

Drylands Natural Resources Centre (DNRC): Donor update and solicitation

Overview

Population growth in East Africa, as in much of the world, continues to outpace the environment's carrying capacity, straining our world's natural resources and increasing the pressure on people to engage in unsustainable land management practices. The Drylands Natural Resources Centre (DNRC) is a Kenya-registered NGO working to help those under the most strain and to whom land management matters the most: subsistence farmers in arid and semi-arid regions. We work with these farmers to develop and share sustainable agriculture and agro-forestry solutions that improve natural resource management and alleviate poverty.

Framing the problem

In 2007, DNRC began operations in Makueni, a semi-arid district in Kenya lacking basic infrastructure, such as electricity and piped water, and with few economic activities outside of subsistence farming. In an attempt to meet their profound need for fuel and income, people in Makueni have deforested much of their natural woodlands for firewood and charcoal (for which demand in urban areas is booming). As a result of the loss of these forested areas, which acted as natural soil and riverbank stabilizers, the soils have eroded, rivers have dried up, and less water and fewer nutrients are retained in the soil. Compounded by climate change, which manifests itself in Makueni as less overall rainfall and more rainfall variability, agricultural productivity has fallen continuously. As crop yields fall, farmers are then forced to further exploit any remaining forest. Women and children, as the primary collectors of water and firewood, bear the burden of travelling further and working harder to find food and water on which to subsist, and firewood with which to cook. Like many drylands areas in East Africa, Makueni is caught in a vicious cycle of environmental degradation and declining agricultural productivity that leaves food shortages, malnutrition, and sometimes famine in its wake.

Our response

Working closely with farmers, we have tested and refined a comprehensive program involving agro-forestry, improved agricultural practices, sustainable wood harvesting, and small business development. These improved practices have increased the health and productivity of farmers' land, while providing farmers potential income from the sustainable harvesting of firewood, charcoal and other tree products. Education is at the heart of this approach, and our program includes bi-weekly classes, community meetings, and on-site farmer consultation. Our demonstration farm offers participants an effective way to observe and learn about best practices in a concrete, interactive, hands-on manner. Our tree nursery, where we grow indigenous drought-resistant tree saplings, acts as both a production facility and a seed bank. We provide the majority of the tree saplings we produce to program participants at a subsidized rate; we sell the surplus at market rates to the larger community, which produces revenues for the organization and contributes to regional reforestation.

How we measure success

Our central mission is to work with program participants to: 1) improve the quality of their soil and agricultural yields; 2) generate additional income from tree products; and 3) to develop and share forestry and agriculture techniques suited to arid and semi-arid regions. We measure our success against the progress we are making towards these three goals.

Our achievements to date

- Established a tree nursery of 15,000+ saplings with over 20 tree species (7,500 samplings disseminated each season to members through subsidized loans, with the remaining few thousand saplings sold on the open market)
- 200 member families (~ 1200 people) have received site surveys and a customized reforestation plan, completed our agro-forestry education program and cultivated trees with an overall survival rate of 65%
- Two full-time employees have earned the trust of the community and are now trained in agro-forestry techniques, community outreach and operations management
- Successful 2010 summer internship program to measure progress to date



Above: Nursery manager Lucas Munyao has spent 3 years growing and managing our tree farm. He is currently responsible for producing 7,500 saplings per season and for constructing a second tree farm that will triple the organization's productive capacity.

Our goals for the upcoming year

Currently the efforts of Dryland Natural Resource Centre are focused on achieving the following goals by the end of 2011:

- 1) Increasing the number of farm households participating in our agro-forestry and sustainable agriculture extension programs from 65 to 300 (~ 1,800 people)
- 2) Completing construction of our new demonstration farm and tree nursery, increasing sapling production to 120,000 saplings per year
- 3) Building robust internal systems for accounting, inventory management, internal communication and data capture (species survival rates, soil improvement, scientific exploration)

Investments needed to achieve those goals

In order to meet these goals and transition from reliance on external funds to increasing financial sustainability, we will need to double the number of full-time staff from 2 to 5 people. Our staff will require resources to deliver 120,000 saplings to program participants and to the wider market, to visit participant farms, and maintain effective inventory, accounting and data capture systems. In addition, to successfully carry out our expansion, we will need to open an office in fall 2011 at the local market town to announce ourselves to the wider community and further expand our reach.

We will need to raise and invest:

- 1) \$2,200 in Expansion of Nursery Operations: planting materials, tools, seeds, water management equipment, land access
- 2) \$8,000 in Technology and Equipment: Office space, 1 laptop, 2 modems, IT software (including MS Office and Quicken), and 1 motorbike (including fuel and maintenance)
- 3) \$9,600 in Staff: Salary for 3 full-time project managers and 2 nursery attendants to oversee the expansion to 300 families
- 4) \$2,000 in Administration & Overhead: Accounting and legal fees
- 5) \$1,200 in Sales & Marketing: To promote, sell and deliver saplings to the wider market in order to generate revenue for the organization
- 6) \$2,000 in Office Opening: Overhead costs for a secure, electrified office at nearby Mbumbuni market.

Our total ask: \$25,000

Donations to the DNRC are managed by Global Giving, a 501(c)3 organization, and are tax-deductible. If you are interested in making an online donation, please visit:

<http://globalgiving.org/projects/drylands-natural-resources-and-forestry-centre-kenya> .

If you are interested in learning more about the DNRC and its operations, please contact Daniel Pike at danieljamespika@gmail.com.

The Drylands Natural Resources Center
A Kenya-registered non-profit organization

Who we are

Nicholas Syano, Co-Founder and Executive Director

Nicholas Mutuku Syano was born, grew up, and continues to live in the Makueni district of Kenya where the DNRC is based. Nicholas was raised on a subsistence farm by a mother with eight siblings. Despite hardships, he won a scholarship from the “Save the Children Fund”, which paid for his secondary school education. He continued on for University training in Kenya, and then began his career at the Kenya Institution of Organic Farming, where he taught small-scale farmers organic farming techniques.

In 2008 Nicholas received a master’s degree Natural Resource Management from the University of Wisconsin, where he focused on small gardening systems for impoverished communities worldwide. Nicholas co-founded the DNRC in 2007. Since then, he has gained significant management experience as a Project Manager at Nyumbani Village-Kitui, a sustainability-focused non-profit that cares for children who lost their parents to HIV-AIDS, where he is responsible for a staff of 80. He works close enough to his home that he is able to oversee the DNRC and its full-time staff outside of his primary job.



Left: Nicholas Syano and Zach Engelking share forestry best practices with program participants at our demonstration farm

Daniel Pike, Co-Founder and Director of Planning

Daniel currently works for Astrum Solar, a solar system design and installation company. Previously, Daniel worked for Analysis Group, an economics and finance consulting firm, and the Brookings Institution, a leading nonpartisan think tank. He graduated with High Distinction from the University of Virginia.

Chas Taylor, Co-Founder and Director of Finance and Investor Relations

Chas currently works for The Earth Partners, a land restoration investment company that focuses on improving the productivity of degraded lands. Previously, Chas worked for McKinsey & Co., the international management consulting firm, serving clients across four continents. Chas also consulted for the Bill & Melinda Gates Foundation within their agricultural development group, where he worked on input supply chain development and financing issues in Sub-Saharan Africa. He graduated with High Distinction from the University of Virginia.

Zach Engelking, Director of Forestry and Applied Science

Zach is currently working in urban tree care for The Care of Trees as a plant health care specialist. He has worked with the Forest Service for 6 seasons, through the University of Wisconsin-Stevens Point, where he met Nicholas Syano, he has studied natural resources and forestry in many parts of Europe and in Tanzania, Africa. When he’s not working on forestry, Zach is a doting father and avid traveler: he has traveled to 14 countries outside of the United States from Central America, Europe, North America, Scandinavia (Iceland), and Africa.