

# BUILDING AN EQUITABLE FUTURE BY STRENGTHENING RURAL ECONOMIES

ANNUAL REPORT 2013

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The MDG Centre  
East and Southern Africa  
EARTH INSTITUTE | COLUMBIA UNIVERSITY

COLUMBIA GLOBAL CENTERS | AFRICA  
NAIROBI

The Millennium Development Goals (MDGs) were developed out of the eight chapters of the United Nations Millennium Declaration, signed in September 2000.

The eight goals and 21 targets are:



**Eradicate extreme poverty and hunger**

Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day.  
Achieve full and productive employment and decent work for all, including women and young people.  
Halve, between 1990 and 2015, the proportion of people who suffer from hunger.



**Achieve universal primary education**

Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.



**Promote gender equality and empower women**

Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.



**Reduce child mortality**

Reduce by two thirds, between 1990 and 2015, the under-five mortality rate.



**Improve maternal health**

Reduce by three-quarters the maternal mortality ratio.  
Achieve universal access to reproductive health.



**Combat HIV/AIDS, malaria and other diseases**

Have halted by 2015, and begun to reverse, the spread of HIV/AIDS.  
Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it.  
Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.



**Ensure environmental sustainability**

Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.  
Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss.  
Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation.  
Have achieved, by 2010, a significant improvement in the lives of at least 100 million slum dwellers.



**Develop a global partnership for development**

Develop further an open, rule-based, predictable, non-discriminatory trading and financial system.  
Address the special needs of least developed countries.  
Address the special needs of landlocked and small island developing States.  
Deal comprehensively with the debt problems of developing countries.  
In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries. In cooperation with the private sector, make available benefits of new technologies, especially information and communications.

# The MDG Centre East and Southern Africa

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# FOREWORD

By Dr Belay Begashaw, Director

**A milestone year:  
Strengthening our capacity  
to boost rural prosperity**

This 2013 annual report is unique, in that it documents The MDG Centre's achievements in its first year of transition to the Columbia Global Centers network. Columbia Global Centers | Africa (CGCA) now houses the Earth Institute's MDG Centre and the Millennium Villages Project regional office in Nairobi since its unofficial launch in January 2012, ushering in an exciting time of new collaborations and knowledge sharing.

This move gives The MDG Centre access to the extensive research partnerships, scientific networks and knowledge and resources gathered together by the Global Centers network. It connects our activities to Columbia University's New York hub, as well as to Global Centers around the world, in Jordan, Istanbul, Beijing, Mumbai, Paris, Rio and Santiago. The Millennium Development Goals are the world's goals, and efforts to achieve them can only be enhanced through international cooperation facilitated by the Global Centers network. In turn, the Global Centers can draw on The MDG Centre's wealth of experience implementing cutting-edge development solutions in Africa and mobilizing governments, the private sector and NGOs to meet the Goals. Columbia Global Centers | Africa aims to increase Africa's influence on global issues' strategic direction, including climate change, global trade and sustainable development. The network will provide African and Africa-based institutions with unbiased, scientific advice and be a channel for the latest multidisciplinary research, science and technology.

On top of this, CGCA provides all Columbia institutions and programs, including The MDG Centre, with a separate, legal identity. The signing of a Host Country Agreement with the Government of Kenya established CGCA as an international organization, bringing a number of privileges and immunities to enable the complex research, academic and policy activities to be carried out. A brand new CGCA office complex cements our identity further still. At this milestone moment, we also look back with thanks to our longstanding relationship with ICRAF, the World



*Sauri's Nyamninia Primary School set up a computer lab with earnings from farm produce.*

Agroforestry Centre, who hosted The MDG Centre for the last seven years. We warmly thank them for their support.

As we approach the three year mark before the deadline of the Goals, we remain committed to meeting each of them across all Millennium Villages. We continue to assess and improve our approach, incorporating lessons learnt with advances in research, science and technology to enable over 500,000 people in rural communities across Africa to lift themselves out of poverty.

Recent statistics show that Africa remains off-track to achieve some Goals, lagging behind on indicators including maternal mortality and child health. We are proud that progress has been made towards tackling even these most entrenched challenges in the Millennium Villages. We are also fully aware that more remains to be done, and feel strongly that the next three years will give us time to close any remaining gaps, to enable the Villages to achieve self-sufficiency by 2015.

Global development thinking is shifting to the post-2015 agenda, with a greater focus on sustainability and the green economy. In September, the UN launched the Sustainable Development Solutions Network at Columbia University, to support problem-solving in development issues at local, national and global levels.

As part of the effort to meet the MDGs in each of the Villages, our focus remains on ensuring that progress made is scalable, replaceable and sustainable. Preparations to hand over development gains to communities, governments and private sector partners were strengthened throughout this year. Communities are increasingly responsible for their water points and road maintenance. Schools, parents and pupils now manage school feeding programs and generate independent education investment. Both local and national governments are adopting Project activities, for example deploying more community health workers and teachers and taking greater responsibility for energy infra-

structure. The Project continues to catalyze public private partnerships, with corporate leaders such as Unilever and the Islamic Development Bank coming on board to support sanitation and drylands measures respectively.

Our business strategies are helping small-holder farmers launch viable agribusiness enterprises and generate lasting new ways to earn and reinvest money. This huge success is the culmination of many years of preparation, working with subsistence farmers to help them shift to bulk commodity marketing via the cooperative model. Increased incomes are already being invested back into social goods such as education and health, and serve as a path to future independent prosperity. Enterprise loans for fledgling businesses in the Villages, to the value \$20 million, funded as part of a wider agreement with George Soros' Open Society Foundations, will soon be disbursed.

On a national level, the example of our collaboration with the Government of Rwanda stands out. Following last year's agreement with the Ministry of Local Government, rapid progress has been made towards scaling up Project interventions and incorporating an MDG focus into Rwanda's national development planning, with the aim in the long term to expand the strategy nationwide. An appraisal for scale up in Uganda will take effect next year. At the intergovernmental level, relationships with regional and continental institutions such as the African Union continue to spread the MDG focus further still.

The Millennium Cities Initiative compliments our activities through its work with the urban poor and local governments of cities close to the Millennium Villages, enabling them to become viable investment destinations with prosperous citizens.

There has been huge progress in forging greater connections with the corporate sector. On the Drylands Initiative, our agreement with the Islamic Development Bank was finalized for three countries – Uganda, Djibouti and Somalia – and there will be further collaboration on the Bank's existing sustainable villages scheme. We have also begun work with extractive industries, most notably with Anglo-Gold Ashanti, on the new Millennium Village of Geita to be established in Tanzania.

Innovation and new technology are key to our success, providing leverage to reduce poverty. Increasingly, the Project's IT capacity has moved from New York to the regional level, and we have made several major breakthroughs in 2012 with a series of second generation poverty eradication programs using the latest science and technology. In particular, the Project is migrating in the health sector from ChildCount+, in itself a major innovation in community health reporting, to the new CommCare system. CommCare allows health data to be stored and sent

off-line using smart phones, thus advancing community health management.

Communities are thriving thanks to new national electricity grid connections, and where Villages are too remote, the SharedSolar system has been an alternative. It showed such dramatic improvements in Ruhiira, Uganda that it will be rolled out to other sites shortly. The simple pay-as-you-go scheme harnesses solar power for households and institutions, significantly cutting energy costs and boosting incomes by prolonging business hours. A similar scheme for drinking water is now being devised for the Villages, using the SharedSolar model with a low tariff and smart metering.

Our Connect To Learn program has continued to expand, improving education with internet connectivity in several new schools. School-to-School connections between Villages and pupils in the US have allowed children to share experiences, and 331 young women and 11 young men can now finish secondary school with help from our scholarships.

To keep stakeholders engaged, as well as to track progress and define objectives, we continuously improve our monitoring and evaluation system and make sure we use the strongest data possible. Alongside this, we employ the latest ICT tools to synthesize information and win policy makers' attention – especially important with competition for resources and the challenging international funding climate. An independent evaluation group to support the good work we have been doing in our monitoring and evaluation activities was established in New York in 2012.

Stakeholder visits are key to this process. This year we hosted partners at the new Center and in the Villages, including representatives of the Islamic Development Bank, KPMG, the Korea International Cooperation Agency, Millennium Promise Japan and the Tommy Hilfiger Foundation, as well as Columbia University schools and program staff. These visits are a testament to the success of the Project, as is the growing number of new donors and partners coming on board every year.

Meeting all the MDGs at all the Villages remains the core of our work, and the measure against which our success will be judged. Are farmers generating enough crops to feed their families and buy basic social services? Are mothers and children being looked after in conveniently located and well-staffed health centers? Do people have easy access to safe, clean water? We are pleased to report that the answer to these and other crucial questions is, increasingly, yes. As you will read, our unique system of integrated, cross-sector interventions in health, education, environment and infrastructure, with business and gender underpinning all activities, continues to raise communities out of poverty and onto the path of self-sufficient progress and security.



# Columbia University accelerates engagement with Africa

COLUMBIA GLOBAL CENTERS | AFRICA  
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The new Columbia Global Centers | Africa (CGCA) first opened its doors in January and represents the pinnacle so far of Columbia University's influential engagement with Africa, which spans several years. The CGCA launch begins an exciting era in objective, unbiased scholarship in Africa, and for Africa, and it aims to become the continent's preeminent research and development institute. It is one of seven Centers around the world, with the others in Rio de Janeiro, Santiago, Beijing, Istanbul, Mumbai, Amman and Paris. Now Kenya and Africa can link directly to a vast body of knowledge, scholarship and enquiry, and can in turn influence debates on the global stage. Reflecting the spirit of close collaboration between The MDG Centre and the new institution, Dr. Belay Begashaw assumes directorship of both organizations.

## Columbia Global Centers | Africa aims to:

- enable high-level knowledge and learning in the region
- create a hub for global curriculum and scholarly outreach in Africa
- link the academic pursuits of the Global Centers to Columbia University's campuses
- advance Columbia's vision to equip graduates with the global perspective necessary to meet today's greatest challenges

Before the new CGCA officially begins operations on January 14, 2012, we have already been implementing activities to achieve these aims. As well as housing The MDG Centre, CGCA hosts the IT Lab of Columbia's School of Engineering which is developing new rapid soil mapping technology and our innovative SharedSolar and ChildCount+ projects in the Millennium Villages. Electronic applications in the field of energy and agriculture will also be developed. The CGCA recently appraised a project to the value of \$20 million with the Bill and Melinda Gates Foundation to implement the second phase of the Africa Soil Information Service, between 2013 and 2017.



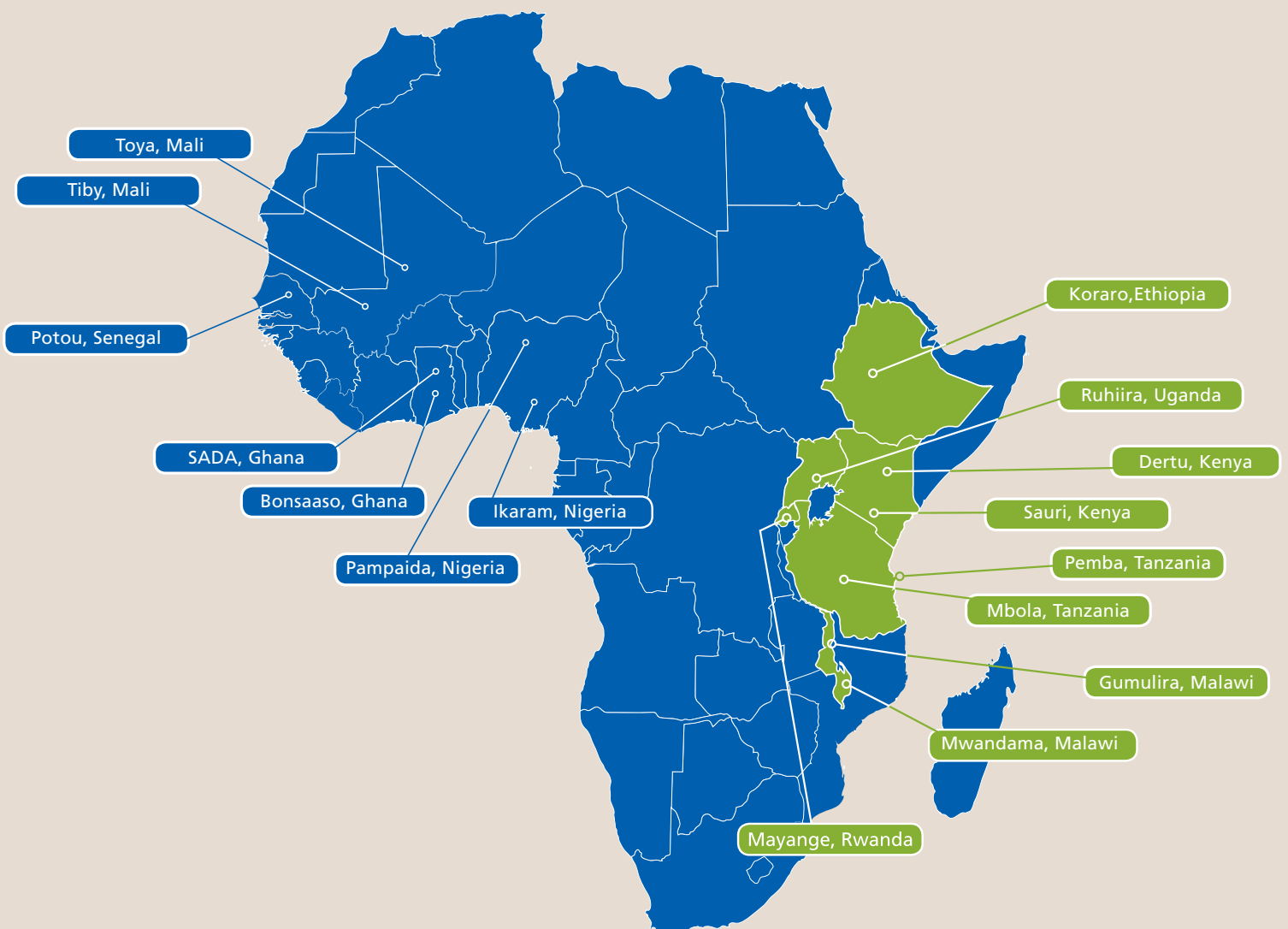
*The pre-launch of the CGCA, January 2012.*

To catalyze new research and forge strong links between international academic institutions and both the CGCA and the Millennium Villages, we will increase our focus on global knowledge sharing. CGCA will continue to facilitate three-month placements in the Villages for graduate students of Columbia's School of International and Public Affairs. Looking to the future, CGCA will support Columbia's five year 16-credit undergraduate program, in collaboration with Princeton University, that has been designed and approved to begin in January 2013. A number of Columbia departments, including the Graduate School of Architecture, Planning and Preservation, the Department of Ecology, Evolution and Environmental Biology and the Teachers College, are keen to work with CGCA. We will also boost engagement with the Columbia University alumni network in Kenya with talks and social events. Discussions with Columbia's Mailman School of Public Health regarding the human nutrition program continue, and a proposed collaboration with the Borlaug Institute for International Agriculture, at Texas A&M University, would gather five universities all working on developing agriculture and education programs in six African countries.

CGCA will build on the experiences of the Earth Institute, the School of Public Health, the School of Social Work and other Columbia schools and programs that have existing research and development practitioners or technical projects in Africa. We will also work closely with policy makers and governments, providing them with objective, science-based advice free of bias or self-interest, and we aim to do the same for regional and continental bodies including the African Union, the Common Market for East and Southern Africa (Comesa), the Economic Community of West African States (Ecowas), the Southern Africa Development Community (SADC), and the Intergovernmental Authority on Development (Igad). CGCA will create a platform for high-level policy dialogue, and a forum that celebrates free speech, good governance and the protection of human rights.

CGCA has already firmly established its physical presence in Nairobi with a purpose built new office complex in the city's vibrant Westlands area. The facility is equipped with a library, space for visiting researchers and students, comprehensive security and high-speed internet and video conferencing facilities. The team currently numbers 35, and new staff will be hired to take activities further in 2013. Of note is the recent appointment of Bruce Scott as CGCA's Deputy Director. This will be an exciting year for CGCA as we expand our team and activities and officially launch on January 14, 2013. Columbia Global Centers | Africa is set to become an essential and dynamic hub in Columbia's Global Centers network.

## Map of the Millennium Villages, 2012





# HEALTH

Adding technological innovations to help lock-in earlier gains

The main drive of our work in the Health sector across the Millennium Villages has been to build comprehensive systems that integrate with other activities to make concrete gains in communities' health, and to sustain that improvement. During 2012, alongside maintaining our earlier successes, we are happy to have significantly increased the ratio of trained community health workers to households. Their efforts have helped to continue impressive trends fighting child mortality, which has stabilized at, or is close to, fewer than 40 deaths per 1,000 live births in the majority of the Villages. Malaria prevalence remains suppressed, fewer women in antenatal care are testing positive for HIV, and there is wider availability of tuberculosis diagnosis and treatment.

Recent statistics show that Africa as a whole is off-track to achieve Millennium Development Goals 4 and 5, lagging behind on maternal mortality and child health indicators. However, the Millennium Villages Project continues to show progress on even these most challenging goals. This has been achieved through consistent work over the last seven years to cement innovative strategies into health policy in the Villages. We have ensured health workers undergo rolling training in proven techniques to save lives, including the Helping Babies Breathe method, integrated management of childhood illness, and best practice in advising on family planning. We have extended health workers' reach to remote households, improved supply chains to ensure consistent stocks of medicines and equipment, and built or renovated out-patient departments and maternity units, often connecting them to electricity and clean water. More clinics provide 24-hour services thanks to new on-site staff housing. Electronic health data management systems



*Community Health Workers in Ruhira, Uganda, with stocked backpacks provided by FEED.*

are improving efficiencies. Across almost all the Villages, we have passed our targets for the number of women who give birth at health facilities rather than at home.

Our Community Health Worker Program is central to the Project's success, and it was expanded during 2012 in many Villages. CHWs are a vital link between the improved health services available, and the families in the communities who increasingly rely on them. The CHWs now visit households three times more frequently than previously – on average once a month – and homes with pregnant women, newborns and young children are prioritized. We have streamlined management processes, including improving both the supervision and appraisal of CHWs by a new cadre of Senior Community Health Workers, established this year. The new assessments reward good performers, including with study scholarships on offer for the best.

In Rwanda, for example, the Project is building on the Government's innovative Performance-Based Financing program for public health, which gives health workers incentives to provide services efficiently. In the Mayange Millennium Village, CHWs are given payments between \$0.30 and \$0.60 for each mother who visits antenatal care, who gives birth at a clinic and whose children are immunized. The money that the CHWs earn is paid into a central fund for pooled health investments. The performance-based approach is paying dividends in terms of community health, too: 97% of 12-month-old infants are now immunized against measles, 96% of births are supervised by skilled attendants, and close to 50% of women aged 15 to 49 now use modern contraception.

## HEALTH continued

“With the new E-Compliance system, we now electronically supervise tuberculosis patients taking their medication every day during the intensive phase and once a week during the continuation phase. We make drop-in visits to see how the patient is doing, and it becomes very hard for a patient to default.

*E-Compliance makes our work much easier because it reduces on the amount of paper work; once the finger print is read the data goes directly into the system.*

*Asiimwe John, Community Health Worker, Ruhiiira.*

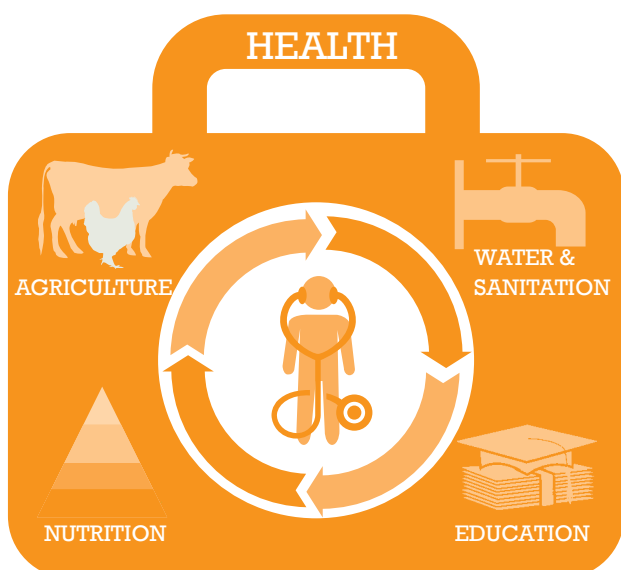
**Eye care day in Ruhiiira, Uganda, has improved the sight of hundreds of villagers.**

In Dertu, TCF - Australia funds have been used to employ four nurses and four Community Health Workers, who conduct monthly outreach to bring health care to nomadic pastoralists for the first time.

We continue to monitor children as they grow to guard against malnutrition that causes stunting, which has a series of knock-on effects to a child's health and development as they mature. To do this, the Health sector integrates its work with colleagues in Nutrition, Agriculture and Water and Sanitation. Together, we ensure that families can grow nutritious foods – and that they cook them for their children rather than selling them. Where needed, food supplements are provided, and families are taught that poor sanitation and hygiene causes illnesses that lead to malnutrition. All of the Villages combine these efforts under an international program called Scale-Up Nutrition, which focuses on the 1,000 Special Days, based on studies that show how poor nutrition in the period from pregnancy to a child's second birthday leads to irreversible impairment of physical and cognitive development.

In Koraro, Ethiopia, for example, pregnant women attending Koraro Health Centre receive fortified porridge and high-energy food supplies including mixed flour, pepper and vegetable oil, to improve their maternal nutrition and prevent intrauterine growth restriction. In Mayange and Sauri, Kenya, with support from UNICEF and Sight and Life, children aged between six months and 23 months receive multiple micronutrient powders to fortify home-made foods. About 400 children have already been reached in Sauri, and other Villages will soon introduce these practices. We also plan to launch systematic monitoring of children's growth in their first two years, and those at risk of stunting will be given appropriate supplements, and their parents will be counseled how to avoid the condition.

*Community Health Workers in Sauri launched a new program to ensure that HIV+ mothers do not pass the virus to their unborn children. The HIV-Exposed Infant scheme brings together CHWs and “model mothers” to offer support to HIV+ women, especially in encouraging them to attend ante-natal care clinics and give birth at a health centre. After their babies are born, the mothers continue to be visited by the health workers and the “model mothers” up to when their children are 18 months old. At that point, a “graduation ceremony” is held to celebrate the mothers' involvement in the program. In the first six months of 2012, 103 HIV-Exposed Infants graduated in Sauri, and we plan to expand the scheme to other Villages during 2013.*



This year we stepped up efforts to screen, treat and monitor patients for tuberculosis in the Villages. In Ruhiiira, Uganda, the Project worked with the Ministry of Health to accredit two new health centers to diagnose and treat TB.



This means that patients who used to have to walk as far as 12 miles every day to be given their medicine can now find those services closer to home, which vastly improves the likelihood that they will stick to their prescriptions during the first intensive phase of treatment. In Mwandama, Malawi, volunteers now collect samples from across the Village without people needing to go to the health centre to be tested for TB.

#### EMPOWERING MEN, WOMEN AND YOUNG PEOPLE FOR BETTER HEALTH

Teaching women ways to plan whether, and when, to have children increases the likelihood their babies will survive and reduces the numbers of teenage pregnancies, which together contributes to accelerated development in communities. Family planning services across the Villages this year continued to flourish. In Mayange, three times more women now use modern contraception, and in Koraro and Ruhira, that number has doubled between 2007 and 2011. These gains have been achieved by counseling families about planning when to have children, making sure there are enough supplies of condoms and other contraceptives, and integrating discussions about family planning into other health services. CHWs and clinical staff use outreach events in the Villages to encourage families to consider the benefits of choosing carefully when to plan a pregnancy.

Key to our success this year has been the Project's increased attention to involving husbands and prospective fathers in family planning discussions with their partners. Traditionally, young women and new mothers are left out of decisions about antenatal and postnatal care, which fall instead to men and mothers-in-law. Instead, we have introduced incentives for couples to attend clinics together, and provided services and spaces specific to men in health facilities. Male role-models in the community helped to encourage men to take part in their wives' or partners' pregnancy, and to take greater responsibility in their babies'



*A father takes his new baby for a check up at a health facility in Pemba, Tanzania. Increasing male involvement in health has been a prime objective of the Project since inception.*

first months. This has not been easy, because involving men in these aspects of family life has not traditionally been a part of cultural norms, practices or beliefs.

The Project recognizes the urgent need to meet adolescent sexual and reproductive health needs, and to expand opportunities for HIV counseling and testing. This has led to the initiation of a variety of programs targeting young people. In Ruhira, for example, this year we expanded a scheme to help young women to be increasingly self-reliant and confident, and to give them opportunities previously seen as only for men. The Kabayunda Girls Empowerment Program began in 2011, designed to reduce the numbers of





*An eye specialist treats a patient in Ruhiira in June 2012.*

young women starting sexual relationships with older men in return for wealth or prestige. From 30 young women in early 2011, the program has now expanded to more than 250 women and girls of all ages, and has also been extended to cover all of Ruhiira's 21 primary schools. Young women and girls meet twice a week, and the scheme also encourages parents and, separately, young men, to get together to discuss gender issues.

### ACCELERATING HEALTH INNOVATIONS WITH MODERN ICT

There have been several exciting developments combining existing best practice in the Health sector with new information and communications technology tools this year. The introduction of mobile phones in the early days of the Project, thanks to Sony Ericsson, so that health workers were easier to contact, is still one of the interventions that has had the most impact on community health. But fresh technological advances are boosting our efforts even further. The Project's already very useful ChildCount+ program has this year been superseded by CommCare, which unlike its predecessor does not need constant mobile telephone network to function properly. ChildCount+ allowed Community Health Workers to keep track of health visits

and data collected on even the most basic mobile handsets that were available in the early days of the Project. But in areas of poor mobile network coverage, CHWs would be forced to fall back on manual reporting, with none of the benefits of the real-time support that the Child Count+ system was designed to bring.

The new CommCare system brings the same benefits of CHWs being able to find answers to their questions on a phone-based system, and to store data, but it also works even when the handset is out of coverage. Information needed by CHWs is always available, and data that they enter is eventually uploaded to the database once the phone again connects to the network.

CommCare in East and Southern Africa was first piloted in Sauri, Ruhiira and Koraro, in collaboration with Dimagi. There are 120 CHWs assigned to 200 households each in Sauri who are now all using the new system, which they say has cut paperwork and reduced the time taken during home visits, and at the same time significantly boosted the efficiencies of their work. Its modules encourage CHWs to touch on topics including pregnancy, child and household health, family planning, hand-washing for better hygiene and the use of bednets, when they visit households. The topics are accompanied by an audio recording of the counseling messages in local dialects, which are played to families during the visits. Children enjoy pictures displayed on the phone screen. With the price of mobile data bundles and Android phones falling, CommCare is a scalable solution that will have a great impact on how CHWs perform their day to day activities.

A further e-Health tool tested in Ruhiira this year – and planned to be extended to other Villages – was a system to help health workers monitoring people with tuberculosis to ensure they stick to their medicines during the intensive first phase of treatment. Health workers make their rounds to TB patients carrying a laptop with a fingerprint scanner. After each patient is seen to take their medicine, they touch their fingerprint to the biometric reader, and it logs that confirmation in a centralized database. This has significantly reduced the number of defaulters and missed doses. Since it started in May, the e-Compliance system has been a great success, with more than 24 patients enrolled.

The World Health Organization is using our experience in mobile technology use in health, to improve the registration of vital events via SMS in Naivasha, Kenya, in collaboration with the Ministry of Health and Civil Registration Department.

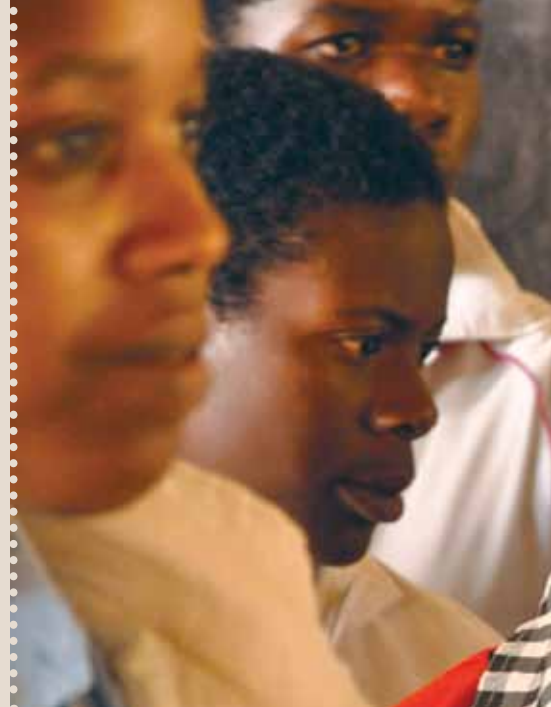


*Mukamugenzi Betty with her healthy baby in Mayange, Rwanda.*



# EDUCATION

## Fast-tracking enrollment for universal primary education



Great progress has been made since the start of the Millennium Villages Project in increasing the number of children enrolled in school, helping us to work towards meeting Millennium Development Goal 2 to achieve universal primary education. As we move closer to 2015, we are even more focused on ways to make sure every girl and boy is in class, ideally at the correct age and that they stay on to complete secondary school. Children who start school with others their age are much less likely to drop out. To improve this age-appropriate enrollment, we have introduced and trained Community Education Workers this year, helping them to support school attendance campaigns across all the Villages.

These Community Education Workers (CEWs) guide parents on their role in making sure their children are in school, and monitor which pupils are most at risk of dropping out, or of failing to enroll in the first place. They mentor those boys and girls who miss classes, and work with civil society organizations and religious leaders to spread messages about school attendance. In Ruhiira, Uganda, school management committees, the local council and church leaders drew up a plan to address school retention rates, which included regular encouragement from pastors during Sunday services and from Ruhiira's community radio station. Council members visited homes to register children who were not in school, and to counsel their parents on the importance of education.

Pupils who had dropped out of class joined coaching and mentoring clinics in Village Learning Centers established by CEWs in Mwandama, Malawi. These and other interventions have increased primary school enrollment in the Village by close to 10% during 2012, to more than 14,500 children in Mwandama's 14 primary schools – more than double the number at the start of the Project in 2005, and more girls than boys are enrolled. In Mbola, Tanzania,

10 pilot CEWs who started work in May 2012 helped to identify that a major reason that children there were not in class was the distance to the school, which was as far as 10 miles from some families' homes. Now, the Project is building classrooms and a nursery facility closer to where these children live.

Early Childhood Development activities have also been stepped up, to ensure younger children are ready to start school at the right age. In Koraro, Ethiopia, the Project encourages parents to put their four and five-year-olds in child-to-child schemes, where they spend time with other children of the same age in a centrally-located homestead, socializing and preparing to enter school lessons. We encourage parents to enroll their six-year-olds in "Class Zero", which is immediate pre-school learning, and finally we try to ensure that all seven-year-olds are in primary school by the start of that school year. Government policy prioritizes enrolling children at age seven. If they miss the start of that year, when they are older they often find that there are very few spaces left for them to register.

"We passed messages through churches, community meetings and during holiday festivals on the importance of enrolling children in school at the appropriate age, enrolling out-of-school children, reducing drop-outs and addressing issues of gender based violence," says Tadele Atakelti, education coordinator in Koraro. "They have worked with teachers and the local administration to register children, and this has produced tremendously successful results. The enrollment rate of Koraro village is now above 90%."

As well as having five new CEWs in 2012, Mayange in Rwanda is seeing impressive growth in its Early Childhood Development scheme, which now reaches 625 boys and girls and has built several new classrooms since 2007 with construction materials bought or donated by the community.



**Winness Phiri, one of 50 Connect To Learn scholarship recipients in Mwandama, supported by Raising Malawi.**



“ They are learning so much here at the Clubs and then imparting those new skills at home. It gives us a good relationship with the community and the parents because they feel that we are bringing up a child with an all-round education, not just a child that is academic-oriented.

*Millicent Obare, headteacher at Nyamninia Primary in Sauri.*

The Project's Connect To Learn program in Mbola helped 26 girls and four boys this year. Mbola is trying to address the challenge of teenage pregnancies among secondary school girls by introducing life-skills training in all primary and secondary schools. For many pupils, especially girls, the cost of school fees at secondary level becomes prohibitive. Overall during 2012, the Connect To Learn initiative gave out 342 scholarships across East Africa, and 50 more are due to be disbursed in Ruhiira early in 2013.

In Dertu, 13 girls received Connect To Learn scholarships, helping them overcome feelings of remoteness and isolation through their improved understanding of information and communication technology and linking them to new friends virtually. An additional 45 students in neighboring secondary schools also won new scholarships. At Dertu's primary school, two new dormitories helped boost the enrollment of children of nomadic families, who used to have to take their sons and daughters out of class when their animals needed to move to new pasture. With the new boarding facilities, this can be avoided.

In Koraro in particular, sending children to secondary school used to be only a dream for many families. Now, with Project interventions in upgrading existing schools and building new ones, there has been a huge improvement. In 2012, 1,065 boys and 1,489 girls from Koraro's schools sat the regional primary school leaving examination, and 93% of them passed and won places in secondary schools.

#### EDUCATION BEYOND JUST THE ACADEMIC

As well as their lessons in school, children in Sauri, Kenya, are increasingly volunteering for extra-curricular 4K Clubs where they learn about modern farming techniques and cash-crop innovations. The food they grow is given to

school feeding programs, and surplus is sold at market to generate income that is reinvested in the school. Six schools in Sauri now have greenhouses producing mainly tomatoes.

At Ulumbi, a bumper harvest of four tonnes of tomatoes is expected from the greenhouse this season, which could earn up to \$2,500 at the local market. In addition to the greenhouses, five schools were given 500 broiler chickens and six schools have five dairy goats each. The income from agricultural activities has enabled some schools to earn enough to invest back into education and facilities. At Nyamninia Primary the poorest students were bought uniforms and books, and, with support from the Project, a computer lab with 20 computers and a boarding facility for orphans were constructed. The results speak for themselves: school attendance in Nyamninia Primary has almost doubled from 425 to 875 pupils, and their performance is improving dramatically.

As we move towards 2015, we aim to have all children enrolled in school at the right age. We will expand the CEW approach to all Villages to enable vigorous enrollment campaigns with house-to house visits and by encouraging parents to send children to pre-school. More scholarships are planned to support secondary education entrants, especially girls. Finally, we will continue developing phase-out plans in preparation for handing over education facilities to both governments and communities. The process will include working with education ministries to absorb infrastructure and costs such as Community Education Workers. At the same time ensuring that schools continue to expand money-earning activities to keep income flowing to schemes including school meals programs and the provision of sanitary towels to keep girls in school, among others.

# BUSINESS DEVELOPMENT

Boosting enterprise skills for sustained independence



*Paul Mugisha, one of Ruhiira's most successful farmers and his wife Maclean.*

Agriculture is the mainstay of economic activity in the Millennium Villages but with farmers now becoming entrepreneurs and shifting from subsistence to commercial production, our work in the Business Development sector increasingly focuses on introducing and strengthening Cooperatives. Farmers now enjoy disposable incomes that they are investing to help their families. This bodes well for their ability to continue their rise out of poverty independently beyond 2015.

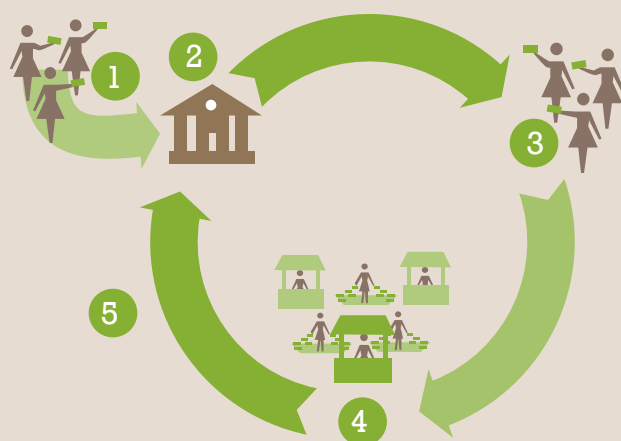
In 2012, we have focused on building the capacity of cooperatives, giving their members greater access to credit, adding value to produce and helping to link farmers to new markets. To diversify farmers' incomes, we encourage them to introduce high-value produce like tomatoes, live-stock and poultry, or to identify service sector opportunities if there is little remaining farmland available. Farmers and cooperative members have this year been mentored on how to earn more from their produce and trained on basic financial skills including bookkeeping and business planning.

Across the Villages new market opportunities have been developed. In Sauri, Kenya, crops grown in greenhouses boosted incomes by allowing year-round harvests. In Ruhiira, Uganda, bakers and dairy herders formed new cooperatives, as did beekeepers and poultry farmers in Mbola, Tanzania. Cooperatives for welders, carpenters, builders and tomato farmers started in Mayange, Rwanda, and some of their members took part in visits to see how more established entrepreneurs manage their businesses.

In Koraro, Ethiopia, a training and research center for silk production with silk worms was established and the first 42 farmers selected, trained and given the necessary feed plants and equipment to start these new businesses. This technology requires low initial investment and can be man-

aged easily on a small plot of land and has a reliable market. It will be scaled up in the coming years. Elsewhere in Koraro, a community eco-tourism cooperative was launched, and members of the new poultry farmers' cooperative earned more than \$4,000 after being trained on rearing chickens and benefitting from a new hatchery, incubator and generator provided by the Project.

Cooperatives and revolving funds are strategies for supporting community-based economic development. Here is an example of how revolving funds work in the Millennium Villages:



- 1 Each member pays about \$5 to \$10
- 2 That money goes into a revolving fund
- 3 Loans are made to members
- 4 The loans help them grow business and make home improvements
- 5 Loans are repaid and those funds can be lent to other members



## Mayange Craft Center

Land is scarce in Rwanda, and there is an increasing focus in the Millennium Village at Mayange on “off-farm” enterprises that still support agribusinesses. The Mayange Crafts Center, which will open in 2013, will provide space for more than 1,000 craftsmen and women working on basket and mat weaving, knitting, carpentry and welding.

“I am very happy as we are going to start operating from a well-organized centre instead of working from home and disturbing everybody with the welding machines. We will be able to improve our techniques and find large markets for our products. Another advantage will be to get materials at lower prices because the cooperative plans to buy stock and sell to all of us members.

Gerard Musabyimana, 40, a member of the Mayange Welders Cooperative.

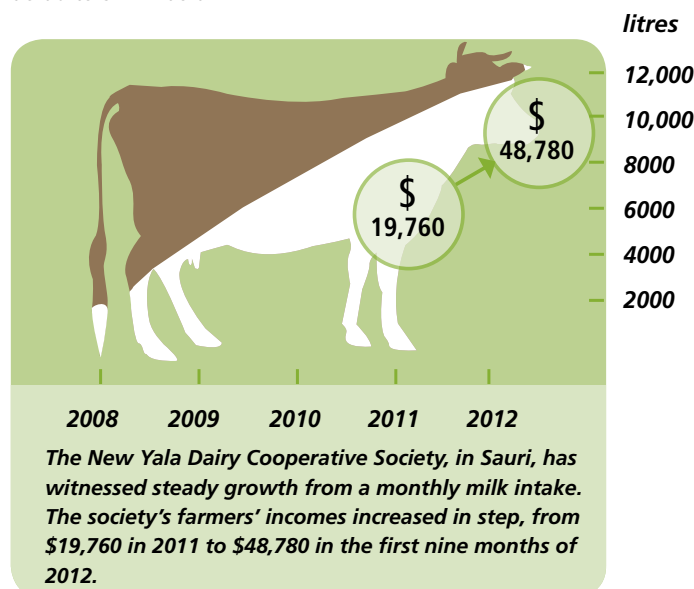


In Dertu, a storage facility for animal feeds was built, a slaughterhouse to process meat products is up and running and the Saturday animal market has increased business opportunities for Dertu's livestock owners. The Project is also supporting other commercial enterprises to diversify community incomes, including women's microenterprises, such as retail shops, food kiosks and boutiques.

It is vital for farmers wanting to commercialize their production to be able to find loans to invest in their businesses. To promote access to financing, most cooperative organizations are now provided with a revolving fund, and savings campaigns have been conducted to increase awareness of how to access credit. This is one of the best ways to reduce dependence on free inputs and instead borrow to invest in commercial agriculture. In Mwandama, Malawi, the Village Savings and Loan (VSL) scheme is a unique innovation and has seen the greatest improvement this year, freeing the community from the high interest rates charged by individual moneylenders. To date there are 15 groups with a total membership of 192 women and 75 men, who have saved \$7,000 and given out \$3,500 of loans to six groups.

More than 1,800 people in Ruhiira are members of savings and credit cooperatives (Saccos), which now have close to \$450,000 in cumulative savings. The Saccos have been given computers to increase efficiencies and smooth access to financial services for their members. In Mayange, the Project helped develop business plans for cooperatives, including one for the growing tourism sector in the Village. Two qualified managers were hired for two cooperatives, whose salaries will be paid for six months by the Project and thereafter by the Village community itself. Start-up capital was given to five new entrepreneurship groups in Mbola, including to one youth group manufacturing bricks. Each was also encouraged to join the Village's Millennium Sacco, to smooth their access to loans and other financial

products. Thanks to training for 20 women and 40 men on the Sacco's management board, there are currently no loan defaulters in Mbola.



The New Yala Dairy Cooperative Society in Sauri this year became the first eligible for new Investment Funds made available through the Open Society Foundations, disbursed via affordable loans from the Cooperative Bank of Kenya that are guaranteed by the Soros Economic Development Fund. The New Yala Dairy Cooperative Society has witnessed steady growth from a monthly milk intake of 2,000 liters in 2008 to over 11,000 liters in the month of October 2012. The number of dairy farmers joining the cooperative society and population of dairy cows is steadily growing. The society's farmers' income as a whole has increased in step, from \$19,760 in 2011 to \$48,780 in the first nine months of 2012 alone. The improved performance in dairy farming is a direct response to intensive training by the Project and development of a bankable business proposal that has received funding from the Soros Fund. The credit



***Members of a womens' Rotating Savings and Credit scheme in Mayange.***

scheme is helping farmers to buy better dairy breeds and improve the dairy society's infrastructure including cooling facilities and equipment to add value, for example by producing yoghurt and fermented milk. In November, 16 new heifers were delivered, worth \$17,000, that were bought by farmers under the credit scheme.

Truly to become agribusiness entrepreneurs, farmers need better links to lucrative markets. The New Yala Dairy Cooperative again illustrates the potential for this. In January, the Yala Market Service Center was opened, bringing all agriculture cooperatives into one value-addition and marketing support system. The Service Center has more than 4,000 members from eight cooperative societies involved in producing honey, cereals, dairy, poultry, horticulture and fisheries products. It allows them to market their goods centrally, to exhibit and advertize together, to cut out exploitative middlemen and to make it easier to share information and experiences. In 2012, more than 5,000 tonnes of produce worth close to \$25,000 has been sold through the Service Center.

Contracts linking Village farmers with commercial buyers are in the process of being signed this year. A regional foods processor, Green Forest Food Ltd, based in Nairobi, is negotiating with farmers in Mbola to buy honey and ground nuts next season. The Project helped cooperatives in Mwandama secure contract farming arrangements with ExAgris Africa, and is advising on a new deal with the Alfa Group of New Zealand to supply soya. Thanks to new agreements with other buyers, including the United Nations World Food Programme, Mwandama's farmers this year earned more than \$132,500 selling maize and peas. One of Rwanda's largest tomato paste manufacturers, Sorwatom, signed a contract to buy all tomatoes grown by Mayange's tomato farming cooperative.

Fidele Mvuyekure, president of the TUTOFACO cooperative, said: "The marketing of tomatoes used to be very difficult because farmers were taking tomatoes on bicycles to Kigali, 30 miles away. Now, we have a farming contract with

SORWATOM, the Project helped us to buy motor pumps for irrigation and the Government has provided us high quality seeds."

To professionalize as far as possible each cooperative's management, many were trained in governance principles and local laws regulating the groups' status. Cooperatives are now running as commercial entities rather than informal gatherings reliant on handouts from the Project and donors. The entrepreneurial spirit is also growing, and cooperative members are becoming interested in producing non-traditional high value crops for profit. In Mwandama, four of the seven new cooperatives have already held their first Annual General Meetings, giving all members the chance to choose their common future activities.

There are still difficulties holding back some Villages from achieving their full business potential. Some challenges – like a lack of funding, or devalued national currencies and rising inflation, or international fuel costs – are beyond the control of the Villages and their cooperatives. Others, we are working on. For example, in Koraro, the Project is looking for new investors to expand the poultry enterprise. In Mayange, we are working to strengthen financial management and to find new sources of funding and loan securities.

Across all of the Villages, we will in 2013 create additional cooperatives and strengthen existing ones, particularly with governance training for managers and management committees. Business plans will be developed in collaboration with the Project, and cooperatives will be trained in business planning and linked with development partners, donors and market opportunities. We will also focus on greater official legal recognition of cooperatives by local authorities, which will help to formalize them and ensure they run smoothly after Project support ends in 2015. We hope to introduce new Market Centers, like the one already in place in Sauri, and we intend to carry out training to improve skills, focusing on apprenticeships in the informal sector for young people, to build their skills and entrepreneurial edge.



# WATER, SANITATION AND IRRIGATION

“ We don’t walk long distances in order to fetch water for cooking now. The water point is located just 100m away from the school and 50m from the kitchen.

School cook at Mwandama, Malawi.

At the start of the Millennium Villages Project, few people had access to safe, clean water, and even fewer of those found those supplies close to home. Decent sanitation and an understanding of the benefits of good hygiene were both limited in the Villages. Now, three years to 2015, when we hand over projects, we are closer to our goal of halving the number of people without reliable access to safe drinking water and basic sanitation. With the construction and rehabilitation of hundreds of water points and improved latrines, preliminary results show a 280% increase in the use of improved supplies for drinking water. Close to five times more people now have access to improved sanitation facilities across the Villages. Smallholder irrigation has led to a jump of 1,200% in the area of land under cultivation in one Village alone.

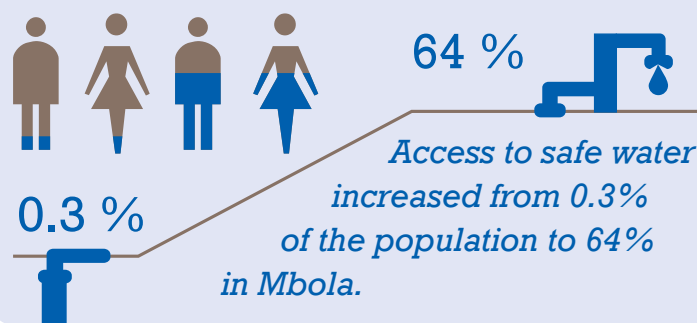
In 2012, as well as sustaining past projects, we have seen great progress in new water infrastructure, including new pumps and pipes, new irrigation schemes, and changing the way people think about water, sanitation and hygiene.

## IMPROVING WATER SUPPLY AND SANITATION

We have increased our focus on improving the systems of bringing water from the ground and storing it, with boreholes, pumps and irrigation wells. In Mbola, Tanzania, 48 water points have been built and/or repaired, increasing access to safe water from 0.3% of the population to 64%. For new institutional boreholes, solar submersible pumps will be adopted. The boreholes are managed by trained water user groups that charge individual consumers roughly \$0.60 a month. One such group, Mkombozi, has used its income to fence the borehole to keep the pump protected. Maulid Kitege, the group’s chairman, said “Mkombozi” means ‘redeemer’ or ‘deliverer’ and the name was chosen because the borehole and pump had stopped people having to use muddy, unhygienic water. The same model is used in Mwandama, Malawi, where 52 trained water point committees have taken full control of 71 boreholes, ensuring that their maintenance continues beyond 2015.

Hand-pumps have been fitted at schools, and diesel and solar powered motorized boreholes pump water to the Mwandama, Maera and Thondwe clinics in Mwandama.

Maintaining the boreholes’ systems is crucial – studies have shown that 90% of borehole hand pumps break within three years of being installed. A lack of spare parts and technical expertise can mean the pumps are abandoned and communities return to drawing water from contaminated sources, often far away from their homesteads. To safeguard against this eventuality, in Sauri, Kenya, 18 men and 10 women were trained how to service and repair hand-pumps by a technician from the supplier of Afridev pumps.



New water pipes have been laid to households, businesses and irrigated fields in many of the Villages this year. Now 94% of people living in Sauri now enjoy improved water sources, and during 2012 10 miles of new pipes were installed to bring clean water to 43 more homes, to two schools and to the Masogo Health Centre, with help from JM Eagle, the Lake Victoria Water Services Board and the Gem Constituency Development Fund. Families shared the costs of being connected to piped water, paying an average \$36 each. In Mayange, Rwanda, 173 individual households were linked to the main water pipeline, as were two Community Health Education Centers, a Nutrition Center, an Early Childhood Development Center and the Craft Center, where six flushing toilets were also installed. In

Ruhiira, Uganda, the piped water project was launched in January 2012, bringing clean supplies to 32 public and 21 private connections, and to 10 institutions in the Village. Each is metered, charging a maximum of \$1.50 per cubic meter of consumption, and we hope to introduce a smart metering system to increase water supply efficiencies and revenue collection. The water project's ten-member management board monitors income against consumption, allowing monthly financial monitoring. Currently, non-

accounted for water is just 15%, and revenue collection efficiency is 70%.

Increased water supplies have prompted tremendous improvements in sanitation and hygiene. Families not only have access to safe drinking water, but many are making further efforts by constructing improved sanitation and hand washing facilities.

### SUSTAINABLE IRRIGATION IN KORARO

Koraro Millennium Village is home mainly to subsistence farmers, but is prone to drought with its meager rainfall concentrated often into just two months a year. The force of that rain on degraded soils causes further erosion, meaning the loss of huge volumes of water through wasteful run-off. To save as much of this precious rainfall as possible, in 2012 we built wells, a diversion irrigation scheme and improved existing water-saving projects. Helping people with pumps, drip systems, seeds and fertilizers transforms subsistence farming into viable microenterprises.

#### IRRIGATION WELLS

- 12m deep, 9m wide pits lined with stone that tap into shallow groundwater
- 300 in use in Koraro, turning dry fields into green oases
- Each irrigates 6 families' fields of high-value tomato, potato and cabbage crops
- Water pumped to fields with 1,535 treadle pumps and 360 motor pumps
- 55 drip irrigation systems water 2.5 square km

#### DIVERSION IRRIGATION

- Weir diverts water from Mai-Weini River to storage tank
- 3km of stone, concrete and earthen canals bring water to fields
- Even in dry season, 28ha of land are irrigated, and 46 systems which supplement rain-fed agriculture.

#### IRRIGATION IMPACT

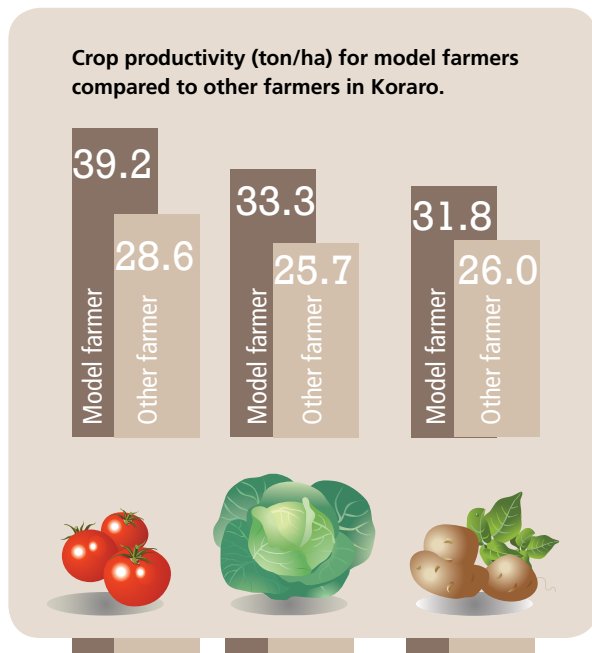
- Land under irrigation up 1,200% from 250ha to 3,000ha
- 3,006 farming families use irrigation, up 37% from 2011
- Arable land under irrigation up to 30% from 10% in 2011. Could rise to 70%
- Some farmers now harvest 3 crops a year – 2 irrigated and 1 rain-fed
- Traders now regularly visit during harvest because produce is guaranteed

### BETTER HYGIENE FOR BETTER HEALTH

Despite advances in access to water and sanitation facilities, infrastructure improvements alone are not enough to eliminate illnesses caused by unsafe water supplies and poor hygiene. Unwashed hands, swarming flies and unsanitary food preparation continue to spread infectious pathogens and disease. It is for this reason that we increased the

focus this year on the software of water, sanitation and hygiene services and on helping people understand how good hygiene is essential to improving community health.

Changing traditional behavior with something as simple as washing your hands with soap can have a huge impact. Pneumonia and diarrhea, the world's two leading killers of children aged under five, claim over two million lives a year



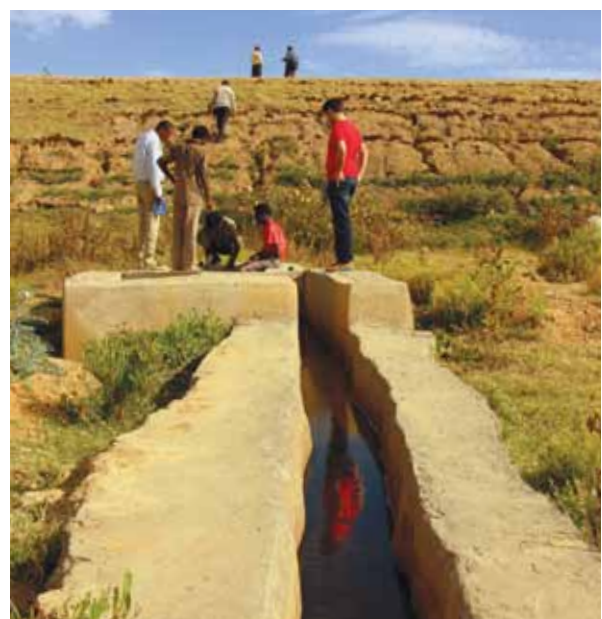
— close to a third of all under-five deaths. MDG 4, remember, aims to reduce the number of children who die before their fifth birthday by two-thirds, and washing hands with soap is proven to reduce the incidence of diarrhea by 45% and pneumonia by 25%. To boost communities' understanding of this, during Global Handwashing Day on October 15 the Project launched a partnership with Unilever to promote hand-washing with soap as a low-cost, effective and sustainable preventative measure against these two diseases. In Mayange, the Project expanded innovative ways to change the way people thought about hygiene and sanitation.



*New water infrastructure in the Millennium Villages.*

Most households used to draw untreated water from the local river for drinking, cooking and washing. Children under five years old, especially, suffered from waterborne diseases, worms, and respiratory infections. During 2012, therefore, we strengthened 40 Hygiene and Sanitation Clubs, which now count the members of 4,000 households among their ranks. One member from each family takes home a hygiene and sanitation evaluation card, which lists performance indicators and verifiable "homework" to be completed within a given period. One indicator, for example, is whether every member of the family washes their hands with soap. In order to show that they have "done their homework", many households have improvised simple hand-washing facilities near their toilets, which reduce the chances of falling ill from diarrhea. It can be difficult sometimes to convince people of the necessity of good hygiene, but changing behavior will definitely happen over time, especially with incentives. The best performers in each of Mayange's Clubs win prizes including hygienic water containers, soaps and new bed sheets.

As we look forward to handing over more of our projects to the Villages, their local partners and governments, our focus in Water and Sanitation during 2013 will be to transfer most remaining water points to their local communities, to extend pipelines, to expand maintenance of existing infrastructure and to increase sanitation coverage. The remaining water supply systems for institutions such as schools and health clinics will be completed, irrigation development using business models will continue, and water quality monitoring and treatment will be prioritized.



*An irrigation canal in Koraro, delivering water from a micro dam to farms.*

# AGRICULTURE

## New paths from subsistence to prosperity

The Millennium Villages Project has helped bring about huge advances in farming and food security by moving farmers from simple subsistence agriculture to forming agribusiness cooperatives growing high-value as well as staple crops. To start with, we helped with simple, quick impact interventions including improved seeds, fertilizers, and irrigation and soil management to improve harvests. As a result, staple crop yields began not only to provide food, but also left a surplus to be sold at market. Building on these foundations, we are now focused on diversifying agricultural production and improving farming methods for improved nutrition and income, and 2012 has seen much progress.

Giving farmers reliable water supplies to irrigate their crops even during dry seasons continues to be a major activity. In Mayange, Rwanda, 50 farmers now benefit from irrigation ponds fed largely with rain water collected from newly-installed rooftop capture systems. Small pumps at each pond allow farmers to irrigate fruit and vegetable plants that are now grown year-round without needing to wait for the rains to start.

New water storage ponds, pumps and drip irrigation systems in Koraro, Ethiopia, have tripled the proportion of arable land under irrigation, from 10% in 2011 to 30% in 2012. The number of farmers growing irrigated cash crops increased by 37%, to 3,006 households in 2012. More than 360 diesel water pumps have been installed, and the Project gave out fertilizers and improved seeds and seedlings, including new high-value crops including tomatoes, capsicums, oranges, papayas and avocados. As in Koraro, the soil and aridity of the environment in Pemba, Tanzania, meant harvests were unreliable. In 2012, we worked with the Ministry of Agriculture to establish two new test irrigation plots, and 12 demonstration fields to teach good agronomic practices.



*David Siriri, Team Leader of Ruhiira Millennium Villages, discusses coffee farming potential*

In Pemba, where 80% of the community is involved in fishing, dwindling fish stocks meant many people struggled to make money from ocean resources. However, in 2012, we helped to professionalize the Village's seaweed industry. Seaweed products such as powder, desserts, bar soaps, body creams and gels are worth far more than selling dried seaweed. Already, equipment has been given to 800 seaweed farmers, who were also trained how to 'add value' to their harvests, and seaweed production is becoming a key income-earner. In 2013, with the Institute of Marine Science at the University of Dar es Salaam, farmers will be trained on seaweed production chains.

Diversifying income-generating activities expanded in Mwandama, Malawi, in 2012, with a focus on growing onions, tomatoes and mango trees, which give not only a valuable harvest of fruit, but also provide shade and wood for fuel. This year, 7,152 mango seedlings were distributed and 200 grafted mango seedlings were given to students to be planted at 14 primary schools.

"We used to grow only maize, but since the Project started, we do irrigation farming to increase our maize yields and also grow crops like tomatoes and cabbage," said Samisoni Nantchengwa, a Mwandama farmer. "We have achieved a lot. We have three buildings now, including a grocery shop, and have managed to send one of our children to driving school and two others are in a private secondary school."

The Project works to make sure that men, women and school children learn about these new agricultural techniques, to ensure that all members of each Village benefit. In Mbola, Tanzania, Agricultural Extension Officers trained women and youth groups on growing high-value commodities for market and how to acquire better prices. Off-season cash crops including tomatoes, watermelons and



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*Felician, a farmer in Mayange, used to live in a grass-roofed hut and subsisted on poor maize harvests. The Project helped him with fruit trees, fertilizer and improved seeds, and the Government of Rwanda gave him his first dairy cow. He has now built a brick house, which is connected to electricity, and pays for school fees for his three children with proceeds from pineapple harvests and rent from a commercial building he constructed.*

“ *The three businesses I have are very important for me. With pineapples, we can eat them but also receive money. From the cows, we get milk for consumption and sell*

*the rest for profit. I also get money from renting the commercial property. I think probably the pineapples are best, they make the most money.*

*He has hired three workers and a temporary laborer for the farm. He wants to buy a car soon to be able to transport his produce more effectively to shops and markets.*

“ *Before, I never dreamed of owning a car. The most important thing that the Project did for me was to provide technical support in agriculture, which helped me to open my mind for earning income.*

green maize were introduced, improving not only farmers' disposable incomes but also giving their families more nutritious meals. A total of 3,201 farmers were trained, and Agriculture Extension Officers established several demonstration plots to explain these techniques. In addition, modern honey production is being introduced, and Luwola Pre-Primary Cooperative Society's 168 members produced 10 tonnes of honey this year, worth \$2,000.

#### CROP DIVERSIFICATION FOR NUTRITION

The diversity of fruit and vegetables now grown in the Villages has improved the health of residents, and some crops were specifically introduced to ensure a more balanced diet – for example, orange fleshed sweet potatoes and soya beans in Ruhira, Uganda. Thanks to these multiple interventions, including practical cooking demonstrations and sensitization of women, malnutrition has dropped by more than a third, to 10.7% among children aged under 5.

“I had never grown soya before, I had never even heard of it,” says Nsiimire Geoffrey. “Now I feed soya to my kids mixed with maize, and they no longer suffer from malnutrition. The soya, combined with vaccinations and cooking demonstrations means that they are now healthy.”

In Sauri, Kenya, the success of the dairy, fish farming and honey industries are well documented. This year, the Project focused on greenhouse farming in response to the dwindling land size due to sub-division as the population increases, as well as to allow farmers to time production to coincide with peak prices. Greenhouses mean farmers can grow high-quality fruits in a controlled micro-climate free from pests and hail storms common during the long rains. In 2012, 65 farmers were growing tomatoes, capscums, watermelons, cucumbers and squash using drip



**Farmers undergo training at the Mwandama grain bank.**

irrigation systems, and techniques to counter plant diseases were taught.

Building and maintaining the momentum of these new agribusinesses needs money. In Sauri, as in other Villages, funds came from loans that are repaid by selling produce. In Mwandama, a Loan Revolving Fund was developed to extend credit to Villages Savings and Loans groups at twice their savings. So far six groups have borrowed a total of \$3,581 to buy farm inputs and household needs.

These are just some of the many examples of how the Project has helped farmers move from dependence on fully-subsidized inputs to standing on their own two feet. In the first phase of the Project, these inputs were given to farmers to boost productivity and incomes. Now, they are increasingly able to expand their agribusiness activities on their own, using their improved earnings and access to credit, with the Project providing technical advice and training. With three years to go before the Project deadline, farmers' increasing economic independence is indeed encouraging.



# GENDER

## Giving women the skills to true equality



46

girls in Sauri were this year sponsored for a two-year course in hairdressing

2,349

girls in primary and secondary classes in Sauri were supplied with sanitary pads to encourage them to stay in classes rather than skipping school when they are menstruating



439

women decided to start a business after discussions with women role models and entrepreneurs in Mayange

Ensuring there is gender equity in the Millennium Villages underpins the work we do in all other sectors, and our approach to supporting women and girls has this year covered a wide range of activities. We expanded girls' education, improved opportunities for women to help make decisions at home and in their communities, and gave skills training and credit to women to increase their financial freedom. Work undertaken by all sectors in the Villages has knock-on benefits for gender balance: wealthier, healthier and better-educated women pass on a legacy of prosperity to their children and communities.

Early pregnancy is the main reason why girls in rural areas drop out of school, and it can hold them back from progressing beyond basic household work in the future. As a result, the Project works to sensitize young women and their parents on the importance of girls' education at primary, secondary and vocational levels, and the potential pitfalls of early marriage.

To encourage girls to stay in classes rather than skipping school when they are menstruating, 2,349 girls in primary and secondary classes in Sauri, Kenya were supplied with sanitary pads. Upgrades to school infrastructure, such as separate latrines for girls and boys, also help provide a conducive environment for girls at both primary and secondary school, and the Project has continued to improve these facilities. In Mayange, Rwanda, girls will be encouraged to join vocational lessons at the new craft center, which will open soon. Training at Mindhine Polytechnic near Sauri is already giving young people new skills necessary to earn a livelihood: 46 girls were this year sponsored for a two-year course in hairdressing and beauty therapy. Other programs on offer include tailoring, welding, carpentry, joinery, masonry and electrical installation.

Milka Seda, 26, has learned how to give women popular braid twists at the course, meaning that she is already earning money with her new skill. She uses the income to

pay school fees for her three children aged between five and eight. "Not many people are lucky enough to get this kind of opportunity" to learn new skills, she says.

Our Connect To Learn initiative in 2012 gave scholarships for secondary education to 331 girls and 11 boys in Sauri, Mbola, Tanzania, Mwandama, Malawi and Dertu, Kenya. Further funds have been raised for another 50 scholarships due to begin in Ruhiira, Uganda, in January 2013.

Ten of the 50 scholarships given in Sauri went to young women who had earlier dropped out of school due to teenage pregnancy.

### CHALLENGING TABOOS WITH GUIDANCE ON VALUES

Few parents traditionally talk to their sons and daughters about sexual maturation and reproductive health, leaving girls and boys to explore and experiment with sex with little adult guidance. To break this silence, we have worked with mothers in Mbola about how to broach these subjects with their daughters and how to give accurate information about reproductive health, the dangers of early pregnancy, and how their daughters can learn the confidence to discuss these topics with their sexual partners. In Ruhiira, Uganda, two radio programs were broadcast to promote children's rights and the importance of both parents being involved to boost their children's wellbeing, and the responsibilities of parents, children, neighbors, relatives and the government.

In Mwandama, Girls' Empowerment Clubs were formed in all 14 primary schools to address gender issues, as part of the Living Values Initiative, which aims to teach basic guiding principles and tools to girls and boys as they grow up. The program encourages young people to be responsible and value each other, and teaches that discrimination and prejudice rooted in gender can be addressed with mutual respect.



Connect To Learn Scholarships for secondary education were given to:

**331** girls and **11** boys

“ We encourage women to become active members of the Millennium Saccos to be able to access loans and other benefits, and we help through training and technical assistance on how to implement their ideas. We can also give technical advice on best agricultural methods and income-generating activities.

*Juliet Mgasa, Community and Gender Coordinator, Mbola.*

Training was held for 53 guidance and counseling teachers for all 33 primary schools in Sauri, on counseling skills, psychology and stress management. Back in Sauri's schools, they can now offer support to boys and girls and help shape their attitudes and behavior.

Gender-based violence has also traditionally been a taboo topic. In Ruhiira, the project team and the community selected 36 couples to act as gender mentors - the first point of redress for cases of violence at home. The couples handle marital problems, and problems related to ownership and control of resources. They were selected on the basis of their exemplary relationship towards each other and their children, and trained in conflict resolution. As respected members of the community, people feel comfortable talking to them about topics which were formerly kept behind closed doors.

#### BREAKING WOMEN'S BARRIERS TO BUSINESS SUCCESS

Financial literacy training to develop women's entrepreneurship and confidence in their abilities was one of the main priorities across all Villages in 2012. In Mayange, and Ruhiira, work continued to help women overcome barriers to economic empowerment, through reading and writing classes, as well as lessons in information and communications technology and English.

Also in Mayange, 1,200 women joined discussions about issues specifically faced by women in business, which were led by well-known women leaders in the Village and businesswomen from further afield who spoke about their individual paths to success. After the second round of discussions, which focused on how to launch an enterprise, 439 women decided to start a businesses. They were connected to the Business Development experts in the Village, especially those at the Mayange Sacco, for help preparing

business plans and applying for loans. As part of the process, women were encouraged to open bank accounts: the number of women with such accounts at Mayange Sacco jumped from 352 at the start of 2012 to 1,239 by the end of the year.

Aimerance Nyirabahire was one of them. Her growing relationship with her bank helped her to expand her business with a small loan. "I have been able to move from selling vegetables also to manufacturing local beer," she says. "My operating capital has doubled and I can regularly pay the loan back with no difficulty."

Perhaps one of the greatest inspirations to these new businesswomen is Mayange's Imirasire Coovamaya basket-weaving cooperative, where 146 members this year won a contract worth \$18,000 to supply baskets to Tommy Hilfiger, the US fashion designer and long-term project partner. Their baskets were used in store-fronts and the international exposure brought not only significant income to women who before had very little, but it also led to prospects of fresh orders from different firms.

In the coming years, as the Villages take more control of development activities, creating products for commercial sale will be an increasingly important income generating activity, and the Project will continue to encourage such ventures particularly in the non-agricultural sector. In Sauri, 50 women were this year trained on business management, marketing and art work as part of commercial development seminars. Already in Mbola, women and young people involved in farming have joined together into 27 different associations that are able to apply for a group loans to boost their businesses.

# INFRASTRUCTURE

## Cementing progress and enhancing the hand-over process



Alongside large infrastructure projects including building schools, health clinics and roads, mostly completed in the first phase of the Millennium Villages Project, the Villages are now enjoying the benefits of investments launched more recently. Installing electricity, computers and telecommunications to link the Villages to the wider world boosts business, widens teachers' and health workers' knowledge, and allows children to explore the virtual world. We are now seeing communities and local governments starting to take over and maintain many infrastructure investments. A key focus in the coming months will be to help continue this transition as part of ensuring that these gains are sustained beyond the end of our financial engagement in 2015.

Connecting the Villages to electricity is a key focus that will accelerate the achievement of several Millennium Development Goals. Where possible, the Project continues to connect households, facilities and businesses to the national electricity grid, but where distance and cost makes this difficult, we have instead implemented innovative off-grid solutions using solar power.

In Mwandama, Malawi, this year has seen progress typical of both traditional and virtual infrastructure projects. Health workers who were on call 24 hours a day but who lived far away have now moved into six new houses built for them at the Mwandama and Maera Health Clinics. Roads and bridges have been extended and maintained. Alongside this, the Project connected the primary schools and the clinics to the national electricity grid. This has ensured round-the-clock medical care, guaranteed refrigeration for medicines, and allowed clinic staff to access the internet for research and to enhance e-health services.

In Sauri, Kenya, not only are schools and clinics now connected to the national grid, but people's homes as well, in

collaboration with Kenya Power, the national electricity distribution company. The aim is to supply electricity to every household within 600m of a power transformer, and during 2012 more than 120 families were connected, freeing them from using expensive and noxious kerosene lanterns. The \$400-per-connection fee is shared between the Project and each household, which pays 60% of the cost. The connections have already spurred household business initiatives, such as welding and milk storage.

As in other Villages, linking two of Sauri's primary schools to the grid has allowed teachers to spend longer preparing lesson plans, given both children and teachers access to computers and led to the introduction of early morning booster classes for struggling pupils. Learning has also been enhanced by using audio-visual teaching aids, says Scholastica Rambim, deputy headteacher of Migosi Primary School in Sauri. Teachers are now so well versed in computer skills, she says, that they prepare lessons, fill out forms and tabulate marks using computers in a new lab set up at the school. In a clever business move, some of the power is used in a new barber's kiosk close to the gates, where customer payments are used to help pay the school's electricity bills.

### OFF-GRID POWER, EVEN AFTER SUNSET

Many Villages lie far from their national grid, but innovative solar power systems have been installed to bring light and electricity to even the most remote communities. The Project's SharedSolar system – a micro-grid of up to 20 connections – was piloted in 2011, and already, the benefits are clear. In Ruhiira, Uganda, SharedSolar systems with battery storage lasting up to three days have been set up in eight trading centers.





1  
Day

The Life Innovation Container's 18 solar panels charge 48 batteries with power that lasts for up to four days.



## SharedSolar

Asimwe Enock's hairdressing salon is one of several businesses now connected to electricity through a SharedSolar micro-grid in Ruhiira. Instead of closing at sunset, or using an expensive generator, he can stay open well into the evening.

“I used to have 10 customers per day, but now I am getting 17 since I can stay open till 9 pm, in addition to earning extra income offering a mobile phone charging service.”

The SharedSolar system has reduced his power bill from \$2.50 a day to less than \$1 a day translating to more money in his pocket, which is also increased because he is spending less on candles, batteries and kerosene.

*Asimwe Enock works at his hairdressing salon in Ruhiira, thanks to power provided by the SharedSolar system.*

Mr. Byarugaba, a father of four, runs a tailoring business and is now able to take on bigger orders since lighting up his shop a month ago. “When I turn on the light it shows everything in my shop, it is so exciting,” he says, pointing happily to the colorful fabrics which surround him, “I have been able to get rid of all the candles and increase my profits,” he says.

Besides the immediate benefit of increased business, the SharedSolar system is popular because it pays for itself after the initial investment, guaranteeing sustained income and maintenance after the end of the Project in 2015.

A similar investment has brought electricity to schools, homes, clinics and businesses in Mbola, Tanzania, thanks to our partnership with Panasonic.

Beyond providing power for later lessons and internet access, Mbola Primary School earns money from customers who use the electricity to charge their mobile phones, and has already used the money to buy a printer. Students and teachers at Ilolangulu Primary and Secondary Schools have been trained how to use the computers and the internet, and several students regularly chat with new friends on the other side of the world online. The Project now aims to set up two ICT kiosks, establish a community emergency response system, widen access to voice and data communication, and improve links between nearby villages via a community radio.

The Project has also continued to work in partnership with regional mobile operators to maintain and expand mobile phone coverage across all Villages. In Mbola, Airtel connected at least 75% of the village to the cell-phone

network in March of this year, in partnership with Ericsson. Toll-free SIM cards were provided to health workers, allowing data collected from patients in remote areas to be uploaded instantly to electronic filing systems, greatly increasing efficiency.

## LOCKING-IN EARLIER PROGRESS

Dilapidated infrastructure made providing decent health and education very difficult in the early days of the Project. In many cases, teachers and medical staff worked with inadequate facilities and poor roads hampered access. As well as innovations with virtual infrastructure, our long-standing activities to improve basic infrastructure are now nearing completion. As our funding for infrastructure is scaled down, our focus is now to hand over responsibility for operations and maintenance to the communities and local governments. In Mbola, the district council with funding from TANROAD has taken control of 17 miles of constructed roads. In Mwandama, the Government of Malawi is working with the Project to assume responsibility for on-going construction and maintenance of roads. In Pemba, Zanzibar, the Ministry of Infrastructure and Communication and the Project have together built 8 miles of road connecting seaweed production areas to both local communities and markets.

In the coming 12 months, a key focus will be to train managers, school staff and community resource center leaders on how best to maintain infrastructure already in place, and to give refresher courses to those who have already been through earlier training. Regular engagement with local governments will ensure the smooth takeover of remaining public infrastructure projects in different countries.

# ENVIRONMENT

## Preserving fragile ecosystems for long-term success



Significant progress in many of the other sectors working to achieve the Millennium Development Goals depends on an environment in the Villages that is well-managed and where there are sustainable strategies in place for the future. Traditional farming methods, coupled with growing populations, means that soils, tree cover, water supplies and air quality are constantly under threat. Since it started, the Millennium Villages Project has worked to rehabilitate damaged environments, and give communities the understanding and tools for their long-term preservation.

Increasing the “biomass” of the areas where the Villages are sited has been one of our core activities. This can involve encouraging people not to cut down existing trees for firewood, and providing seedlings to improve the vegetation cover over time. In Koraro, Ethiopia, in 2012 we focused on new agroforestry techniques to put reclaimed land into production. More than three million tree seedlings were planted in 2012 to rehabilitate 200 hectares of degraded land – the equivalent of 35 seedlings for every woman, man and child in the Village and four times as many as were planted in 2006. More than 1.2 million new trees are growing in Ruhira, Uganda, this year, and in Sauri, Kenya, 175 farmers were trained how to nurture tree seedlings to sell them. In 2012 alone, these Sauri farmers have earned more than \$16,000 selling 106,822 seedlings. Pupils in 4K Clubs at 19 of Sauri’s primary schools are also learning how to plant tree nurseries, for their homes and to sell. Part of their training also included teaching about sustainable wood supplies for fuel: charcoal is a key fuel for cooking in Kenya, used in 82% of urban and 34% of rural households, and the Project continues to advocate for

modern kiln technology that turns wood to charcoal with less smoke and less waste while producing more charcoal.

To help the Villages plan better how to manage their environments, especially as they increasingly take control of activities the closer we get to 2015, we launched surveys in 2012 in Sauri and Mayange, Rwanda, to gauge more accurately each site’s biomass and biodiversity. In Sauri, it was estimated that biomass had roughly doubled since the start of the Project as a result of soil fertility management and increased tree planting, but comprehensive data were needed. The analysis of the study is ongoing, but preliminary findings indicate that 20% of the 241 respondents have commercial tree plantations, 50% have small scale woodlots and 40% have planted trees along the boundary of their plots. Most encouragingly, we found that 82% of that new tree cover and vegetation had been planted since the Project began in 2006. In Mayange this year we started a biodiversity study to give a clear report on the health of the ecosystem in the Village, touching on indicators including air quality, climate, water purification, pollination and erosion. Once the survey is complete, Mayange will have essential land-use planning data to give its people accurate information to decide how best to manage their environment. Mayange’s biodiversity study is also expected to stand as a pilot for other Villages to follow in the coming years.

Tree planting, like all agroforestry, requires nutrient-rich soils to perform at its best. In Koraro, the soils are generally sandy with extremely low organic matter, and composting is the most efficient way to improve soil condition. In 2012,





Michael Mkwalamasi started a tree nursery in Mwandama, Malawi, in 2006, and today he and his wife earn a growing income from selling seedlings. He calls himself an “afforestation entrepreneur”.

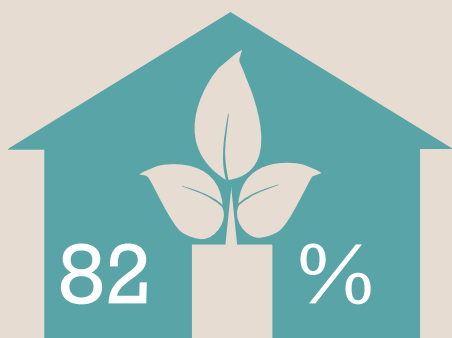


“ Now I can afford to buy bricks for a new house, and to hire builders to construct it. I have bought a solar panel and inverter, and people pay me to use the electricity to charge their mobile phones. I have bought fertilizer for my plot, and new clothes for my children.

**Lake Cyhohoha, in Mayange, Rwanda, has been protected since 2011 with a buffer zone of trees planted by the Government.**

selected farmers were trained how to prepare compost with leaf litter, organic kitchen waste and other material including livestock straw bedding. They were shown how to make the best compost, how to make it quickly, and how to share this knowledge with others. Integrated Soil Fertility Management (ISFM) practices that have been such a success in other Villages were expanded in Ruhirra during 2012. ISFM focuses on reducing erosion by constructing trenches and planting nitrogen-fixing trees for soil health improvement and to slow erosion.

Similar activities have been expanded this year in Mbola, Tanzania, where farmers were encouraged to mix maize plants with pigeon peas and other leguminous crops that fix nitrogen in the soil. The results will be seen in the harvests due in 2013, when we hope for a 20% to 30% increase in yields. Alongside these efforts, 19,700 tree seedlings for fuel wood and fodder were distributed to farmers and primary schools in Mbola to improve soil fertility, and 30,000 tree seedlings were established in two community nurseries. At the onset of seasonal rains, these seedlings will be distributed to farmers.



**82% of the new tree cover in Sauri has been planted since the start of the Project, and a fifth of the Village's people are growing trees to sell for wood.**

“From my one acre of banana, I used to get less than 10 bunches a month,” says Jolly Rwendinga in Ruhirra. “I dug trenches and planted seedlings there and around the plantation, and I now sell more than 30 big bunches a month. My bananas are no longer falling due to wind and water, and soil erosion has reduced.”

New infrastructure has been proven to help rehabilitate degraded land, and in Koraro this year the Project constructed a series of structures to slow or divert rainfall run-off. These have included new gabions and rock walls to trap nutrient-rich silt in rehabilitated and cleared gullies, or to direct rainwater into percolation trenches to improve groundwater in areas with shallow aquifers.

As the Villages move closer to independence from Project funding in 2015, we continue to cement gains already made and ensure that the skills, knowledge and techniques needed to conserve precious environments are understood by as many people as possible. To convey the benefits of these interventions, communication is vital. Ruhirra's community radio has during 2012 aired 11 talk shows discussing important environmental issues, including indiscriminate bush clearing and burning, the negative impacts of traditional brick making and over-grazing, and the environmental benefits of using briquettes and energy-saving cook stoves. These are the messages that we will continue to spread in the coming years, to all the Villages.

# SCALING UP

## The smooth shift to sustained success



*A woman at the new grain bank in Mwandama, Malawi - a good example of a business that can sustain itself for year to come.*

The Millennium Villages Project has covered a lot of ground since its inception in 2005: more children are in school, especially girls, better health services have reduced maternal deaths, farmers harvest more, and graded roads and electricity now reach many of the Villages, for example. The Project has now engaged high gear to ensure these gains are sustained at the same scale and quality beyond current donor funding and the Millennium Development Goals' deadline of 2015. Key to maintaining momentum is to make sure that national governments, local authorities, commercial partners and the communities themselves are increasingly in the lead and taking responsibility for the success of the activities in the Villages.

At the same time, the examples set in the Villages will, we believe, be extended to improve the lives of people across the countries of East and Southern Africa where we have been working. This is exemplified by the Government of Rwanda. Its Ministry of Local Government signed a memorandum of understanding with The MDG Centre in 2011 to expand its own activities in five priority areas: drinking water, irrigation, energy, agribusiness and information management systems. The first step is the ongoing MDG-based appraisal of the Ministry's existing poverty reduction initiative, the Vision 2020 Umurenge Program, looking for ways within the priority areas to improve it. During 2013, we will hold consultations with senior technical officials in core ministries to design a national strategy for scaling-up.

One country that has come a long way in preparations for scaling-up the Project is Tanzania. Following the visit

of the President to Mbola, the Government of Tanzania has shown remarkable interest to expand our approach to other parts of the country. In collaboration with the Islamic Development Bank, a scale-up program in Uganda for six areas of the country has been appraised.

As the Project enters the stretch towards 2015, we are more and more shifting from short-term activities with quick impacts to more strategic interventions that will last for many years. For example, instead of handing out free fertilizer and seeds, increasingly our model is to support micro-financing with loans for farmers' cooperatives. Linked to this longer-term focus is the way we use simple technological advancements that have direct impacts in each local context – ideas that are low-cost, use clever emerging innovations, and are effective and long-lasting. An example is the SharedSolar micro-grid system already bringing electricity from the sun to small clusters of homes and businesses in some of the Villages.

Boosting business development is key to creating sustained successes, and the Project increasingly looks to achieve this through cooperatives, which pool benefits for lots of members. As farmers move beyond subsistence agriculture and pool surplus harvests or cash crops in cooperatives, we will in 2013 work to strengthen each aspect of farming as a business. Improving this "product value chain" will include activities both on and off the farms, and touches on financing, farm production including bulk production, processing, branding and marketing to generate self-sustenance and independence for the cooperatives.





*Mayange's basket weaving cooperative is now experienced to meet major international orders.*

To ensure that cooperatives and other institutions in each Village can successfully manage themselves, perhaps the most important aspect is building their capacity to continue their work – and to adapt it to future requirements – after the end of the Project. An example of this is the Grain Bank in Mwandama, Malawi, a idea born during the Project that has developed its own life as a local agribusiness that will sustain itself in the years to come. It is essential that community committees are able to adapt and modify their projects, to develop resilience to cope with future shocks including drought. In Rwanda, the Mayange Community Development Organization has evolved into a body that is able to mobilize community action and better use resources, something that it is already doing and will continue to do after 2015. This and many other groups in the Villages are increasingly involved in decisions within their local authorities. A team from Mayange sits on the district Joint Action Forum. In Uganda, Ruhira's representatives have an office at the local government and in Kenya and Tanzania, Sauri and Mbola each have a seat at the District Development Committee and Dertu at the District Steering Group. These kinds of joint strategic planning activities allow the Villages to be autonomous and at the same time one of multiple contributors to local development processes. Strategic planning is important as it enables each Village to plan with other local bodies, independent of their current donors and affiliates. Such joint planning enables pooling and leveraging of resources, joint activities and the setting of shared priorities. Engagement with local authorities also gives the Villages an opportunity to cement agreements for the maintenance and oversight of Project interventions beyond 2015.



*Profits from agribusiness activities in Nyamnina Primary School, Sauri generate independent investment.*

That is, of course, ultimate aim: for Village cooperatives and groups, local governments, civil society and community organizations, and the private sector to be responsible for the ongoing operation and success of the work already done. For example, health centers in many Villages have linked with their Ministries of Health to benefit from pooled supply chains for personnel, medicines and equipment. School management committees have taken control of school feeding programs, while overall school management, including staffing and quality control, remains in the hands of the local authorities. Feeder roads, boreholes, dams and other infrastructure projects are being handed over to local government, community management committees, or other organized groups. Agribusiness developments including managing high-value crop marketing and maintaining irrigation systems need close interaction with the private sector. Produce including dairy, coffee and fruit is already being aligned with existing production and supply chains to encourage independence from Project support systems.

Sometimes, communicating the changes ahead clearly to local governments and even members of the communities in the Villages is challenging, and there can be a feeling of uncertainty about what the future beyond 2015 holds. Equally, influencing policy discussions within authorities to try to encourage a greater embrace of Project interventions can take time because of the significant amounts of investment needed, from already tight local budgets. The MDG Centre has prioritized these as key areas of focus during 2013, to ensure a smooth transition phase well ahead of 2015.



# DRYLANDS

## New opportunities to reverse enduring challenges

There has been an increased focus on drylands communities from international policy makers and development strategists during 2012, following weeks of headlines across the world during the Horn of Africa drought the year before. Although the worst of its effects have passed, the drought confirmed that a changing climate was adversely affecting drylands communities, some of whom also live in areas of conflict. Lessons were learnt, however, not least of which were that moves to increase people's resilience, and measures to address conflict, should lie at the center of community-based adaptation approaches to achieve the Millennium Development Goals.



**>60%** of the world's food insecure populations lives in these arid areas, and four-fifths of the rural population is dependent on growing crops and raising livestock for both food and income.

That resilience is best improved by working to protect nomadic herding communities from the shocks of disease and drought. Increasing reliable access to affordable food stocks for people living in drylands is key to winning the battle against global hunger. More than 60 percent of the world's food insecure populations lives in these arid areas, and four-fifths of the rural population is dependent on growing crops and raising livestock for both food and



*Camels hold business potential for dryland communities.*

income. But as the climate changes, fertile soil is lost to erosion or increased salinity and desertification expands, compounding an already precarious situation.

But we are today seeing encouraging efforts to predict the impacts of climate change and ways for organizations and governments to ease crises including drought and flooding by improving the long-term livelihoods of people living in dryland areas. Helping them to generate sustainable incomes and support themselves through difficult times is a marked departure from the focus on emergency relief which, until recently, was the only lifeline for many dryland communities. Based on its work in the Millennium Village at Dertu, Kenya, we have been lobbying policy makers and development strategists to adopt a sustainable, MDG-focused approach in all drylands areas.

Encouragingly, there is growing recognition of the importance of arid ecosystems in increasing not only their own food security and meeting their own needs, but helping other non-dryland communities, too. The Global Dry Land Alliance, an initiative of the Government of Qatar, is an example of the many initiatives aiming to entrench national policies addressing dryland issues. We have seen in 2012 significant progress towards aligning programs and funding so that donors can better coordinate their work and enhance the effectiveness of their interventions.

The MDG Centre's flagship Dryland Initiative, launched in 2010, has continued wide-ranging and painstaking negotiations with governments to develop strong partnerships at national and local level, and to strengthen our presence in the field. Our partnership with the Islamic Development



## Camels: a developing business in the drylands

*The fact that camels can produce milk and provide transport even during drought has prompted a renewed interest in rearing camels among the pastoralist communities of northern Kenya. Many are switching investment in their herds from cattle back to camels, and there is a growing new trend for consuming camel meat and milk, which is highly nutritious and has several health benefits. To tap into the potential for increased trade in camels and camel produce, The MDG Centre is working on ways to improve outputs of camel-related products, and to make camel herding a viable business generating increased incomes. Depending on the availability of funds, we hope to implement this strategy in 2013.*

Bank is coming to fruition, with the Bank committing funding for work in Somalia, Djibouti and Uganda. In Ruhiira, Uganda, the Bank is providing financial and administrative support plans, with the Government of Uganda, to scale up key agribusiness interventions to five neighboring districts and roughly 500,000 people. The MDG Centre is giving scientific, technical and policy support.

Following a recent joint appraisal mission to Somaliland in northern Somalia, the local government selected Baki district in the western Awdal region as the site of its first drylands site. Baki neighbors two countries with significant drylands, Ethiopia and Djibouti and this new project will strengthen cross-border interventions and trade especially for neighboring Jijiga district in Ethiopia, which relies on the port at Berbera in Somaliland for livestock exports to the Middle East and the Gulf. In Djibouti, we are studying the possibility of establishing a Center of Excellence for Drylands Development, and the launch of the Drylands Millennium Villages in Khor Angor and Dassbyo is imminent.

The Drylands Initiative will start 2013 with quick wins. The Centre believes it is important for communities to begin to see improvements within a short time frame. In Dassbyo, Khor Angar and Baki, these 'quick wins' include livestock immunization, improved livestock marketing and working with drought tolerant crops. This will be followed with school meals programs, supporting women in business and providing insecticide-treated bed-nets, ORS, iron and vitamin A supplements, deworming treatments, WASH programs and improved mobile phone connectivity, among others.



**Livestock and livestock products are the livelihood of dryland communities. Yusuf Abdulahi, pictured, is a butcher from Dertu Millennium Village.**

# MILLENNIUM CITIES INITIATIVE

Bringing rural development know-how to fight poverty in urban centers



*The Himalayan Cataract Project in Mekelle Millennium City, Ethiopia.*

The Millennium Cities Initiative is an urban counterpart to the Millennium Villages Project that aims to help 11 under-resourced urban centers across Africa become sustainable economic and social zones with job opportunities, improved public services and links to markets. In East and Southern Africa, Mekelle in Ethiopia, Tabora in Tanzania, Kisumu in Kenya and Blantyre in Malawi were identified as Millennium Cities because of their proximity to Millennium Villages in each country.

In the investment arena, the Initiative worked closely with the cities and lead investment partners, KPMG, an international audit and analysis firm, and the United Nations Industrial Development Organization (Unido). Together, we set out to identify investment opportunities through extensive research and analysis, resulting in a number of working papers and the first series of Investment Guides for the Cities.

To generate commercial interest, the Initiative held discussions on private sector investments with key City officials. Investment Guides for Blantyre and Kisumu were launched, and led to the opening of Kisumu's first branch of the Kenyan Investment Authority and the publication of the Handbook for Investment Promotion in Kisumu. This year, the Initiative focused on business profiles for Mekelle and Tabora, which highlighted opportunities including honey and sunflower-oil processing, tourism and dairy produce. Foreign investors are now being sought to supply technological and management know-how, ideally alongside local firms.

City Council investment teams were trained to identify what drives investors' decisions and the best techniques to present business opportunities, during workshops held as part of the Regional Partnership to Promote Trade and Investment in Sub-Saharan Africa. The Initiative also reached out to Millennium Village Project business teams to encourage farm-to-market links for products from the Vil-

lages. Already, several investors have committed to signing contracts with farmers, particularly in Mwandama, Malawi.

We also produced a working paper to guide national, regional and metropolitan authorities looking to attract foreign investment.

## SOCIAL AS WELL AS ECONOMIC INVESTMENTS

Improving business opportunities in the Millennium Cities is designed to accelerate efforts to eradicate poverty and attain the MDGs. This year, the Initiative launched partnerships with the City Councils of Kisumu and Blantyre to guide discussions on development strategies. We also organized MDG-based household surveys in both cities, piloting the Initiative's own MDG-based survey instrument. The Kisumu survey findings were presented to stakeholders in October, along with needs assessments covering water and sanitation, health, education and gender. With a more nuanced understanding of the combination of factors that define urban poverty, the City authorities, with significant civil society input, are now better able to prioritize actions. For example, a number of health facilities in Kisumu's low-income areas had not been registered with the City Council's Health Department. Now that these sites have been identified, as a result of the Initiative's health facility survey, the Council can better monitor them and ensure the quality of health services delivered.

"The City Council of Kisumu and indeed the entire city is grateful for the partnership with the Initiative," says Samuel Okello, the Mayor of Kisumu. "We hope that by 2015, the city would be able to count on the deliverables with respect to the MDGs because the Council has been able to make significant strides, even where there were scarce resources and deficiencies in technical human resources."

The Initiative worked with interns from Harvard and Columbia Universities, who produced a database of all





## Millennium Cities Initiative

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Millennium City	Millennium Village	Country
Accra	Bonsaaso	Ghana
Akure	Ikaram	Nigeria
Bamako	Tiby	Mali
Blantyre	Mwandama	Malawi
Kaduna	Pampaída	Nigeria
Kisumu	Sauri	Kenya
Kumasi	Bonsaaso	Ghana
Louga	Potou	Senegal
Mekelle	Koraro	Ethiopia
Segou	Tity	Mali
Tabora	Mbola	Tanzania

development organizations in Kisumu. The list is available on the City Council's website, to enable officials to monitor the different organizations' work and determine where to locate new entrants and coordinate development.

Since 2006, the Initiative has arranged several medical missions, training and donations to the Cities. In Mekelle, Ethiopia, a team of visiting urological surgeons working through the Chicago-based KNOCK Foundation joined Ayder Referral Hospital and Mekelle University Hospital for two weeks, conducting difficult surgical procedures and training local staff. They also donated state-of-the-art medical equipment worth \$176,470 to the two hospitals. They will give additional training on this equipment in 2013 to enable Mekelle's doctors to conduct laser surgeries for the first time.

In Education, the Initiative joined with LitWorld, a global literacy NGO, to launch LitClubs in Kisumu's schools, providing learning opportunities and, for girls especially, giving advice on ways to increase confidence. The Initiative has also nurtured partnerships between two Kisumu high schools and Los Gatos High School in California, USA. Nine primary school head teachers travelled to Nairobi for training organized by the African Teachers' Education Founda-

tion, thanks to the Initiative. Girls in schools in Mekelle and Blantyre took part in activities celebrating the United Nations' first International Day of the Girl, when girls at Kisanet Primary School in Mekelle demonstrated how their peers in 20 Mekelle primary schools were trained to use donated sewing machines to manufacture sanitary pads for local distribution.

In Blantyre, the Initiative is supporting plans to open a community radio station. We have also been involved in the African Development Low Income Housing Project, a partnership between Blantyre City Council and the Federation of Homeless People to provide housing, water and sanitation to people living in poorer areas of the city.

To encourage greater regional partnership, representatives of three Millennium Cities gathered in Mekelle in May to talk about progress in investment promotion and the implementation of the Initiative's Regional Partnership to Promote Trade and Investment in Sub-Saharan Africa funded by Finland.

During 2013, the Initiative will hold investment days for Mekelle and Tabora as culminating events of the Regional Partnership. In Blantyre, we will hold a workshop to present the findings of the needs assessments and the household survey, to help stakeholders choose development priorities and design a City Development Strategy to achieve them. In Kisumu we will follow up on this process by helping the City mobilize resources to realize its Strategy. Life-saving neonatal survival training is planned for January for health workers in Mekelle and Koraro, and all programs in health, education, gender and investment promotion will continue.

# PARTNERSHIPS

Clever connections  
to accelerate  
sustainable change

Partnerships with NGOs and the corporate sector are major part of our sustainability strategy. As funding from the Millennium Villages Project gradually reduces towards 2015, we are working closely with a host of organizations to take over and expand the Project's model.

Corporate partnerships are emerging that carry great potential to benefit Village communities, where companies are often both major stakeholders and core donors. Many firms want to develop their corporate social responsibility strategies into measurable and sustainable approaches that show how their investments carry an ever greater positive impact for the communities that host them.

In July, the [Soros Economic Development Fund \(SEDF\)](#), signed an agreement with [Millennium Promise](#) and [Kenya's Cooperative Bank](#) to give cooperatives in Sauri, Kenya, access to new loans. In Sauri, SEDF provided a cash guarantee of \$700,000 topped up with \$50,000 from Millennium Promise, enabling Cooperative Bank to offer twice that amount, a total of \$1.5 million, to selected enterprises. The first to be approved is the New Yala Dairy Cooperative. This process, which forms the backbone of our business development strategy, will gain momentum in 2013, starting with other businesses in Sauri and then moving to other Villages.

The MDG Centre is in the early stages of a partnership with [AngloGold Ashanti](#), the world's third-largest bullion producer. Together, we are exploring how to adapt our model in the context of a major gold mining site and the small-scale miners who work nearby. The mining industry increasingly seeks to provide more than just employment and expanded associated business. As long-term investors, they have a deep interest in the economic progress, stability and security of the local community, who themselves have high expectations of reward from the mining companies. But mining presents unique challenges – and opportunities – for development in the often remote

*Mayange's basket weaving cooperative with baskets for Tommy Hilfiger's store displays.*

and impoverished areas in which it operates. We have this year focused our attention AngloGold Ashanti's Geita mine in Tanzania, surrounded by a poor small-scale agriculture and mining communities. Large-scale mining operations highlight complicated issues relating to compensation, environmental impacts and community relationship management. Small-scale mining often leads to problems of migration, environmental risks, toxic chemical exposure, child labor and poor school retention rates. We are working closely with AngloGold Ashanti and people living near the Geita mine to design integrated plans that boost development and improve the company's community investments and relationships. We hope this will lead to a scalable model for integrated, sustainable development programs in other similar mining areas.

The [Charitable Foundation](#), an Australian not-for-profit fund, will continue to finance work in Dertu and three neighboring villages after evaluations concluded the Project can improve the livelihoods of these vulnerable communities.

Our partnership with [Unilever](#) has provided additional resources for water and sanitation in the Villages – in particular, encouraging hand-washing with soap to reduce diarrhea and respiratory infections, the biggest killers of children aged under five.

In all 16 schools in Mwandama, Malawi, [The Coca-Cola Africa Foundation's](#) School Water Supply scheme increased the use of safe drinking water and encouraged better hygiene. Despite improvements of supplies to households, most rural schools have irregular access to safe water. To help improve this situation, more than 6,150 Mwandama pupils will soon see better water infrastructure, hand washing facilities and sanitary material at school, and will be taught about good hygiene practices in School Health Clubs. These efforts continue the work of the recently concluded Personal Hygiene and Sanitation Education (PHASE) project, funded by [GlaxoSmithKline](#).



## UNITED NATIONS PARTNERS

Many UN agencies and programs continue to help us with our work. The **United Nations Office for Project Services** provides critical operational support. The **World Food Programme** helps improve nutrition levels and build markets for Millennium Village farmers through the Purchase for Progress initiative, as well as supporting the school feeding program. The **UN Population Fund** focuses on universal access to reproductive health. Together with the joint **United Nations Program on HIV/AIDS (UNAids)** and the **United Nations Children's Fund (Unicef)**, we monitor acute malnutrition and work to eliminate mother-to-child transmission of HIV. The project works with the **UN Development Programme** on policies related to scaling up the lessons of the Project.

In addition to the support provided to Ruhiira and Mbola through the Korean Millennium Villages Project, in 2011 **UNWTO ST-EP Foundation** began working with Millennium Promise to establish a sustainable tourism project in Koraro.

KPMG's commitment of \$1.5 million over five years to our recently-launched village at Pemba, Tanzania, has helped bring significant improvements during 2012. Working with the local government, the village is now connected to the electricity grid and a sustainable seaweed farming scheme has boosted incomes. The MDG Centre hosted representatives from the global accounting earlier this year, including Michael Hastings, KPMG's Global Head of Citizenship.

As part of a major publicity campaign for the partnership, Katie Holmes, the actress, visited Ruhiira in her capacity as an ambassador for the **Tommy Hilfiger** brand.

**“ I was drawn to the Project from the moment I heard about it. Its goal is not just to donate funds, but to give villagers the support they need to create a self-sustaining future.**

**Katie Holmes, actress and ambassador for the Tommy Hilfiger Foundation.**

Our ongoing connection with the Tommy Hilfiger fashion house went to a new level this year with the launch of the brand's Promise Collection, which featured African-inspired collections whose proceeds supported the Millennium Village in Ruhiira, Uganda. Baskets from the Coovamaya weaving cooperative in Mayange, Rwanda, were used in Tommy Hilfiger shop window displays in Europe and North America, and in advertisements, including on New York City taxicabs. The Tommy Hilfiger orders helped the cooperative's 146 members to earn a guaranteed income higher than their usual earnings for two months as they fulfilled the contract.

Other private sector support has come from a wide range of leading companies, including Agrium, Ericsson, General Electric, JM Eagle, Mosaic, Sumitomo Chemical and Panasonic. These partnerships have variously given Village



**Store windows of Tommy Hilfiger's Promise Collection with baskets from Mayange.**

residents mobile phone connectivity, modern health technology, free mosquito nets, improved seeds and fertilizer and more than 300 miles of piped water systems.

Millennium Promise Japan and the Korea International Cooperation Agency (KOICA) are key project partners. KOICA is a major donor to the Villages in Mbola, Tanzania, and Ruhiira. This year, representatives from the agency visited both sites and the MDG Centre to assess progress made.

**Table for Two**, which uses donations from the purchase of healthy meals in developed nations to support school feeding programs in developing countries, helped to provide school meals for approximately 39,000 students in the Millennium Villages.

This year, Professor Jeffrey Sachs, founder of the **Millennium Villages Project**, was appointed to lead the UN's new **Sustainable Development Solutions Network**, reporting to Ban Ki-moon, the UN Secretary-General. The network will pool scientific and technical expertise from academia, civil society and the private sector to expand sustainable development solutions at local, national and global scales. The **Earth Institute** will host the Secretariat of the network in New York.



# PRESS REPORTS

To read the listed articles, please go to our website: [www.mdgcentre.org](http://www.mdgcentre.org)

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[Country school kids build global class room](#) NCA, October 2012

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[How business is leading the battle to solve global sanitation crisis](#) Guardian, October 2012

[Earth Institute and Unilever partner to improve one billion lives](#)  
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[Scholarships Brighten Future of Young Girls in Rural Kenya](#)  
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[Millennium Village reforests Mwandama](#)  
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# THE MDG CENTRE STAFF

(31 December 2012)

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