

HARVEST OF HOPE

An economist believes that a five-year aid effort in a dozen villages across Africa can teach the world how to defeat poverty. **Sarah Tomlin** reports on the project's progress in Rwanda.

Hyacinthe Mukaritaganda of Kagenge village helped build a communal water tank, as part of the Millennium Villages project.

Celestin Ndahayo smiles broadly at me from below the corn (maize) that towers a metre or more above him, his daughter Annalita clutching his hand. This is the first corn harvest he has seen here in almost ten years. There was a smaller harvest of beans and sorghum in 2001; last year there was nothing. In the years without good rains, the people of Kagenge (sometimes called Mayange) in Rwanda survive the best they can. Some walk four nights and three days to reach a more productive region. Ndahayo sometimes takes construction jobs to support his wife and four children.

Hyacinthe Mukaritaganda's husband is one of those currently working elsewhere, leaving her to manage their land and look after three children on her own. This season she planted corn on one-fifth of their land, a short walk from Ndahayo's homestead. Thanks to the rains, she is expecting a good harvest, which should provide enough seeds to plant all 2.5 hectares next year. Then, she hopes, her husband will stay at home to help.

The rains, though, are not the only things bringing hope to Kagenge. In 2005, the village was chosen to take part in the Millennium Villages project. Led by the Earth Institute at Columbia University in New York, the project is applying a range of poverty-slashing interventions to 12 sites across Africa (see map). The idea is not just to show that interventions in a number of different areas, properly coordinated and financed, can make a sustainable change to the lives of the world's poorest communities. It is to show how that can be done quickly in a way that can be replicated easily.

Donald Ndahiro, an agronomist trained in Uganda, is the project's agriculture coordinator for Rwanda. He says that when he arrived in Kagenge late last year conditions were desperate. "The villagers were emaciated." They wanted food aid more than they wanted the agricultural advice, drought-resistant seeds, fertilizer and new techniques that the project was offering. "They thought we were making fun of them," Ndahiro says. "We were telling them how to plant, how to harvest, but they were saying they were never getting any good rains. We told them to get organized."

Five months later and the villagers are getting organized. Ndahayo is a member of the agriculture committee that will decide what to do with the surplus from this year's corn harvest. Mukaritaganda is helping to clear land for a tree nursery (villagers sometimes walk

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Fertilizer, seeds and advice are being given to 12 villages in Africa, to demonstrate how properly coordinated interventions can make a sustainable difference to people's lives.

MILLENNIUM DEVELOPMENT GOALS

- Eradicate extreme poverty and hunger
- Achieve universal primary education
- Promote gender equality and empower women
- Reduce child mortality
- Improve maternal health
- Combat HIV and AIDS, malaria and other diseases
- Ensure environmental sustainability
- Develop a global partnership for development

says “We believe it’s possible, especially with the focused leadership we have and the commitment of our people, to make Rwanda a mid-level income country by 2020.” In the context of that commitment, Ruxin is confident that with the help of the Millennium Villages project, Rwandans can succeed in not just turning round one village, but in transforming life for poor farmers across the country.

Money cares

Part of Ruxin’s confidence comes from an assessment of the government. In the aftermath of the genocide of 1994 and the resettlement of some two million returnees from neighbouring countries, 64% of Rwanda’s population was living in poverty (on less than US\$1 a day) in 2000. But despite its internationally criticized role in the Congo war, the government of Paul Kagame is widely seen as committed to poverty reduction, and as embodying principles of good governance from the top down (for example, all ministers are required to declare their annual income).

Ruxin believes that good governance will be an important factor in the long-term success of the millennium villages. Those running the project have deliberately avoided what they see as the worst African regimes. But they say that even in corruption-prone nations, such as Ethiopia and Kenya, the research villages so far remain free of corruption. Sachs points out that if you focus on supplying commodities, such as seeds, fertilizer and nets for protection against malaria, “there’s very little money that changes hands”. That said, Sachs is less worried than many about corruption; he knows people criticize this lack of concern, but doesn’t care. “Corruption is way down the list of practical issues,” he argues, Africa’s miserable roads, poor soil and endemic disease burden are at the top.

Indeed, the road from Kigali, Rwanda’s capital, to Kagenge in the Nyamata district, throws up choking red dust in the dry season and can be impassable in the rainy season. Although the land looks green from the air, the rains can be infrequent and Ndahiro confirms that the soils are poor. Some 70% of the patients at the village’s clinic have malaria and the district has one of the country’s highest levels of HIV, at about 13%.

As well as suffering from Sachs’s top three

ten kilometres to gather firewood) and was part of the team that just built a communal tank to collect rainwater. She invites me with pride to a ceremony in which certificates are awarded to her and the 25 other villagers who worked on the tank.

Leading the way

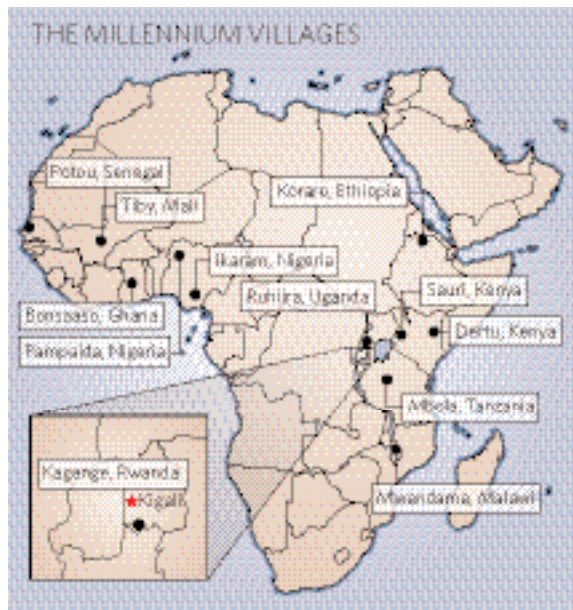
The Millennium Villages project aims to provide improved resources and techniques not only in agriculture, but also in health, education, transport, energy and water provision, and financial management. The plan is

to achieve the United Nations’ Millennium Development Goals (see above, right) for the 5,000 or so people in Kagenge, and for the tens of thousands of people in the 11 villages elsewhere within 5 years — 5 years ahead of the UN target date.

The eight goals, committed to by 189 heads of state in 2000, include halving the number of people living on less than US\$1 a day and controlling malaria by 2015. Progress so far has been limited, especially in Africa — far too slow for the impatient economist Jeffrey Sachs, head of the UN Millennium Project and the Earth Institute. Sachs wants the ‘research villages’ and the data that they provide to offer ways of picking up the pace: “The idea is to demonstrate a practical path and to mobilize governments.”

The man in charge of making such a demonstration is Josh Ruxin, a Columbia University public-health expert and the project’s director in Rwanda. Ruxin, imbued with an impressive energy and passion, was initially sceptical of the village-by-village approach: he wanted to target a millennium country not an isolated village. But Ruxin is encouraged by the Rwandan government’s own ambitious poverty-reduction strategy, known as Vision 2020.

Ben Karenzi, the Rwandan health ministry’s secretary general



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problems, Kagenge has its own particular sadnesses. The local mayor, Gaspard Musonera, lost three-quarters of his family in the 1994 genocide. “Nyamata district lost more than half of its population,” he says. “The implications and consequences of that you can imagine for yourself.”

Kagenge itself is a community created since the genocide. Half the households live in settlement housing — or *umudugudu* — built by the government

for survivors and returnees. Ndahiro is himself a returnee, living in Nyamata near the church where 10,000 people were murdered in 1994 — the blood stains on the walls and altar cloth remain as a memorial. He recalls how lifeless the town was when he arrived in 1997. People were bitter, he says; some didn’t want to continue living.

Grand plan

Musonera sees the Millennium Villages project as a sign of hope for the most vulnerable people in his district, and a big test for poverty-reduction measures. “If it can be done here, it means it can be done elsewhere,” he says — and that indeed is the point. The project is not just about breaking the cycle of poverty in 12 villages, but about learning how to do it in 1,200 or 12,000. Sachs’s plan is to show that with a five-year investment of about US\$550 per person — \$50 a year from the project, \$30 from government, \$20 from other donors and \$10 from the villagers — an integrated package of low-cost interventions

can produce long-term financial sustainability in a way that not only can be repeated but can also be scaled up. The project plans to grow to 78 villages this year by creating clusters around the 12 original research villages. The expansion is being funded by the US Millennium Promise charity, which has so far raised \$100 million to support Sachs’s vision.

Not everyone is convinced that the Millennium Villages project will succeed. Ecologist Ian Scoones at the Institute of Development Studies at the University of Sussex in Brighton, UK, is a member of the Future Agricultures Consortium, which was put together by the UK Department for International Development to focus on African agriculture and development. Scoones points to the Integrated Rural Development and ‘villagization’ schemes that tried to boost African agriculture in the



Angelique Kanyange is one of a handful of doctors working in rural Rwanda.

1970s and 1980s. “They created little islands of success but when donors pulled the plug they all collapsed.” Scoones says he is very pleased that the millennium villages are putting African agriculture back on the map, but he is afraid of old mistakes being repeated, and worried about things moving too quickly. “India launched its green revolution in the mid-1960s on the back of decades of solid investment and research,” he points out. “It didn’t

happen overnight.”

For his part, Sachs sees patience, like a well-developed sensitivity to the issue of corruption, as an overrated virtue. He has no worries about moving too fast. “It happens to be an emergency,” he says. And he has no illusions about the projects working as examples simply by word of mouth. “This is not viral. You can’t do it without resources,” Sachs notes — as ambitions grow, so must spending. The biggest risk, he says, is for official donors to sit on their hands.

The goal is not to do without large transfers of money to Africa, it is to work out how to make those transfers more effective. After all, the individual interventions used in the Millennium Villages project are tried and tested methods, even if they haven’t been applied all together in one location before. Asked about the target of reaching the millennium goals in five years, Celina Schocken, an international-affairs fellow at the US Council on Foreign Relations, says “I absolutely believe they will succeed. I don’t see how they can’t.”

But she’s less convinced about how scale up will be achieved. “What good is an island of prosperity anyway?” she asks. Scoones agrees that the big question is: “How, without that external support, do you replicate?”

That is the question Sachs, Ruxin and their colleagues are trying to answer. By documenting all the inputs and outputs for each research village they hope to tease out the synergies between overlapping interventions. Measuring 35 indicators for the 8 goals across several hundred households in 12 villages is time consuming and costly, but it is necessary to show not just that the investments work, but also how they work, and how they can work better. Only then can they be scaled up to the truly monumental level envisioned by Sachs, who wants to see development aid change the course of history. “I think the

“The idea is to demonstrate a practical path and to mobilize governments.” — Jeffrey Sachs



Donald Ndahiro, an agronomist working for the Millennium Villages project, has helped to transform conditions in Kagenge in just five months.

biggest challenge is the defeatist attitude of the official donor community,” says Sachs. Such rhetoric reinforces the suspicion that Sachs is unwilling to learn from lessons of the past. “People in the development community see some benefit in the publicity Jeff Sachs gets,” says Schocken, who used to work with Ruxin in Rwanda, “but they’ve seen these ideas before.”

Skill shortage

In Kagenge, the villagers assembled for the water-tank certificate ceremony are briefly reminded of the international debate over their future. “This is an important day for the project,” Ruxin tells them during a short address, “You are now the teachers for us and for the world.” Some of the farmers I met in the fields yesterday have donned suits and ties for the occasion. Each villager who received training from visiting Kenyan water specialists receives a signed certificate — the expectation is that they will take the skills they have learned and pass them on to others. After many more speeches by village leaders, the villagers distribute soft drinks and, for those who can stomach it, fermented sorghum, the local brew.

In the weeks before the corn is harvested,



the contrast between Kagenge and the surrounding area is already striking. An emergency feeding centre supported by the UN Children's Fund UNICEF and the World Food Programme was set up in Kagenge in early March, in response to reports of serious malnutrition following last year's drought. Four hundred people from the wider local population are still receiving weekly rations, but not those of Kagenge. The bean crop and corn picked straight from the fields before the harvest mean that they have enough to eat.

They also have a functioning health centre, which serves Kagenge and four neighbouring communities of similar size. The centre now has its own doctor, Angelique Kanyange, known to everyone as Dr Angelique, and its nursing staff has doubled in number. Dr Angelique is zealously improving the nurses' cleaning procedures with demonstrations of the use of a broom and disinfectant. Today, the clinic is seeing more than 35 patients a day, as well as some 50 mothers bringing children for immunization. One of the new patients is Musabyimana, an 8-year-old boy who is blind and in pain because of severe cataracts. His mother noticed his poor sight when he was three months old, but this is his first visit to the clinic. Dr Angelique is not sure what caused the cataracts, but there is hope, she says, because Musabyimana seems to be able to

detect some light and colour. She will refer him to a specialist for treatment. For now, the project will fund it; the mother, a widow, could never afford it.

Rural parts of Rwanda have community medical insurance schemes, but only 12% of families in Kagenge have cover. The goal of the Millennium Villages project is to get 100% coverage, with the hope that as the clinic becomes more useful to patients, more will join the scheme.

From village to province

It is here, though, that scaling up looks harder than it does in agriculture. Buying more fertilizers is easier than making more doctors. "Angeliques are hard to come by," admits Ruxin. Indeed, Dr Angelique is the first government-appointed doctor in a rural health centre, demonstrating the government's commitment to the Millennium Project but also, perhaps, the project's weakness. "The president of Rwanda says 'I want this village to work, so they are going to get the best,'" says Schocken. There are currently about 200 doctors in the country. The medical schools may be able to produce 60 or 80 a year, but the country has a long way to go to reach the World Health Organization's minimum recommended level of one doctor per 5,000 people.

Sachs claims recruitment problems can be overcome with decent salaries. Although the project is mostly about spending money on physical resources, he is in favour of top-up payments for doctors. But even with targeted salary increases, a country such as Rwanda suffers skill shortages in every sector.

Kagenge currently has a team of ten dedicated people who work long hours to motivate the villagers and document their progress. Detailed accounts were not made available to *Nature*, but in its first year the Kagenge project will spend as



"We want a millennium province, not just a millennium village."

— Theoneste Mutsindashyaka

much on personnel as on materials. The budget for the cluster villages being set up in addition to the original 12 is smaller, and they will have much fewer support staff. "Research on top is extremely expensive," notes Ruxin, explaining that in future, and in villages that aren't research focused, costs should be much lower. But Sachs's claim that "the science behind this is broadly transferable without needing large teams" has yet to be put to hard tests.

The budgets matter to Theoneste Mutsindashyaka, a former mayor of Kigali and the governor of Rwanda's eastern province, which includes Nyamata and covers a quarter of Rwanda's population. He is a great fan of the Kagenge project, in part because it fits so well with the government's Vision 2020. He wants the figures so that he can roll out projects informed by the experience more widely. "The documentation is very important to me because I have to negotiate with partners," he says. He is impatient to get moving on the next stage of the project: "We want a millennium province, not just a millennium village," he says.

Within the next year, Mutsindashyaka wants to set up a Kagenge-like village in each of his provinces' seven districts. "We are going to move village to sector, sector to district, but you have to have money," he says. And he is certain he can sell the idea to his friends all over the world, from Quincy Jones to Donald Kaberuka, the president of the African Development Bank. And although scaling up to 3,600 villages is daunting, the governor says he only needs the numbers from Kagenge to get started: "I am total 100% confident that the project will succeed."

From Sachs to the president to the governor to the mayor, the ambitions for transforming the country are vast. But in Kagenge, despite the good rains, the villagers themselves remain wary. They are not as confident that they will achieve rapid progress as the project leaders. Anxiety about what to do with the harvest surplus is high. Celestin Ndahayo and other farmers worry about whether they can really afford both to sell corn and store enough for food security; they are not sure they believe Ndahiro's forecasts for the yields of their smallholdings. And what if the rains don't come next year? In his experience, says one *umudugudu* farmer, when a project is here, then the rains come. Back in 2001, an organization helped them to plant cassava and sweet potato and the rains came. But when they left the rains stopped. So as long as the Millennium Villages project is here he believes it will rain again. He doesn't believe, yet, that his village can learn to flourish in the project's absence. ■

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