

THE MAGAZINE OF HEIFER INTERNATIONAL ® FALL 2013

HEIFER MALAWI

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Tapping
hto the
possibilities

HEIFER ARMENIA

Green Pastures Ahead | 28



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HORIZONS

Changing Lives

Dear Fellow Activists,

NATION ALL INTERNET

There are many ways to tell the Heifer International story. Perhaps most familiar, especially for those who first learned about us by buying or receiving a goat, cow or chicks as a gift, is through the livestock component of our work.

It was told this way in the Heifer classic children's tale *Beatrice's Goat*, where income and training on how to raise goats helped Beatrice Biira's family in Uganda earn enough money for her to get the education she always dreamed about.

Yet behind the word "training" lies the key to understanding Heifer's success in empowering once-vulnerable farmers to gain the knowledge and confidence to drive their own economic stability and success. The impact of Heifer's values-based long-term development goes far beyond what the animal training alone could achieve and sets Heifer apart from other organizations in changing lives for good, not just for the duration of a project.

During a visit to Nepal this spring with our Board of Directors and executive staff, we experienced firsthand what this transformation looks, feels and sounds like. Training in Heifer's Cornerstones of Just and Sustainable Development unites people in a common purpose based on their core values, incorporating such motivations as spirituality, accountability, gender equity and full participation.

In areas where Heifer had not yet started training, we saw women who were afraid to leave the house to talk with strangers; men who dismissed and derided women's capabilities; and farmers who were doubtful of the need for new techniques such as planting nutritious fodder for their animals. There was frustration, embarrassment, reticence and doubt. Questions about responsibility, planning and expected results of their work were met with shrugs and silence.

In contrast, a visit to Koluwa village, where the Manakamana women's self-help group has been a part of Heifer for more than four years, revealed a very different picture. The women here, who had all had several years of training and experience, stood tall and spoke proudly and at length about their accomplishments. They directed the conversa-



The Manakamana women's self-help group poses with Heifer board members and executive staff in Koluwa, Nepal, in April.

tion and were unified, from the striking black and white group "uniforms" they wore to the plans they continued to build for even more community growth.

When asked "what has changed for you through the Heifer training," they answered:

"We feel this is a rebirth for us. We're very happy from the inner part of our hearts. We have built so much confidence that we now know we will only move forward. From the help you have given us, we have been able to help others in return."

Community engagement is the foundation on which all the other tools and inputs are built, preparing small-scale farmers for the successful connection to markets and the self-reliance they build together with their own hands.

Ask these women, "What are the most fundamental principles upon which you build your life?" and many would now answer "Heifer's Cornerstones." All of us who are dedicated to ending hunger and poverty should understand the foundational importance of community engagement in this work and begin to share it as part of the core Heifer story.

Yours for a better world,

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Pierre U. Ferrari, President and CEO

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ENDOWMENT GIFT NOW CAN SUPPLY ENOUGH TO FEED AN ENTIRE CONTINENT FOREVER

AN

World hunger and poverty can't be eliminated overnight, but you can leave a legacy that provides resources for Heifer's work for years to come. Gifts to our general endowment allow Heifer to be flexible in responding to changing needs throughout the world and provide long-term support for our proven approach to ending hunger and poverty. Endowment gifts grow over time, becoming the gift that keeps on giving. To find out how your gift can have a longer-lasting impact, visit **www.HeiferFoundation.org**.



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Data visualization rock star Hans Rosling urges top development players to invite more statisticians to the party.

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In one Malawi village, change starts slowly as a convenient new pump and fresh water ease women's burdens ahead of a new goat project.

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By Katya Cengel Heifer Armenia, with government and World Bank support, unites small-scale farmers into vibrant communities to recharge the country's agricultural economy.



Cover and at right: Agnes Hedisoni, age 11, enjoys the benefits of a new water pump in Ndaula village, Malawi.

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28 Aida Vagharshak gathers feed from the family cave to feed her chickens. Khoznavar, Armenia, villagers used to live in the caves but now use them for temperature-controlled food storage.

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Cover photo by Russell Powell Top photo by Geoff Oliver Bugbee

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LETTERS Readers Respond

TAKE A CLOSER LOOK

I read in your May issue the article regarding Laura Bush and Egyptian women. Very interesting, and I commend the former first lady's efforts. But under the heading of women's (and everyone's) rights, I would like to call attention to an issue right here in the United States. On May 13, the day after Mother's Day, PBS broadcast a documentary film called The Invisible War. It's a must-see for all Americans. It documents the cover-up of rape and sexual assault against women and men in our armed forces. The disgusting thing is that it gets covered up, pushed to the side and the victims are basically told to suck it up.

My point is that this country tries to right so many wrongs in the rest of the world. Very commendable, but how much does that mean when we can't address terrible wrongs in our own country?

> ARTHUR SINISI Bronx, N.Y.

GAINFUL GOATING

Your "Goating for Broke" article in the May 2013 issue actually discourages



This photo in the May 2013 issue did not list everyone's names. Pictured in the front row, from left to right, are Elisamehe Mbwambo and Kelly MacNeil. In the back, from left to right, are Randy Bagg, Marta Haley, Joseph Lugangire, Brendan Bagg, Gail Neuwith-Geisler, James McCurdy, Pricus Shirima and Valerian Aloyce.

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people from getting a goat. I have been a goat keeper since 1976 in rural California. I've kept dairy goats for 25 years and meat goats for 13 years. I was a 4-H goat leader for 20 years and have been a Grange member and officer for eight years. The average person would not start out on an empty piece of land with 10 dairy goats, needing fencing, shelter, lighting and high-cost feed. I recommend that people interested in keeping goats decide the use of the goat-dairy, meat, fleece, pet or weed eater-and buy accordingly. Most people will already have some fencing and may only need a bit of cross fencing. A suitable shelter for two young goats can easily be made from used lumber. Always get at least two goats, these are herd animals who do not do well by themselves. My goats get all of my tree and plant prunings, besides alfalfa hay and a mix I make up of corn, oats, barley, alfalfa pellets and sunflower seeds. This is much less expensive than a brand name fancy mix. I sell little does and bucks each year, which is a great source of income. I have 37 years of tax records that show it does not cost me a \$1,000 a year to keep a goat. We do our own dehorning, shots and hoof trimming, easily learned skills. Goats are just plain fun to have, give it a try!

> BERNADETTE FAUST Ramona, Calif.

DON'T MESS WITH DAIRY

Just received the May 2013 issue of *World Ark* and read the letters. I am shocked and so disappointed to see that Heifer International would reprint such a slanderous, untruthful letter of opinion from Robyn Parker of Arnold, Mo. She has a right to her opinion of the U.S. dairy industry. However, in my opinion, she is wrong, wrong, wrong!

I grew up on a dairy farm, and as a journalist, I still know many dairy farmers across the U.S. No one cares for their animals more than dairy farmers; milk is not full of chemicals or antibiotics. Farmers take pride in their animal husbandry practices and strive to produce the highest quality milk possible. Milk from a farm is tested multiple times for quality before it ends up on grocery store shelves.

All I can say is, "Wow." A highly respected international organization known as Heifer allowing one lowly opinionated person to unfairly slam U.S. heifers and their caretakers.

> PAULA MOHR Anoka, Minn.

BE THE CHANGE

We need to support Heifer, but perhaps our even greater personal contribution to the well-being of poor farm families around the world is to significantly reduce our carbon footprint. Each of us must reduce our fossil fuel use by using fuel efficient cars, biking, walking, using public transportation, buying only what we need, reducing heating and cooling use, switching to solar or wind power, etc.

And we must support our representatives in government in their efforts to shift to alternative energy and deal seriously with the current dangers of climate change and global warming.

It is us, the residents of developed countries, who are primarily responsible for the suffering climate change is causing worldwide. It is important, but not

Q&A FALL

What aspect of Heifer's work is most meaningful to you as a donor and why?

Email your answers to worldark@list. heifer.org. Please limit your answer to 250 words or fewer, and include the city and state where you live. We reserve the right to edit responses for length, clarity and grammar.

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enough, to give money to Heifer. CYNTHIA AGUILAR West Tisbury, Mass.

TENDING THE SAHEL

I am delighted that you are establishing programs in the Sahel. As the head of a small nonprofit organization that helps to build schools in the Sikasso region of Mali, near the border with Burkina Faso (www.BuildaSchoolinAfrica.org), I have spent a fair amount of time in southern Mali and have often wished that Heifer had a presence there. Many people customarily let their animals—cattle, sheep, goats, donkeys—wander and forage with little or no supervision.

This, of course, can contribute to overgrazing and expose animals to contagious diseases. Manure that could be used to enrich their soil and improve crops is scattered and wasted. The Heifer policy of confining the animals and growing and bringing food to them would be of great benefit to the animals and people alike, and could mitigate some of the environmental problems as well. I look forward to reading more about your programs there.

> JUDITH LORIMER Pepperell, Mass.

Q&A MAY

Do people in the United States and other developed nations have a responsibility to respond when disasters strike in poor countries? Why or why not?

As an international studies major, I have discussed this topic heavily in many of my courses. I think that "responsibility to respond" is a bit vague, because ultimately, a responsibility to respond in what way? This could mean that the U.S. is responding with troops or volunteers, with finances or with words of encouragement. Ultimately, I do not believe that the U.S. is obligated to send people or money. I believe the correct way to respond is by donating

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manufactured goods and products; for example, lumber, metal, machinery to rebuild industries, etc. By donating these commodities, we are encouraging local efforts and education instead of giving handouts, which will ultimately do more harm than good.

> HILLARY HARDESTY Arlington, Va.

Contact Information for Heifer Education Opportunities

Heifer Ranch Perryville, Ark. (501) 889-5124

www.heifer.org/ranch

Heifer Village Little Rock, Ark. (877) 870-2697 www.heifer.org/village

> Heifer Farm Rutland, Mass. (508) 886-2221

www.heifer.org/farm

Heifer Global Village at Howell Nature Center Howell, Mich. (517) 546-0249

www.howellnaturecenter.org

Heifer Global Village at Shepherd's Spring Sharpsburg, Md. (301) 223-8193 www.shepherdsspring.org

We want to hear from you!

Please send your comments to worldark@list.heifer.org. Include your name, city and a telephone number or email address. Letters may be edited for length and clarity, and may be published online as well as in print. Because of the volume of mail we receive, we cannot respond to all letters.



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Since 1944, Heifer has helped 18.5 million families in more than 125 countries move toward greater self-reliance through the gift of livestock and training in environmentally sound agriculture.

Heifer International is a member of InterAction, the largest alliance of U.S.-based international development and humanitarian nongovernmental organizations, and of Global Impact. Federal and state employees may designate gifts to Heifer through payroll deduction by entering CFC #12079.

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FOR THE RECORD

Facts & Figures

THE TOP 20

Taking Measure

ousehold income is an important gauge of the well-being of a nation, but it's not the only important indicator. A new system called the Social Progress Index offers a new way to measure the health, happiness and prosperity of nations.

Social progress is defined as a society's capacity to meet the basic human needs of its citizens, establish the building blocks that allow citizens and communities to enhance and sustain the quality of their lives, and create the conditions for all individuals to reach their full potential. The Social Progress Index—an initiative headed by a Harvard Business School professor and members of a group of economists, philanthropists and other thinkers that make up the Social Progress Imperative—measures 50 countries based on 52 indicators. Those indicators include things like safety, sanitation and obesity levels.

Sweden tops the list while the United States ranks sixth. To learn more and see the full list, visit **socialprogressimperative.org**.

Sweden United Kingdom Switzerland Canada Germany **United States** Australia Japan France Spain Republic of Korea Costa Rica Poland Chile Argentina Israel Bulgaria Brazil **United Arab Emirates** Turkey



Commute Happy

September 22 is World Car Free Day, and if you plan to celebrate it, you'll probably be glad you did. A survey of 828 people by a Ph.D. candidate at Portland State University revealed that people who ride a bike to work enjoy their commute the most. Next happiest are walkers, followed by express bus riders, train riders, carpoolers, local bus riders and then drivers, in that order.



Jargon Data visualization is the communication of information through graphical means.

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Throwing It Away

V canvas grocery bags in the car again, didn't you? It happens to the best of us, but try to remember next time. Roughly 1 trillion plastic bags are made and used each year, and each one takes 1,000 years to fully degrade. Until then, many of the bags end up bobbing around in the ocean, where they can kill marine animals.



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THE GOOD LIFE

Tips for Better Living



Leave It

t can be hard to relax and enjoy a beautiful fall day when there's so much raking to be done. So what if you just

skipped it this year?

Lots of us rake because we fear a coating of leaves will kill the grass underneath. That's not necessarily the case, though, since grass is usually going dormant as the leaves fall, and the leaves will likely be well into a state of decomposition by spring (maple, ash and birch leaves decompose fairly quickly, but oak and beech leaves take longer).

So instead of dedicating your weekends to raking this autumn, try just going over the leaves with a mower a few times. The small pieces can be left on the ground, where they will decompose relatively quickly, releasing nutrients into the soil. If the leaves are on a flowerbed or a garden, they can provide warmth for the soil until spring.

If you're looking for another reason to scratch raking from your chore list, consider that leaving leaves on the ground also saves space in landfills.

Give Me a Beet

oasted beets are sweet, inexpensive and super easy to make. Just wash them, chop off the green tops and put them on a foil-lined pan. Drizzle with oil and salt, then fold the foil in half and crimp the sides closed. Roast at 375 degrees until tender. Small, young beets will be done in about 25 minutes, but larger beets can take an hour or more. Once they're cool, peel the beets with your fingers or a paring knife. You can serve them with oil and salt or slice them for salads.

If your beets came with the green tops still on, don't toss them. Instead, sauté them in olive oil and add salt for a side dish.

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Fed up?

here's no question that most people in the United States get enough calories each day, but nutrients are a different story. Many of us are coming up short on seven key nutrients, according to the USDA.

Here's what you might be missing:

What it is	Why you need it	Where to get it
Calcium	Strong bones	Dairy, leafy greens
Fiber	Reduces the risk of heart disease, obesity and diabetes	Beans and cereals
Folate	Helps prevent birth defects	Lentils, leafy greens
Iron	Energy metabolism	Meats, poultry, seafood, beans, lentils, spinach
Potassium	Counteracts over- consumption of salt, maintains fluid balance, prevents kidney stones and bone loss	Fruit, vegetables and dairy products
Vitamin B12	Healthy red blood cells	Meat, eggs, dairy, sardines, salmon
Vitamin D	Bone health	Eggs from pastured hens, salmon, herring, mackerel

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It's the Small Things

aring for the Earth is a key part of Heifer's mission. There are plenty of high-tech ways to do that, like installing solar panels or driving an electric car. But don't underestimate the dozens of low-tech ways to lighten your footprint. For example, instead of using the heat-dry option, open your dishwasher after it runs and let your dishes air-dry. To avoid creating more demand for plastic, one of the most prominent pollutants on the planet, carry your own glass or bottle to refill so you don't need to buy bottled water. Choose foods packaged in glass instead of plastic.

Have any other good ideas on how to take baby steps toward sustainability? If so, we would love to hear them. Send your suggestions to **worldark@list.heifer.org**.

Beauty Tips from Oscar the Grouch

round the globe, roughly one-third of food produced for human consumption gets tossed out. If you're looking for new ways to make a dent in that statistic, try ditching the chemical peels and using fruit and vegetable peels instead.

- Sprinkle sugar on the flesh side of banana peels and use as an exfoliating loofa in the shower.
- Perk yourself up by rubbing orange or grapefruit peels on your face (avoiding your eyes) and then rinsing with warm water.
- Rub the fleshy part of an avocado peel on your face for a rich moisturizer.
- Press the non-skin side of potato peels on your eyes for 15 minutes to reduce puffiness.

SOURCE: MOTHER NATURE NETWORK

Alternative Medicine

eifer International's project participants in the South American highlands use llamas and alpacas to haul cargo up and down the steep slopes of the Andes. An elite class of llamas and alpacas in the U.S. stay equally busy, but their job descriptions are far different.

Therapy llamas and alpacas routinely make their rounds at hospitals and rehabilitation centers, where their soothing presence gives an oxytocin boost to patients struggling with illness, injuries and anxiety.

Llamas and alpacas can't just ramble into a hospital and get to work. To become therapy animals, they must first undergo rigorous training to ensure they won't get spooked around traffic, noise or ornery patients. While both the training and the sometimes-grim settings can be difficult, there are perks to the job. Pretty much everyone therapy llamas and alpacas visit offers them a hug or a kiss.



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ASKED & ANSWERED

Haiti Earthquake Aftermath

Aid Gone Awry

On Jan. 12, 2010, one of the poorest countries in the Western hemisphere suffered one of the deadliest natural disasters of all time. The 7.0-magnitude earthquake that shook Haiti caused 230,000 deaths and severe damage to its already fragile infrastructure. Jonathan Katz, the only full-time American news correspondent in country at the time of the quake, watched as some of the \$16.3 billion in emergency aid was squandered. In his new book, *The Big Truck That Went By: How the World Came to Save Haiti and Left Behind a Disaster,* Katz explores why much of the aid only furthered the country's long history of poverty and catastrophe.



By Maggie Carroll, World Ark contributor

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WORLD ARK: When and why did you move to Haiti?

JONATHAN KATZ: A few years out of graduate school, I got hired by The Associated Press as a temp in Washington. At the end of that year, in the beginning of 2006, I was hired as the AP correspondent for the Dominican Republic. About a year and nine months later I ended up being moved to Haiti.

What was it like living in Haiti preearthquake?

It was never an easy place to be. Haiti can be a very nice place, but also a very frustrating place. You'd go out to gorgeous restaurants, full of foreigners and Haitian elites, wearing their designer dresses and diamonds, with lively music and delicious food. Then you'd leave and go outside into the pitch-black night, careful not to step in a pothole, while trying to avoid being kidnapped or injured. If you get in an accident you won't be able to go the hospital. If you get robbed you won't be able to call the police. You can expand that to the world of reporting as well. I was the only foreign correspondent there full time. It meant that I got to do everything! If I saw a great story it was mine. As a reporter, in a very perverse way, it was luxurious. There is so much drama and the struggle for survival is so visceral, that from a cynical point of view, which frankly that's where we come from as journalists-we are just looking for the story-there were great stories everywhere. It's all a fascinating and rich environment to be a writer in, but you have to put up with a lot of stuff.

Where were you when the earthquake hit? I was playing an online quiz game in my room. The next day we were going to go up north to do some reporting. So Evans (the translator) was downstairs making flight arrangements, and I was upstairs preparing. Not much going on that day. The day after the quake, the AP chartered two planes and flew [other reporters] in by early afternoon on Jan. 13.

How quickly did you realize that restoration efforts were being mismanaged?

It can be very hard to tell right away if something is effective. In regards to coverage, I started figuring out aid issues fairly quickly, because AP kept sending me out of the capital, unlike other news organizations. People were

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In September 2010, a tent city on the southern edge of Port-au-Prince, Haiti, (above) was one of many still housing families displaced during the January earthquake. More families whose homes were destroyed in the quake lived in shacks along the median of the road out of Portau-Prince (near right). Further south of Portau-Prince on the way to Les Cayes, a sign requests help from passers-by (far right).

fleeing the quake zones and returning to their villages and towns. When I got to these other places that the people were escaping to, there was nobody there. People were leaving the capital, but no one was getting aid to encourage them to stay in the countryside and keep out of the capital in order to keep from overcrowding. The crowds [in Port-au-Prince] were an enormous problem. When people spontaneously spread themselves out, it can actually be very useful for those trying to provide aid. The responders missed this and did not use the opportunity properly. All the aid was being directed at Port-au-Prince.





Why do you think the aid was so poorly distributed?

I think the main thing was the inherent disorganized and uncoordinated nature of the response. In some ways, because it wasn't properly channeled, it ended up causing more problems than helping. As I mention in the book, things like a Danish hand puppet shipment were impeding the accessibility of necessary supplies. I understand that someone in Denmark wanted to send [the puppets] to cheer up the children, I get that, but still it was uncoordinated. In a certain sense, you can only have one thing in one spot. If you have a big pile of stuff that nobody needs in that spot, it blocks the

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ASKED & ANSWERED

Haiti Earthquake Aftermath

stuff they actually need. Responders didn't know what to do. They had no idea where to go and had no one to take orders from. Coordinated orders were not happening.

What happened when the initial surge of attention calmed down?

I think we often misunderstand the way interest and attention affect [what happens] on the ground. I think we assume that high attention means good results. But if things are well organized, you can have an effective response with very high attention or very low attention. You just have to have the right institutions in place. High attention and high results have nothing to do with one another, and we often think far too much of the purity of our intentions and the effectiveness it can bring to bear. It is an important myth to bust.

You had more time to spend on different aspects of the situation. What do you feel needed to be done to aid Haitian farmers?

With the understanding that I am a journalist and not an agricultural expert, there are two major things that need to be done. The first thing, the major thing, that has made life hard for Haitian farmers for the last 30 years is the food policy with the outside world, especially with the United States. The most important thing that could be done from a level of power and policy would be to change that food policy. Until you fix that it doesn't matter what you do. As long as it is not economically viable to be a farmer in Haiti, it doesn't matter what you do. Once you get done fixing that giant thing, there is a second giant thing



Author Jonathan Katz was the only full-time U.S. news correspondent in Port-au-Prince at the time of the January 2010 earthquake.

to fix, which is solving the problem of land ownership. This is an intensely thorny, politically charged and culturally sensitive matter that people usually want to avoid. Most people don't know who owns what land. It is unclear if a farmer is going to invest in a parcel of land and whether there is a clean title on it. Farms are often lost to a corporation or individual and nothing can be done to retrieve it.

Are nonprofit organizations working to alleviate these issues?

Far too often, people who work in the agriculture sector only focus on land maintenance and care as though Haitians are children who need a tutor. They tell them "No, don't use too much of this" or "Oh no, don't use that tool." That's fine and there is something to be done in that area of work. But in general, people who are coming in from the outside need to be very careful to respect the intellect and experience of these people they are dealing with. These are people whose families have been farming for this land for 200 to 300 years and probably know more about it than visitors do. A lot of this nonprofit work, like microloans and small subsidies, don't make a difference if you're being undercut on a daily basis by policy and lack a strong basis on land ownership.

Why do you think the non-governmental work is not achieving optimal results?

This is the problem with NGOs in general: they want achievable results. Frankly, donors' expectations are very low. In a country where people are hungry now, if there are food problems in 20 or 30 years, the donors won't be surprised because, after all, it's what was already happening. In addition to that, people want to do these easily attainable projects. The project gets a stamp of completion and you move on to the next one. The core problem here is the undercutting of an entire food sector and the land tenure problem as I mentioned before. Those problems have to be fixed first. It is a big mess and this stuff needs to be sorted out if people really want to make a difference.

What is your next move?

I'm currently promoting and doing interviews for the book. I'm still somewhat involved with Haiti and often write about it, though I am no longer the AP correspondent for the country. I poured everything I had into this book. At the moment, I'm transitioning into a freelance lifestyle but who knows, I may end up back in someone's stable.

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Heifer Haiti Empowers Small Farmers

Heifer Haiti is committed to putting solutions in the hands of Haiti's small farmers in rural areas of the country, said Director Hervil Cherubin, who is from Haiti and assumed the lead of the program in 2011.

he country program's \$18.7 million Rural Entrepreneurs for Agricultural Cooperation in Haiti (REACH) project—the largest animal project of its kind in Haiti's history—will help change the lives of 20,250 Haitian families by:

- Empowering women to step up as leaders and entrepreneurs in their communities;
- Improving Haiti's inefficient foodproduction and soil-protection systems;
- Training Haitian farmers in disaster preparedness, including safeguarding assets such as animals from disaster;
- Protecting the environment by using animals complementary to crops and using techniques like zero grazing that protect groundcover and trees;
- Creating dependable work opportunities for Haitian youth while also working to reverse the aging farm population.

The project will boost livestock markets for goats, cattle, fish, poultry and pigs through improved breeding, nutrition, care and training, reducing Haiti's reliance on imported livestock and meat and improving farmers' links to local markets.



Heifer President and CEO Pierre Ferrari with Pastor Jean Gibbonz Desgrave. Desgrave is a farmer and entrepreneur working with Heifer to build a goat production center on his land in the Central Plateau region of Haiti.

"If you really want to change something in this country that currently has poor-quality animals, you have to invest long-term," Cherubin said. "We're developing our own high-quality centers to improve the quality of animals throughout Haiti and reduce imports."

Heifer's President and CEO Pierre Ferrari agreed: "What we're doing is addressing the problem systematically and with scale. It's not just a pilot project. We're building a system that creates value for everyone in the production chain and that empowers Haitian farmers to have a coherent and powerful voice on land tenure and other policy issues so they can succeed.

"It's slow; you don't see it right away," Ferrari said. "But in 10 to 15 years, we will look back and measure the difference in quality and income and economic value created by this program. Many of the complaints about organizations working in Haiti are that they don't stay long enough to make any real change. Heifer has been here for more than 20 years, and we're investing in structural change and the long-term success of Haitian agriculture."

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DATA VISUALIZATION ROCK STAR HANS ROSLING SHOWS THE STATE OF THE WORLD IN AN UNDERSTANDABLE WAY, WITHOUT DIMINISHING ITS COMPLEXITY.

BY **RAGAN SUTTERFIELD**, *WORLD ARK* CONTRIBUTOR ILLUSTRATION BY **JACKIE BESTEMAN**

ANS ROSLING is many things—a doctor, a statistician, a sword swallower, a performance artist—but he is most of all a man of facts, a conductor of data. In the data he finds a kind of hope, but it is hope that can be quantified.

Call the Swedish professor of public health an optimist, and he will correct you. He prefers to be called a "possibilist." Rosling sees the problem and the solution in the numbers, and his hope comes through their analysis.

"[Tracking development work] is like walking in a fog," Rosling explained. "You don't know how far you have come toward the peak you are [working] to climb, but when it's clear you can suddenly see, 'Oh, we've already reached to here.'" That's what he shows us through data visualization, "the way it is," absent emotional labels.

For instance, if you look at his "200 Years That Changed the World" visualization, "the way it is" goes well beyond the old categories of "developed" and "developing" countries. "If you divide the world that way, then the developing world contains 6 billion of the 7 billion people in the world," Rosling said.

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This graph from Hans Rosling's Gapminder.org shows by country how long people live and how much money they earn.

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IT IS DISMANTLING THOSE SIMPLE DICHOTOMIES AND OLD IDEAS THAT LED ROSLING TO DEVELOP AN INNOVATIVE WAY OF DISPLAYING DRY STATISTICS—NOT ON SIMPLE BAR GRAPHS OR TABLES—BUT AS MOVING ANIMATIONS.

The intro to this chart notes, "200 years ago, all countries were poor and life expectancy was less than 40 years." Yet hit play, and watch how specific regions of the world, highlighted in color-

coded bubbles on axes of life expectancy and income per person, begin to bob and weave and gradually rise from their grim beginnings in the 1800s. Finally, in 2011, not one country measured here has a life expectancy of less than 40 years.

Countries often labeled as "developing" are as varied as Brazil, which is a major lender to the United States, and Somalia, where most people are malnourished. It makes no sense to lump those two countries together, Rosling points out. It is dismantling those simple dichotomies and old ideas that led him to develop an innovative way of displaying dry statistics, not on simple bar graphs or tables, but as moving animations. These tools are best viewed and most beautiful in their animated form, but snapshots in time are also useful in tracking trends (see Mapping the Wealth and Health of Nations chart at left).

Rosling said his visualizations "started and continue with trying to explain the world," so that people can put their resources into solving its most real and dire problems. As a professor of public health, he was frustrated that so much time was spent by his students just to find the data that they no longer had time to invest to make the data useful. "Why not give them the data and make it so that they can spend their time thinking about it?" Rosling said.



It was that motivation that led him on a quest to show the state of the world in an understandable way that didn't diminish its complexity. It was Rosling's son Ola who made his father's stunning use of the facts possible. Ola Rosling dropped out of university and spent what his father said was "70 hours a week for seven years" to create Trendalyzer, a software tool that can be loaded with any kind of data and create stunning animations. The software is freely available to all, acquired by Google in 2006 from Rosling's Gapminder Foundation and made a part of Google's free Public Data Explorer.

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"WE MUST MEASURE HOW COUNTRIES ARE PROGRESSING. ONLY BY MEASURING CAN WE CROSS THE RIVER OF MYTHS."

—HANS ROSLING

Rosling may be data visualization's rock star, but it's a growing field, with computer scientists and statisticians specializing in unique ways to show us the numbers. There are more than 50 data visualization software programs available, many of them open source and freely available like Trendalyzer and Google Public Data Explorer.

Communicators, especially journalists, have joined the data visualization revolution by working to show hard-to-understand statistics in striking and understandable ways. The British newspaper *The Guardian* has a whole department dedicated to data visualization. The World Bank, too, is using the tools of visualization to help the public understand progress toward the United Nations' eight Millennium Development Goals, which the U.N. uses to measure the most important areas where the world needs to make progress—areas like poverty, malnutrition, education, maternal health and gender equity.

Tariq Khokhar, open data evangelist at the World Bank, said there is now "a range of easy-to-use tools that can produce useful, elegant and interactive visualizations of statistics."

Few have communicated the data so well—and to so many—as Rosling. A supreme example is Rosling's 2006 Technology, Entertainment, Design (TED) talk "Stats that reshape your worldview," a 20-minute presentation that brought Rosling to the attention of many around the world. The talk has been viewed more than 5 million times online and has been translated into 47 languages.

Speaking in his heavy Swedish accent, Rosling says it was while teaching students about global health that he realized the biggest problem he faced was "not ignorance; it was preconceived ideas." His students believed that the Western world was characterized by low birth rates and long lives, whereas the "Third World" was not. What Rosling did next was astounding.

Using Trendalyzer, he took the available data and showed how that reality has changed from 1962 to

2004. That preconception about birth rates and mortality was plain wrong, and the world is in fact showing real progress. The facts themselves are surprising enough. What is more remarkable is the clarity with which he communicates the data.

Rosling's showmanship extends beyond academia and development, as you can see in the swordswallowing segment of one of his TED talks.



Hans Rosling demonstrates his showmanship by swallowing a sword during a TED talk.

Visualizing the data as it relates to specific targets like the Millennium Development Goals shows clear evidence that the international development work of many organizations has been effective. Improvements from 2005-2010 are a hopeful sign.

However, as the World Bank's Khokhar said, "The [Millennium Development Goals] also showed us ... that we often don't have the data to measure progress in key areas of development." For instance, malnutrition can be a hard thing to measure using standards like Body Mass Index. Children who are malnourished can be fine according to BMI, but their height can be stunted. As development agencies work to understand the extent of malnutrition, they are trying new methods such as measuring wrist circumference to more accurately identify malnutrition.

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"SETTING CLEAR GOALS AND FINDING MEASURES THAT WILL MARK PROGRESS TOWARD THEM CAN IMPROVE THE HUMAN CONDITION." —BILL GATES

Hans Rosling brings development data to life in his TED talks, which have been translated into 47 languages.

Rosling is even more pointed in his criticism of the data gaps. "The whole Millennium Development process has not led to any new data collection," he said.

To visualize the data, you have to have it, he said. If we want a view of the complexities of the world, we need more data collection. For instance, one of the Millennium Development Goals is to improve maternal health, yet in many countries women who die in childbirth are not assisted by a qualified professional and the deaths are never recorded. If we want to achieve improved maternal health, then we must work to improve data collection around maternal mortality, Rosling said.

In his Annual Foundation Letter for 2013, Bill Gates made the case for making such measurements at the core of the Bill & Melinda Gates Foundation's work. "Setting clear goals and finding measures that will mark progress toward them can improve the human condition," Gates wrote. Gates points specifically to Rosling's work, even quoting Rosling via Twitter: "We must measure how countries are progressing. Only by measuring can we cross the river of myths."

What impresses Rosling about the Gates Foundation's work is its patient, analytical approach. "They are not in a hurry because they don't have to be re-elected," Rosling said. Instead, they are working carefully and meticulously to close the data gaps that have been hindering the achievement of the Millennium Development Goals. For example, the Gates Foundation funded a 10year grant that will enable the Gallup organization to collect data on the financial transactions of the poor and provide it to the World Bank, where it will be freely available to other organizations. The Gates Foundation is funding similar projects in agriculture and public health and hopes to add more data collection-focused projects in the coming years.

For Rosling, the greatest obstacle toward achieving those goals is not money, but understanding. There is a picture of Rosling on the Gapminder website, with only his head and shoulders showing above water. He is wading through his "river of myths"—a river that is both deep and wide. To build a stronger bridge of data, Rosling said that collection has to go deeper than the national levels.

We have to be able to see region by region, village by village what is happening in terms of infant mortality, birth rate, women's education, etc., he said. For those who want to change the world, he said the task is to "speak to what we really know."

We must work to better the lives of the world's very poor, but first we must understand the reality of who they are. What is the cause of their poverty? How much progress are we making? Do we start with helping countries become wealthy or does health come first?

Rosling is making the facts clear so all can see the form of possible solutions and progress take shape. In its beauty and simplicity, it's hard not find hope there.

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Story by Austin Bailey, World Ark senior editor Photos by Russell Powell In this Malawi village, change starts slowly as a

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convenient new pump and fresh water ease women's burdens ahead of a new goat project.

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Odeta Shata, above, hauls water from the swampy wetlands near Ndaula village. Although easy to get, the water is often dangerously dirty. Previous page: Cecelia German, left, and Mary Hero pump clean, fresh water at a new borehole.

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"Adding water to our list of things we can do changed where we can work." -Elizabeth Bintliff

DAULA, MALAWI—When you talk about water, you talk about women. In Malawi, as in many developing countries, it's women who walk miles to fetch the water and women who balance water buckets on their heads even as they haul children on their backs. It's women who need water to get the cooking and washing done. It's also women who tend to

parasites. If they made the trek to the nearly dry wells and had to spend hours waiting, a few risked being beaten by their husbands upon return. Some of the men in Ndaula wouldn't believe fetching water could take so long and accused their wives of visiting boyfriends in other villages.

their children when they fall sick with cholera, or diarrhea, or other waterborne illnesses.

On the dusty red roads and footpaths leading away from Ndaula, a village in the central region of Malawi, women used to walk an hour or more to get to the closest wells, still miles away. During dry weather, the women had two choices: Wait in line, sometimes for hours, for their turn to scrape up water as it slowly refills the nearly dry well, or take their chances with the murky water easily gotten from a pit in nearby wetlands.

Both options came with serious drawbacks. If the women took water from the pit in the dambo, or wetlands, they



and their family risked becoming sick from bacteria or

Agnes Chisale, a village elder who reports her age as



A young girl totes both a tub of water and a younger sibling home after fetching water from the village borehole.

88. made the daily walk for water for decades. Women from throughout the village would gather around 6 a.m. to make the hour-long walk together, and they would pass the two- or three-hour wait in line at the well together, too. Chisale also remembers many times when sickness-either diarrhea or abdominal pain and bloody urine-broke out from water fetched in the dambo.

The younger women are lucky to be spared having to make this choice between long walks and potential sickness thanks to a new borehole that brings clean water right to the village square.

Heifer International

is known for its interventions with hooves and feathers, not cement and steel. But when Heifer came to Ndaula, it was clear that the women would be overburdened if they had to add fetching water for the animals to their list of daily chores.

In the past, the lack of clean and readily available water would preclude Ndaula and places like it from becoming a Heifer project site. But in recent decades as access to water became a challenge for more people around the world, Heifer began dedicating more of its resources to helping people tap the water they need to become self-reliant.

"For me, hunger and thirst are two sides of the same coin," explained Elizabeth Bintliff, Heifer's vice president for Africa. "We can't not pay attention to it."

And so, in Ndaula, the borehole came before the goats. Bursts of cool water pour easily from the pristine new pump, then sluice their way down a smooth cement trough. A thoughtfully placed cement stump provides the perfect halfway point as women hoist heavy buckets from the ground to the stump, then from the stump up to their heads. Any water not captured spills down the trough and drops back down into the ground.

The pump, on display right next to the sturdy tree that marks the village square, is visible from the dirt road that runs past Ndaula. It's a natural gathering place for the women who make the now short trip to fetch water each day, and on a May day both men and women met beside the borehole to talk about the second phase of the Heifer project.

Residents met there for a community-wide meeting to talk about the changes wrought by the borehole as well as the changes everyone expects when the goats arrive. Some of the families slated to receive the first goats are already finished constructing elevated pens and fencing to keep their goats safe and out of their neighbors' gardens. Constructed about four or five feet

Top: The women of Ndaula congregate at the village center, where a new borehole makes fetching water quick and easy.

At right: Gertrude Kajedula, 12, will never have to trek hours and miles to fetch water like her mother once did. The young women of Ndaula now have more time to devote to school.





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Residents of Ndaula village in Malawi take a midday break from working to meet with staff from Heifer International. The group reported that gender roles are slowly changing, and men are beginning to take on more of their share of child care and other daily chores.

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Agnes Hedisoni, 11, plays in the water with other children from Ndaula village. Never before has the community had such a safe, abundant supply of water so close to home.

off the ground, these pens have screen-like floors that let the manure and urine fall through so they can be easily gathered and used for fertilizer, while also keeping the goats' living space relatively clean. The tops of those tall pens peeked over the grass roofs of the mudwalled houses bordering the square.

Women settled on the dusty ground with their children, while men claimed all of the chairs. It's a familiar seating arrangement in rural Malawi, where women shoulder most of the work and men take on most of the lounging. The daily demands of childcare, cooking, washing, gardening and animal care all fall to the women, whose straight backs and chiseled arms hint at the strength that's required of them each day. Men's work is more seasonal and sporadic. They're responsible for patching roofs, doing farm

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work and otherwise keeping homes in good repair. A man who steps in to help with the children risks being mocked by other men. This antiquated, gender-based division of labor is budging only slowly, and young mothers worry their daughters will be hamstrung by the same system.

"The men don't want to change anything," said Cecelia German, mother of 1-year-old Ida. "We're fearing our daughters will fall into this tradition."

German is right to be concerned. "It is time for our visitors to go," one man said, eliciting laughter from the others, when questions about changing women's status in the village came up.

But hints of change are already here. A roughly equal number of young girls march off to school each day as boys, although girls are more likely than boys to drop out after primary school. Women are more likely to plan smaller families than in the past to be better able to afford education expenses for all their children. The village council for Ndaula remains all men, but the leadership for the community group in charge of implementing the Heifer project includes women. The hope is that as women become more unburdened, with the help of things like a convenient source of clean water and the improved health and increased energy coming from the meat and income their new goats will bring, they will build on this momentum.

Resistance is likely, but so is success. Some men sit together in a row on the ground during the meeting, Gelemani C. Kulijani among them. In his arms is Ida, the daughter he shares with his wife Cecelia German. Kulijani offers a sheepish smile when the conversation turns to women's work, but he holds his daughter proudly. Daudi Lizineti, age 60 and the oldest man at the meeting, speaks up. Women work hard and deserve more help and more freedom, he said, nodding toward Kulijani.

"This is what's needed," he said. ■

Heifer Gets Its Feet Wet

n Heifer International's early days, groups hoping to take on a Heifer project had to have easy access to clean water. The thinking was that a reliable water source is non-negotiable to ensure healthy livestock and productive fields, so starting a project where water isn't readily available creates a burden for the community members—most likely women and children charged with fetching and hauling water.

In some cases, that line of thinking kept Heifer from working with the people who needed help most. As maintaining access to clean, reliable water sources becomes difficult for more people around the world, Heifer International is tweaking its approach, dedicating more resources to ensuring its project participants have the water they need to become self-reliant.

Today, it's not unusual for Heifer's work to include drilling boreholes, digging wells or helping to set up filtration systems where water is available but the quality is poor. In a number of projects, Heifer partners with other nonprofits that can bring a breadth of knowledge and experience to help communities tap into clean, abundant water sources.

FOR EXAMPLE:

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- Cisterns installed at a Heifer project community in Maniche, Haiti, save time and energy for residents who no longer have to trek nearly three miles each day to fetch water.
- In Vietnam, project participants in the Long Phu District, Soc Trang Province, now have hand-pumped wells that provide clean water for drinking, cooking and bathing. They no longer rely on unsafe river water.
- A community in Suswa, Kenya, has no running water and used to rely solely on water that was trucked in during dry weather. But with help from Heifer and Kenyan NGO Ramat, community members built a system of pipes and tanks to capture rainwater for their cattle.
- "Adding water to our list of things we can do changed where we can work," said Elizabeth Bintliff, Heifer's vice president for the Africa program. "We're a little bit more intentionally part of the solution. We're not excluding target groups because of something they don't have. Instead, we're helping them get it." ■

green pastures

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ahead farmenian farmers



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heifer armenia, with government and world bank support, unites small-scale farmers into vibrant communities to recharge the country's agricultural economy.

by katya cengel, world ark contributor photos by geoff oliver bugbee

HOZNAVAR, Armenia—Vagharshak Nikolayan, 74, survives the same way most of his neighbors do: by farming. There is no other industry in this mountain hamlet, and the road to Yerevan, the capital city where paying jobs can be found, is winding and long. Two of his three children have left Khoznavar, the village of about 100 families 200 miles southeast of the capital. Vagharshak Nikolayan and his wife, Aida, 72, share the stone house his parents built in 1933 with their remaining son and his family.

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The six people in the household depend on their two cows for milk, cheese, butter and sour cream to eat and sell. They use cow patties to fertilize their fields and to fuel a wood stove that's used for both heating and cooking.

"The whole community lives thanks to cows," Aida Nikolayan said. "Otherwise they will die from hunger."

It is a story repeated in many Armenian communities and the inspiration behind the more than \$23 million Community Agricultural Management and Competitiveness (CARMAC) project. The project launched in 2011 when the Armenian government secured a loan from the World Bank and enlisted the help and expertise of Heifer Armenia.

The five-year program will make small-scale agriculture, an occupation practiced by 40 percent of the population, more profitable and sustainable by establishing cooperatives and improving

"when people think you can receive more with the same resources but increased efficiency, this will change the attitude toward agriculture itself." sergey hayrapetyan, mayor of khndzoresk, armenia pasture management in 55 communities in Armenia's mountainous regions. It is based in part on international and national studies that found that Armenia has a vast, untapped potential in livestock breeding. The first phase of the project will



help nearly 24,000 Armenian families. casting off a soviet legacy

A tiny country with a population of just 3 million, Armenia is haunted by its history. During Soviet times agriculture was controlled by the state through collective farms known as *kolkhoz*. The government owned all machinery, land and livestock. Villagers were employed in a single part of the farming process, perhaps driving a tractor or baling hay. They had little knowledge or say in what was grown and where it was sold.

The communal system collapsed after independence in 1991. Machinery and animals were

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dispersed to individuals, while pastures were given to the community, said Gagik Khachatryan, director of the project implementation unit at the Armenian Ministry of Agriculture.

"People considered if a cow is mine, it's mine, but if it's communal, then it's no one's," Khachatryan said. "And when there's no ownership feeling in people, that brings to further devastation."

Villagers used to working on *kolkhoz*, where they performed a small part of a larger process, were ill-prepared to farm on their own. For the last two decades they worked without proper equipment, training or supplies. When they needed to cut or bale hay, they had two options: rent from owners of the few private tractors or rely on rusty Soviet relics. Overwhelmed by requests, the private owners sometimes took as long as a month to fulfill orders. The Soviet machines were even more unreliable. Remote pastures quickly fell into disrepair, forcing villagers to overuse nearby pastures, straining the environment and depriving livestock of adequate nourishment.

During the global recession of 2009, Armenia's economy shrank by more than 14 percent. Although things have improved, a large proportion of the labor force still travels abroad for Vagharshak Nikolayan, age 74, (above), and his family depend on their two cows for milk, cheese, butter and sour cream to eat and sell. Full milk containers (left), sit on the Nikolayans' porch.





Mher Grigoryan (above left) shows off the new MTZ-821 tractor members all use as part of the CARMAC project. Providing money for equipment purchases is part of the Passing on the Gift requirement. Village residents (above, right) chop wood.

seasonal work, leaving fields fallow. The goal of CARMAC is to change this by targeting not one or two families, but entire communities, said Heifer Armenia Program Manager Vahe Sardaryan. The project has four components: pasture/livestock management system improvement, strengthening agriculture support services, establishing agro-businesses through competitive grants and management. Heifer focuses primarily on the first and main component.

The CARMAC project will improve the roads leading to remote pastures, install watering points and introduce pasture management strategies. The project will also boost nutrition for livestock, thereby increasing milk and meat production. Additionally, project participants will have access to new, reliable tractors they can rent at a reduced cost. The collective rents the tractor to its members at an average 25 percent discount for baling and a 15 percent discount for cutting. The discount will increase once the collective is given its own secondary equipment and doesn't have to charge members additional money for the baler it must now rent from private owners. The money they collect is set aside to be passed on to another community for the purchase of equipment, fulfilling Heifer's requirement to Pass on the Gift.

After decades under Soviet rule, some farmers in Khoznavar were reluctant to sign on to a collective project. But savings generated by using the new tractor won people over, collective leader Mher Grigoryan said.

Khoznavar Mayor Varo Grigoryan, agreed that savings was key to acceptance of the project. When they initially heard the word "collective," villagers were reminded of the unpopular *kolkhoz*, which left them in the dark as to what was being produced and where it was being distributed.

"But in this model I understand what is produced, how it is produced and that's why I have decided to join," Nikolayan said.

The Nikolayan family's initial savings from using the collective's tractor rather than renting from a private owner seems minimal at about \$30. But it becomes more substantial when the couple's combined monthly pension of \$220 is considered. It was enough to convince them to cultivate more land to plant wheat, barley and alfalfa. Like many of his neighbors, Vagharshak Nikolayan is enjoying the security that comes with being able to provide for himself and his family.

"One thing that has changed in the village is the kind of dignity of people now that they are not obliged to ask [for help] anymore," he said.

And the CARMAC project is already yielding measurable benefits. Although the project has only officially been in place a year and a half, cattle numbers have increased by 14 percent. Even more telling, said Heifer's Sardaryan, is that "a 20 percent increase in dairy productivity has already been reported in some places."

Mayor Grigoryan hopes the changes will con-

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vince more people to stay in Khoznavar.

"One of the reasons people leave is because of the low efficiency of agriculture," he said. "So I hope it (CARMAC) brings higher efficiency agriculture and then people will stay in the community."

bucking the trend

At a time when most Armenian villages struggle with emigration, Khndzoresk is growing. In 1995 this village 170 miles southeast of Yerevan had a population of 1,950. Now it numbers 2,350, far less than the 8,200 it had at the beginning of the 20th century, but impressive nevertheless considering the declining numbers around them. The village lost people during the Soviet purges of the 1930s and '40s when residents were exiled to Siberia or simply fled. Now they are in danger of losing them to migrant work, but Mayor Sergey Hayrapetyan believes CARMAC can keep that from happening.

"When people think you can receive more with the same resources but increased efficiency, this will change the attitude toward agriculture itself," he said.

He gestured to a large map of the region's vast pasture land hanging on his office wall. The 7,200 acres represent huge potential for grazing livestock, but until the cooperative was formed last year they remained largely unused.

"You feel sorry for the community when you

know you have the potential but cannot use it because of some infrastructure issues," Hayrapetyan said.

He is thrilled that villagers will now be able to take advantage of the land's bounty thanks to the collective's installation of seven watering points that ensure that cows don't have to travel far to find water. More than a mile of formerly impassable road has also been leveled and made functional. Across the country, CARMAC improved 22 miles of remote pasture roads and constructed 116 watering points by the start of 2013.

The collective charges its members a little more than half price to rent the tractor, a discount that allowed farmer Edik Minasyan to invest in addi-

tional cattle and land. Minasyan expects the more bountiful pasture to increase his cows' milk production by 50 percent, a figure that has convinced him to plan to grow his herd from two to 15 when he has the

money. He would also like to increase the amount of land he cultivates, something he was reluctant to do before because he could not harvest it on his own. But now that he is part of a collective, he can count on its members to help him, and he will do the same for them.

"Working together is much more efficient than working alone," he said.

Heifer Armenia's Sardaryan agreed. One of the problems with agriculture in post-Soviet ArKhndzoresk Mayor Sergey Hayrapetyan (above left) points out land available for livestock grazing. Farmer Edik Minasyan (above right) expects better pasture land to increase his cows' milk production by 50 percent.

"working together is much more efficient than working alone." farmer edik minasyan

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Berdashen line up to sell their daily milk. Every morning the truck arrives to take the milk to a local chilling plant.

menia is the fragmentation of farms. In a country the size of Maryland, there are 340,000 small farms. Alone they are inefficient and expensive, said Sardaryan, but when they pool their resources and work together they are more efficient and cost effective. In Berdashen, in the snowy mountains in the north, the benefits extend beyond agriculture. During the long winter the collective's new tractor was able to rescue trapped motorists.

"This is the village savior," collective president Yervand Akhtskhetsyan said of the tractor. Without it, maintaining pastures and providing fodder for livestock would be impossible, he said.

"Livestock in general is the only income source for these families," said Akhtskhetsyan. "If there is no livestock in this community, it doesn't make sense to live here. You cannot live here."

In the cold of winter, the streets are empty except when the dairy milk truck appears. Then the road is lined with villagers carrying pails waiting to sell their milk.

About half of Armenia's 950 communities engage in livestock breeding. At present CARMAC covers 55 of these communities, but hopes to expand to 55 more in spring 2014, said Khachatryan with the ministry of agriculture. The second stage of the project will help unite small-scale farmers into milk producer associations that can then be linked to major processing markets in the country.

"We consider this project as kind of a pilot project for Armenia," he said.



Caves served as dwellings for centuries. A new hanging bridge links the caves of Old Khndzoresk to the stone houses of New Khndzoresk.





Alisa Nikolayan graduates this year from high school. Grandfather Vagharshak Nikolayan supports her dream to go to college to become a journalist.

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surrounded by history

agharshak Nikolayan tells the story of his village through its stones.

There are the stone outcroppings where his grandmother and two of her children were slaughtered in 1905. There is the stone the size of a car that fell from the mountain more than a century ago and crushed several villagers. Then there are the stone caves that sheltered four generations of his family. Nikolayan remembers hiding from his mother in the caves when he was a child, and hiding from the rockets that rained down like hail during the war with Azerbaijan in the early 1990s. He remembers the year the last villager left the caves, 1961, and her name, Tamara Bagdasaryan.

Khoznavar is one of several communities in mountainous Eastern Armenia where residents lived in caves up until the last century. By working with villagers to develop more profitable and sustainable small-scale agricultural practices, CARMAC is helping to preserve villages like Khoznavar and nearby Khndzoresk. In the latter, a new 525-foot long bridge 207 feet above ground connects the stone homes of new Khndzoresk with the caves of old Khndzoresk, some of which once featured electricity and built-in shelves.

In Khoznavar, Nikolayan's caves are used to store potatoes and cook lavash, the flat bread that is an essential of every Armenian meal. Nikolayan's16-yearold granddaughter, Alisa, shares her village's fascinating history with outsiders on her blog **xoznavar.blogspot. com**. The money the family saved by using the CARMAC collective's tractor this year went toward her higher education fund. She dreams of becoming a journalist.

"Whatever I have learned and whatever I can do, I have learned mainly from my parents and grandparents," she said. "The most valuable thing I have learned from them is speaking the truth."

-Katya Cengel

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MIXED MEDIA

Food for Thought

REVIEW

Tapping Trees

Review by Erik Hoffner, World Ark contributor

always love seeing trees listed alongside the livestock, fish and bees in Heifer's catalog, and not just because I'm an arborphile.

Of all the ways Heifer supports communities worldwide, agroforestry has perhaps the greatest potential for improving nutrition and livelihoods while also boosting soil health, biodiversity and air quality.

And it's all made possible with trees.

Agroforestry encompasses growing trees for agricultural purposes, whether it is for food, fodder, clothing fiber, cooking fuel, fertilizer, medicine or construction materials. As a key component of permaculture, agroforestry is a powerful method of growing life-giving trees, often in combination with livestock and food crops.

So I was glad to see a new book on the

topic by Roger Leakey, the practice's foremost expert and evangelist. Leakey has spent several decades tracking down the world's most useful tropical trees in order to domesticate, propagate and distribute them to those who can benefit most from their cultivation: the rural farmers of Africa, Asia, Oceania and Latin and South America. Further, he's proven their effectiveness in bringing degraded land back to health for the benefit of both people and planet.

Equal parts memoir and manual, *Living With the Trees of Life* weaves facts and figures together with adventurous tales from the field to varying degrees of success, but what always shines through is Leakey's devotion to this powerful and

LIVING WITH THE TREES OF LIFE



Living with the Trees of Life: Towards the Transformation of Tropical Agriculture By Roger Leakey CABI, 2012 Paperback, \$38.50 hopeful cultivation practice. As he notes, 1.2 billion farmers already practice some form of agroforestry, so increasing the acceptance and intensity of it could have widespread benefits globally.

Powered by an almost boyish enthusiasm for this field of study, Leakey aims to improve the lives of subsistence farmers in the tropics, particularly in Africa. To accomplish this, he listens to villagers wherever he goes, noting their concerns and dreams, and then advises them on an application of agroforestry that is appropriate to the situation.

In cases where he is shown the best wild or cultivated trees to collect seeds from for improvement and domestication, the farmer or village who supplied it is credited in an attempt to avoid exploitative "biopiracy," and hopefully to help

the owner(s) secure future profits from any commercial success.

While the casual reader will enjoy Leakey's descriptions and photos of exotic sounding trees like cutnut, snot apple, African plum and candlenut, a sustainable agriculture educator will find worldly advice and solid case studies to work from.

These examples underscore the power of agroforestry when applied appropriately, such as a community-based enterprise in Cameroon where a nursery propagates the village's own native fruit trees for sale and personal planting. As noted early in the book, well-established agroforests in

Indonesia supply 50 to 80 percent of village agricultural income, so the potential is great.

Though the book sometimes bogs down with technical information, the tone is cheerful enough, especially when Leakey reminds readers his intention is to domesticate tree species that can create a pathway out of poverty for half of the world's population.

Living with the Trees of Life gives short shrift to the role of animals in the overall project of improving agriculture, but it does identify the integration of livestock as a crucial component of any project for supplying better nutrition, nutrient cycling and income generation. And beyond human benefit, Leakey stresses the method's environmental benefits, from biodiversity (agroforests have been shown to contain up to 70 percent of the animal species found in natural forests) to climate change, since trees lock up large amounts of carbon dioxide in their trunks, branches, roots and within surrounding soil.

So the next time you're perusing the Heifer catalog, look at the trees. As Leakey says, their addition to small farms worldwide can truly benefit everyone.

Erik Hoffner has written for National Geographic News Watch, Yale Environment 360, Earth Island Journal and Orion. www.erikhoffner.com

NEW AND NOTEWORTHY

To Repair the World: Paul Farmer Speaks to the Next Generation By Dr. Paul Farmer

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President Bill Clinton writes the foreword for this collection of speeches by Farmer, a hero for health and social justice.

Tropical Gangsters II: Adventures in Development in the World's Poorest Places By Robert Klitgaard

This sequel deals with corruption in some of the world's poorest places. Klitgaard offers guidance on how to operate successfully despite corruption so that commitment, passion and community spirit can overwhelm the dark forces. TO REPAIR THE WORLD WORL

Adventures in Development in the World's Poorest Places

FIVE FAVORITES ON NEGLECTED TROPICAL DISEASES

Disfiguring and debilitating parasitic and bacterial diseases such as hookworm, river blindness, elephantiasis and leprosy contribute to a cycle of poverty in developing countries in tropical regions. Sufferers lose their resources and abilities to work, as well as social status. Luckily, most neglected tropical diseases are both preventable and treatable.



Forgotten People, Forgotten Diseases: The Neglected Tropical Diseases and Their Impact on Global Health and Development By Peter J. Hotez

Moloka'i By Alan Brennert





Colonizing Leprosy: Imperialism and the Politics of Public Health in the United States By Michelle T. Moran

Beyond the White House: Waging Peace, Fighting Disease, Building Hope By President Jimmy Carter





Pharmacy on a Bicycle: Innovative Solutions to Global Health and Poverty By Eric G. Bing and Marc J. Epstein

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HEIFER BULLETIN News from the Field

Honduras' Coffee Crisis

Story and photos by Falguni Vyas, Heifer International writer



Pierre Ferrari, Heifer CEO; Oscar Castañeda, Americas vice president; and Heifer Honduras staff visit Capucas Cooperative.

OPAN, Honduras—The mountains of western Honduras have the perfect climate and elevation for growing coffee, and the flavorful bean is now the country's most important crop, accounting for more than one-third of its agricultural output.

Of the country's 298 municipalities, 210 have some level of coffee production, making coffee the main source of income for many Hondurans. But these smallscale farmers who are responsible for 70 percent of the world's coffee production are hungry and struggling to survive.

Worldwide demand, however, doesn't consider their predicament. Some 2.25 billion cups of coffee are

consumed every day. It's one of the largest commodities in the world, coming second only to oil.

But coffee prices are almost half of what they were last year. Unpredictable weather patterns, making plants more susceptible to disease, coupled with *la roya* or coffee rust—are contributing to the crisis. Official estimates are conservative, citing a 25 percent loss for growers during the 2012-2013 season; but producers estimate that their actual loss is closer to 60 percent. The reality is that right now, coffee producers earn less than 5 percent of the cost of a cup of coffee.

Rust, a fungus that affects coffee plants, has more than 5,000 spores per spot, and a dry day with a little bit of wind is all that is needed to spread the spores to other

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plants. Unfortunately, even if the rust is gone next year, production will continue to drop as the infected crops recover from being severely cut back in order to help them survive the fungus.

With the crisis in coffee creating unstable prices in the global market, coffee farmers must also deal with *los meses flacos* or "the thin months." This phenomenon occurs between May and October, the time of the year when most families' income from that year's coffee harvest is gone and the prices for basic grains are at the highest, as those crops are not harvested until the fall. To cope, these families eat less expensive and less nutritious food or borrow money from lenders with high interest rates, putting them further in debt.

In response, Heifer Honduras is working to connect these families to four local coffee cooperatives. Cooperatives help farmers achieve fair market prices for their product, as individual farmers cannot make it in the market by themselves. Heifer, realizing that income generation alone is not the answer, will help farmers and their families survive the thin months through training and gifts of livestock and plants for family vegetable gardens, helping farmers in diversifying their income and food supply.

Local coffee cooperatives provide farmers access to technical training and infrastructure to help process the coffee. Co-ops help secure fair prices for their crops, too. Without co-ops, farmers are at the mercy of the "coyotes" or middlemen who pay extremely low prices—\$6 for a 100-pound bag of coffee. A co-op can help farmers sell



Coffee beans are washed and sorted at plants like this one.

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their coffee for at least \$118 per 100-pound bag and can get close to \$175 per 100-pound bag for specialty coffee.

In March 2013, Heifer International President and CEO Pierre Ferrari, Vice President of the Americas Oscar Castaneda and Heifer Honduras staff visited Capucas Coffee Cooperative, one of the four participating co-ops.

Founded in 1999, Capucas has 410 members, 32 of them women, working on nearly 1,700 acres of land for coffee production. Approximately 5,000 people benefit from this co-op, covering 21 communities in three municipalities in Copan.

At the heart of the Capucas mission is to achieve better prices for the coffee that is produced. To this end, they have received three environmental certifications: Organic Coffee Cultivation; Sustainable Agriculture (from the NGO Rainforest Alliance, for the protection of the rainforests) and a Fair Trade Certification. These certifications have allowed them to plan and implement activities in renewable resource management, sustainable coffee production, organic coffee production and establishing a wet and dry milling system.

A third of their 1.5 million pounds of gold coffee produced per season can be classified as Certified Organic and/or Rainforest Alliance. All of their coffee is fair trade.

While Heifer coffee projects are still in the early stages, farmers here are hopeful about what cooperatives like Capucas can do for them. In 2010, Capucas helped repair the local hospital and worked with a Peace Corps project to install more than 100 improved cooking stoves and 30 garbage cans throughout the community.

They are currently working with 200 members to develop organic vegetable gardens. And many co-ops work to increase opportunities for education not only for its members but also for children living in the communities. Capucas used a portion of the Fair Trade Premium to build a community library, providing a place for both children and adults to learn and attend classes.

"Together, we dream and plan for coffee communities where everybody has the best quality food all year round; by sharing gifts of animals, seeds and training, smallholder coffee farmers can keep building strong and sustainable coffee communities," Castaneda said. ■

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HEIFER BULLETIN News from the Field



Second-graders at the American International School of Lusaka, Zambia, celebrate a successful first year of Read to Feed.

Heifer Zambia Pilots Read to Feed Program

By Frank Phiri, Heifer Zambia

eifer Zambia is piloting the Read to Feed[®] program to enable student participation in Heifer International's mission of ending hunger and poverty and caring for the Earth.

The pilot program began in December 2012 with 25-second-graders participating from the American

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International School of Lusaka (AISL). The students read about 30 books, raised more than \$1,000 and were awarded certificates in appreciation of their efforts.

Heifer International's Read to Feed program promotes reading, introduces students to global issues and helps to fund projects that enable people to feed their families and reach self-reliance through gifts of livestock and training. Children participating in the reading program

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The class raised \$1,000 for Heifer.

obtain sponsorships from parents, friends and relatives and collect money based on the number of books, pages or units of time they read.

Along with motivating children to read, the program allowed AISL students to partner with Heifer to end hunger and poverty in Zambia.

The funds raised by the students will provide goats and training to impoverished families in the Mumbwa district in the Central Province of Zambia. Heifer Zambia plans to extend the program to more schools willing to participate, promote reading among their students and offer children a chance to change the world.

A Read to Feed participant said, "I am happy that the money raised will help to empower families who are living in poverty, and it will also help them take their children to school."

Nepali Children Feel Positive Effects of Heifer Projects

By Alina Karki, Heifer Nepal

Sriman Thapa, 9, seems like a typical third-grader who enjoys science and says he's good at Nepali. But other village kids bullied Sriman because of his parents' disabilities. This had such an impact

on him that when asked whose son he was, the answer was, "I am *laata's* son."

What sets this curious boy apart is that both of his parents are *laata*, or mute and deaf. His mother, however, is a member of a Heifer self-help group and his father is equally

enthusiastic about Heifer activities.

After receiving two goats from Heifer International, Sriman's mother, Bimala, was able to contribute to another family in a Passing on the Gift ceremony. Her gift uplifted another family's life.

Now his response to "whose child are you" is much different. "I am Keshav Thapa and Bimala Thapa's son," he says.

The Heifer goat project and Passing on the Gift ceremony did something for Sriman's parents that nothing else had: acknowledged Bimala and Keshav as people instead of just the disabled. Sriman says the bullying stopped for him, "because now they know my parents' names." after becoming involved with Heifer. Sunil has immense respect and pride for his mother who has truly changed the fate of their family. His mother never had a formal education, and her only source

Another boy, 17-year-old Sunil Pariyar, has seen his family change



of income was a tailoring business she ran from her neighbor's porch. Since receiving training from Heifer, she can read and count. She has opened a shop and gives sewing lessons other women. to The family was able

Sriman Thapa, 9

to move from the shed where they lived and shared a single room with four other family members to a new house where everyone has their own bed.

Before his family became Heifer participants, Sunil faced harsh discrimination based on the caste system because his ethnic background was considered "untouchable." But now his only worries are about his higher education. He says he wants to go to college and study business administration.

Nepali children have strong role models in these women. Heifer plays an important role in their lives and an often more important role in the lives of children.

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HEIFER SPIRIT

Giving Resources, Giving Self



The second-grade class at Forsyth School in St. Louis, Mo., raises money for Heifer all year and celebrates with special "Heifer Hoedowns."

Story by Donna Stokes, World Ark managing editor

S AINT LOUIS, Missouri—Where does generosity come from? At Forsyth School, the answer is easy—the second grade.

A sign on the second-graders' floor reads "Welcome to the Heifer Zone," and further signs of this group's passion for Heifer International and its mission to end hunger and poverty overflow in every direction. The students refer to themselves as "Heifers," and individual classes call themselves "the bees" and "the trees."

A bulletin board highlights countries where animals are donated and features photos of students who have donated their own money. Some forgo birthday or holiday gifts and others chip in allowance cash.

"Because every donation helps, we stress that no gift is too small," said teacher Eric Axelbaum. "Additionally we work together on an activity or project to help strengthen our sense of community and reinforce our class values." Every school year starts with the reading of *Beatrice's Goat*, he said, to help the students understand how many people in the world have very different lives than they do.

On special Fridays, surprised neighbors and the entire school might look outside to find every second grader and all four teachers—Becca Meddler, Liz Alessi, Jill Dorgan and Axelbaum—dressed in western wear, line-

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dancing on the playground in a "Heifer Hoedown Extravaganza." On every other Friday morning, they wear team T-shirts to the Heifer Hoedowns for team updates on fun-

draising totals, to honor individual donors, to decide what animals to buy and to learn more about Heifer's projects through videos and literature.

Going back more than 10 years, the second graders donated one goat a year for a family in need overseas from a can-crushing project. Yet since 2008, under the project leadership of teacher Axelbaum, the classes have donated thousands of dollars to send animals and training to those in need.

Students still crush and recycle cans but also make jewelry for sale. Teachers include lessons about poverty and agriculture in the

curriculum, with students learning about the animals, how much milk they produce, the number of offspring and other vital characteristics. Based on this information, they vote on their favorites. Goats and water buffalo are always at the top of the list, as is the milk menagerie when students raise more than \$1,000, Axelbaum said.

Heifer's President and CEO Pierre Ferrari, in a recent



Teacher Eric Axelbaum

visit to St. Louis, was able to stop in and join in the spirit of giving at the school.

"What a great, great group of kids and of course teachers," Ferrari said after the visit, where he took questions from the kids. "Their immediate, unified and energetic response is proof that kids really do get it and they will keep the work alive toward achieving a better world for everyone for many generations to come."

> Axelbaum said it's meaningful for him and his colleagues to teach kids that they need to do something to help less fortunate people instead of just get their parents to donate money for them. "The children collect, rinse and crush one can at a time. They forsake gifts to help others. Finally, they per-

sonally make one piece of jewelry at a time. This is the most rewarding part.

"The pride on their faces when they donate money and tell their stories in front of the entire class is memorable. When they think outside of themselves and our community, we confirm that we are making a difference in the world."

Q&A with the Class

What is your favorite part of being a "Heifer?"

Will: I like raising money and giving animals to people who are less fortunate.

Jordan: It is helping save people's lives.

Emma: I like how when we donate money, it allows us to pass on the gift.

Owen: When we donate, we get our picture on the wall, and it lets us know that you are saving lives.

Nicolas: If we didn't help, there would be a lot of poor people out there who wouldn't have food.

Sylvia: I like making the can-tab jewelry, which helps raise money for Heifer.

What would you like to give kids your age who are hungry or don't have a safe place to live?

Madeline: I would like to give them animals who produce milk. Then they could sell the milk.

Peter: I would want to give them five pigs, two water buffalo, and one goat because the goat would give a lot of milk, pigs would be sold to make money, and the buffalo would pull carts.

Grace: I would like to give them a great family and a nice, warm house.

Olivia: I would give them a goat like Beatrice because goats give off babies and also make milk.

Maggie: I would give them a nice shelter.

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HEIFER SPIRIT

Giving Resources, Giving Self



LITTLE GARDENERS, BIG GIVERS

By Annie Bergman, World Ark senior writer

A JOLLA, Calif.—Digging for worms, picking (and sometimes eating) blueberries and holding baby chicks may sound like fun for many children, but it's a job taken very seriously by the nursery school students at the La Jolla United Methodist Church.

And they do it all to help others.

Part of the teachings at the church's "Yellow Cottage" class is giving back. Preschoolers used to come to school with money they had earned from home, and the class would then take a trip to the local store and purchase food to donate to the Christian Charities, said teacher Kim Schwartz.

But two years ago a student proposed the idea that they grow their own food for people to eat instead of buying food for the charity. The next day, the children went to an empty lot on the church property and began their preparations for a garden plot, Schwartz said.

"We did not choose the Pre-K children for this project, they chose for themselves," Schwartz said. "The teachers, administrators, parents and the local community simply allowed the children to express their understanding of the things being taught at the school and gave them the support to make it happen."

One boy in the class brought with him a gardening book that showed children growing foods. He encouraged the others to be help like the kids in the book, Schwartz said. The class also had help from a troop of Daisy Girl Scouts and their parents who built raised garden beds and from an Eagle Scout who put in an irrigation system.

Though the children had good intentions with the garden from the outset, Schwartz said the idea to sell produce to raise money for Heifer came after the children were read the story of *Beatrice's Goat*. They were inspired by the story of a girl who received a goat from Heifer, Schwartz said.

"It was the children's hope from the time we read the book *Beatrice's Goat* to send a goat but we did not make

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enough with our first sale so they purchased chickens and ducks and saved what was left to add to the next week's donations. Eventually they did send a goat and some other animals," she said.

The Yellow Cottage class holds its market each Friday afternoon from 1:45 to 2:15, in the community garden adjacent to the La Jolla United Methodist Church. The students, parents, church members and other volunteers tend the garden daily, Schwartz said. The garden includes fruit trees and seasonal vegetables: tomatoes in the summer and winter wheat and buckwheat in the fall. The nursery school also has chickens and ducks.

"The prize is gathering the eggs," Schwartz said.

The garden is in its second year of production. So far the nursery school children have raised nearly \$1,200 with no sign of turning back.

The children's reactions to seeing the money they earn go to hungry people around the world has varied, Schwartz said. But mostly, she thinks the kids take pride in their good deeds.

"One boy was a little puzzled when he realized that he would not get to use his roping skills on the water buffalo," Schwartz said. In the end they all felt that helping others in this way made them feel good, too. They beamed with confidence as they would decide together using the Heifer International website which animal they would make as their next goal to send. Each new week was an opportunity to learn about another animal and how it can help people."



Three nursery school students check over their harvest while setting up for a market Friday.

What is your favorite part of helping work in the garden?

Eden Toppi, age 5: Planting sunflowers.

Maya Hanoch, age 5: Seeing the chickens in the garden.

Inji Hamdoun, age 5: *Digging for worms and holding chickens.*

What is your favorite thing to eat from the garden?

Eden: Tomatoes.

Maya: The tops of the radishes.

Inji: When I go into the garden I like to pick and eat blueberries.

How often do you get to help in the garden?

Eden: Almost every day

Maya: Most days

Inji: A few times a week. We take care of the chickens on the weekends.

What do you know about Heifer International? What is your favorite part about Heifer?

Eden: They buy goats for families. My favorite part is rabbits.

Maya: They sell animals to people. Selling the animals.

Inji: They give farm animals and plants to people around the world who don't have much. They teach people how to keep their animals healthy.

Do you want to keep donating to Heifer as you grow up? Why?

Eden: Yes, because I like to do it.

Maya: Yes, because I like to give people animals.

Inji: Yes! I had a lemonade stand this summer on my street and I raised \$17.55 to donate to Heifer. I told people I was donating the money to buy animals.

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HEIFER FOUNDATION

Fall 2013

Heifer International or Heifer Foundation? The difference is in the donor's desire.

By Shannon Boshears, World Ark contributor

o, what is Heifer Foundation? Is it the same as Heifer International? Aren't the names interchangeable?

Google News doesn't even know the difference, which really doesn't help matters.

And if they are different organizations, to which do I donate?

Simply put, Heifer Foundation and Heifer International are separate nonprofit charitable organizations with distinct purposes. They are global partners that work closely together to support a common mission while meeting the unique individual needs of donors.

For more than 20 years, Heifer Foundation's mission has been to manage and grow an endowment to provide long-term support for Heifer International. The Foundation's endowment is built through charitable gifts, such as gifts of cash, property and stock, as well as funds from bequests, trusts and annuities. Some of these planned giving instruments even offer lifetime income payments back to the donor. But all of these gifts are invested, and the investment earnings provide annual support for Heifer for many years into the future.

By investing the charitable gift prudently, the initial donation has a greater impact over a longer period. Each year, a portion of the endowment is provided to Heifer International to use to help end hunger and poverty. This sustainable cycle of support provides lasting resources for Heifer's sustainable solution to end hunger and poverty.

Still confused?

Think of it this way: If you want to buy a cow, a goat or a flock of chicks as an alternative gift, you should donate to Heifer International. Or if you wish to fund a specific program or project, you should donate to Heifer International.

But if you want to leave Heifer International in your will, you can join Heifer Foundation's W.I.L.L. (Why I Leave a Legacy) Society and secure Heifer's future work through your bequest. It's a way to donate your assets after your lifetime and ensure your values are carried on with your best interest at heart.

If Heifer International is a checking account, Heifer Foundation is the savings account. All is invested in the shared mission to help people in the margins of the world. As a donor, you decide where and when you want your money to work—now to take care of immediate needs or in future gifts that are invested and protect Heifer's legacy.

Either way, your gift creates hope, offers dignity and forges a way for disadvantaged people around the world to become self-reliant.



Nita Whitfield has taken advantage of many of the planned giving tools offered through Heifer Foundation. In addition to a named memorial endowment, several gift annuities and a charitable remainder unitrust, she is also a member of the Foundation's W.I.L.L. Society because she has left Heifer in her will. All of these planned giving offerings allow her to provide for a sustainable future with lifetime income, and she says, "These decisions result in leaving a legacy of philanthropy that expresses my values." For her full story and video, visit www.heiferfoundation.org/ whitfield.

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FIRST PERSON

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Chance for a Better Life



Patricia Chakhala, 32, fawns over daughter Vanessa. The youngest in the family and the only daughter, 22-month-old Vanessa is tough despite all the coddling she receives from her parents and three older brothers. Unlike herself, Patricia said her daughter will have an education that extends beyond eighth grade and a chance to shape her own future. Money for Vanessa's education will come from the meat goats Heifer provided.

Photo by Russell Powell | Story by Austin Bailey

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Your Help and Our Tools Build a Barnyard of Opportunity!

riends of Heifer can give as little as \$10 a month and buy one goat every year for a family struggling with hunger and poverty. Our Friends know that a gift of livestock from Heifer International increases income, provides better nutrition and creates a lifetime of opportunities. Your friendship is a gift that empowers us with a steady stream of support, allowing us to continue our work with confidence.

All you have to do is sign up, and we'll take care of the rest. Heifer will make automatic monthly deductions, which you are free to stop or change at any time for any reason.

Start building today!

Call us at (888) 5-HUNGER or (888) 548-6437 or visit www.heifer.org/monthly



Friends of Heifer®