health delivery systems and improving efficiency in agriculture by providing timely information on markets, prices, and weather for farmers. In addition to the key interventions listed here, it will be important to facilitate linkages between other sectors and the ICT sector to develop some of these crucial interventions such as communications for health delivery systems, emergency transport, accurate weather and price information, and computers for schools.

Looking Ahead

Many of the interventions discussed here are those which must be taken immediately to assure progress toward the MDGs. However, once these are undertaken and progress is made toward their achievement, there are many other important required steps to ensure that this progress is sustainable. This includes building community capacity to use and maintain energy, transport, and ICT services. In addition, support for new small businesses and vocational training must also be provided with the intention that small businesses, private sector individuals or groups, or other community groups will increasingly provide energy, ICT, and transport activities.

Water and Sanitation in the MV Model

Water supply is essential to achieving many of the MDGs. Inadequate access to safe water supply and improved sanitation affects households on health and economic levels. Women and children bear the burden of transporting water from access points to homesteads, taking away time from education, child care, and other productive activities. Improving access to water and sanitation by developing appropriate facilities will reduce burdens on women and children, and lead to a reduction in water-related disease and healthcare costs.

Adequate water supply is crucial for maintaining and increasing agricultural production and ecosystems goods and services, such as recharge of groundwater, water for wetlands, and biodiversity conservation. The interrelationship between water and the environment cannot be overstated. Denuded hillsides and compacted soils result in runoff of waters that would normally infiltrate the soil and restore ground water.

Development of safe water supply and sanitation facilities is also important for protecting ecosystems and environmental services. Some water interventions, if not properly implemented, especially in the agriculture sector, can have negative impacts such as increasing pollution of surface water sources with excess nutrients from fertilizers, depleting groundwater due to over-pumping, and exacerbating social conflicts over scarce water resources. Therefore an integrated and holistic approach to water is a prerequisite to mitigate these possible effects.

Water and sanitation interventions in the MV recognize the variation in climate zones, landform types, hydrological regimes, soil types, mineralogy and texture, hydro-geology, land uses, and socio-cultural and economic conditions. These factors affect the options and costs of addressing a community's water supply and goals for health and sanitation, agriculture, and ecosystems.

Localizing the appropriate holistic water plans that address competing needs for water for health, agriculture, and ecosystem services begins with an integrated, participatory assessment of current and future demands of water for all uses. In addition to community members, stakeholders, including local government agencies, technical experts, such as hydrogeologists, and other development partners are essential partners for planning and implementation.

Water and Sanitation for Health

Increasing the quantity and quality of water supply is integral for preventing water-related diseases. Interventions are aimed at increasing accessibility of safe water sources, improving quality of water supply and improving sanitation through improved latrines and toilets. The focus is on increased sanitation and water quality at households and institutions, including gender-sensitive sanitation facilities, at schools, and community sanitation systems. Training programs and information on sanitation and hygiene education are essential components to any of the interventions.

Key interventions for improving access to and quality of water include the following:

- Increase number of and continuous access to safe water sources and systems for household uses, including stream/rivers diversion, boreholes, improved hand-dug shallow wells, protected springs, and rainwater harvesting facilities.
- Provide a safe and reliable drinking water supply at clinics, schools, and public places.

Water and Sanitation Targets

- Access to 20 liters of water per day, per person, at a distance of less than 1.0 km.
- Access to sanitation facilities with a maximum usage of 20 people per facility, within a distance of 50 meters from the household.

- Design and implement water treatment programs at household and community levels.
- Establish regular water quality monitoring by local experts involving community representatives.
- Constructing water storage facilities at community and/or household levels, including facilities for disadvantaged and vulnerable people.
- Assess and find appropriate, sustainable energy solutions (e.g. solar and wind) to meet the community's needs for supplying water.

Water for Agriculture

Improved agriculture water management is critical for the initial steps out of hunger and the success of the African Green Revolution . The focus is mainly on soil and water management to increase water capture and storage (green water) for rain-fed production and improved efficiency of smallholder irrigation systems (blue water). Interventions in green water management are essential since most MV agricultural practices are rainfed.

A focus on increased water supply for efficient irrigation systems is a must to provide more reliable water supply in drought prone areas and to permit crop production during the off-season. Irrigation systems, even small scale, all require investments, so careful assessments must be made and interventions should exploit crops that generate income for the farming communities. Some of the feasible agricultural water management interventions include rainwater harvesting and management systems (both in-situ soil moisture conservation and runoff storage for supplemental irrigation), smallholder community irrigation schemes for high-value crops, and household micro-irrigation systems (e.g. low-head low-cost drip irrigation kits) for vegetable production.

Water for the Environment

The MV interventions are targeted to rehabilitate degraded soils and landscapes through plot, farm, and landscape level activities. Any water resources intervention should be based on an analysis of upstream and downstream impacts, both on different and competing water users and environmental needs. Most small-scale or localized water interventions, such as spring development, shallow wells, boreholes, and rainwater harvesting, have minimal negative impacts on other water uses and users in a river basin. Moreover, small-scale irrigation intervention, if well implemented, will have a number of benefits for the environment, such as controlling erosion and soil salinity. Any anticipated negative environmental impact should be thoroughly investigated, and mitigation measures incorporated in implementation plans.

Business Development in the MV Model

The MV model intends to demonstrate a new paradigm for integrated rural development. In this regard, a key issue is income growth and sustainability. The current practice of subsistence, smallholder farming, which traditionally focuses on staple food production, will not be adequate to foster this growth. The only solution lies in starting new business interventions that have higher profit margins and do not substitute food security for income security. The pipeline for such projects is rich and the relatively nascent markets offer great rewards for investors who have the patience to allow the projects to reach fruition and are willing to bear the risk. Through training and local capacity building, the MV model intends to support the creation of businesses so they become long-term community assets and provide the driving force to help communities escape the poverty trap.

The MV model intends to support the creation of businesses so they become long-term community assets and provide the driving force to help communities escape the poverty trap.

The following table shows the potential income from growing maize with and without good seed and fertilizer. Even with improved yields, decent market prices, and good rainfall, a single crop will not pull people out of the poverty trap. It is clear that multiple crops are required to fully utilize the very small parcels of land available to smallholder farmers. Further, a diversification of income streams away from agriculture alone will help reduce the risk of catastrophic failure.

Income from growing maize with and without quality inputs

	Using good seed/ fertilizer	Using no quality inputs
<i>Yield with good rain</i>	4-5 tons/hectare	1-1.5 tons/hectare
Cost of seeds and fertilizer	\$80	\$0
Revenue from ½ hectare using today's price of \$250/ton	\$500-\$625	\$125-\$186
Net profit on a ½ hectare plot	\$420-\$545	\$125-\$185
<i>Food consumed by the household (1.25 tons)</i>	\$310	\$125 - \$185
Net income at the household level	\$110	\$0

The business development strategy must encompass the entire value chain of on-farm and off-farm activities, from the production to the commercialization of agricultural and non-agricultural products if it is to realize the full value of the commodity. These include the delivery of agricultural and non-agricultural inputs to the farming and off-farming sector, post-harvest handling, processing, transportation, and marketing and distribution of products and services to the consumers.

To decide which businesses will thrive best in the areas served by the MVs, it is necessary to gain an understanding of the unique challenges and opportunities offered by the soil and climatic conditions in each location and match the potential produce with the existing or anticipated market demand. Narrowing the focus to no more than two or three opportunities allows for aggregation and scale. Some of the non-agriculture businesses to be considered from a diversification standpoint include dairy, livestock, poultry, honey. In the process of supporting these, many secondary initiatives such as veterinary services, breeding services, and feed production services will also have to be launched.

The identification of which businesses to develop and support requires a systematic approach. The following are some of the key criteria that should be considered.

- *Scale:* It is absolutely critical that the focus of the activities be narrow enough to allow for scale. Tied into this would be issues relating to climatic variations, quality of infrastructure, availability of technical expertise, and the ability to maintain complex supply chains.
- *Market Analysis:* Matching the production capabilities with the market potential is one of the most critical factors in deciding whether to launch a business. The demand may be local or export oriented. Ideally, the first choice should be to channel the production into an existing buyers' network and then consider a private label only when sufficient experience has been gained.
- *Financial Viability:* With production costs, markets, and pricing, well determined, a detailed business plan and a financial model can be developed. The returns must be measured in both financial and social terms, ensuring that the project has a sufficiently wide footprint to benefit more than a select minority of the local population.
- *Identifying local partners:* Understanding the local dynamics of what drives a business is absolutely critical and can be difficult. This can be greatly ameliorated by partnering with a local entrepreneur. It also gives validity to the project and greatly increases the chance of finding an investor.

Viable business enterprises can be funded through a debt or an equity instrument. In structuring the funding, it is important to ensure that there is an equitable sharing of the profits. One suggestion is to have the village cooperative that grows or supplies the raw commodity have a stake in the business. This will not only give the cooperatives a sense of ownership but also help in stabilizing the supply chains.

Because relatively immature and inefficient markets are frequently faced with unexpected logistical, regulatory, and marketing challenges, they are best served by "patient" capital that understands these risks and is willing to take them on because returns are measured not simply in financial terms but also in social terms.