

God's Green Resourceful Earth

A Tree Nursery Sown by the Africa Inland Church



Background and Introduction

In 2015, the Rev. Tom Ochuka, program leader of the Africa Inland Church in western Kenya, invited the Rev. Dr. Patricia Tull, A.B. Rhodes Professor Emerita of Hebrew Bible at Louisville Presbyterian Seminary, Louisville, Kentucky, USA, to visit Kisumu to speak to congregations about earth care, drawing from her book, *Inhabiting Eden: Christians, the Bible, and the Ecological Crisis*.



Ecology and Health

During Dr. Tull's visit in January, 2016, Rev. Ochuka arranged for tree planting events at two Nyanza area churches and at the Nyakach Dispensary. This 1906 British-built dispensary, serving 8000 residents of the western edge of Kenya's Rift Valley, was in dire need of funding for renovations and expansion. So the Revs. Ochuka and Tull applied for, and received, a Presbyterian Women Thank Offering Grant of \$50,000 to meet the dispensary's most critical needs. As a result, the clinic received major structural and grounds upgrades, new laboratory and office equipment, new patient furnishings and facilities, improvements to the kitchen, kitchen garden, and laundry, and two motorbikes for making house calls. Because of these improvements, Nyakach Dispensary became a Health Center and additional fenced land was donated for expansion.

Since then we have gained additional staff provided by Kenya's government, as well as a youth and children's department and programs. The road to the dispensary has been improved. Diseases are better managed, including best management practices on tuberculosis, malaria, and others. Nyakach has been recognized as a Level B Health Center by Kenya's government, and now accepts hospital insurance plans.

Tree Nursery

Meanwhile, deforestation, pollution, and other unsustainable practices in the Kisumu area, as in Kenya overall, have led to several serious environmental problems, including:

- Increase in carbon pollution resulting from loss of carbon sequestration in forests;
- Loss of biodiversity in a once rich area on the shores of Africa's largest lake, Lake Victoria;
- Disappearance of many wild animal species that lived around the lake;
- Disappearance of pollinators such as bees and bats, leading to poorer crop yields;
- Flooding and erosion in the Kano plains during heavy rains, causing loss of human and animal life as well as infrastructure and crop loss;
- Periodic drought and acid rain.

The primary energy source in Kenya for both domestic and industrial use is wood fuel. This has caused major destruction in forests, since many people prefer to make charcoal from hardwood,

especially gums and eucalyptus, which burn longer. Some indigenous trees, such as some acacias, could no longer be found in western Kenya. Canopy loss led to higher temperatures and the use of air conditioning day and night, increasing utility bills for some and pollution for all.

During the January 2016 visit, the Revs. Ochuka and Tull discussed the need to help increase the forest canopy in western Kenya and the possibility of starting a tree nursery on the grounds of the Africa Inland Church's bishop's office in Kisumu. They had each drawn inspiration from the work of the Green Belt Movement and the witness of Wangari Maathai, whom Rev. Ochuka had heard in person during her lifetime, and whose memoir *Unbowed* Dr. Tull had read. Funds were raised by First Presbyterian Church in Jeffersonville, Indiana in the summer of 2016, and soon the new nursery began growing seedlings.

Since 2016, we have piloted this mission by distributing between 10,000 and 20,000 trees annually to schools, churches, and community land in Kisumu County. We have also given trees to farmers, who in turn support our work with their prayers and gifts of manure as fertilizer for the seeds. Each year we have planted gravelia, pine, cypress, blue gum, various palm trees, and red and white bottle brush, which all grow readily from seeds, and we have begun growing fruit trees as well. Forty high schools and twenty primary schools have received our seedlings, as well as ten hospitals and forty-four churches of many denominations. These trees have improved both soil fertility and participation in environmental activities such as school agriculture clubs. Churches and members now have fast-growing gravelia and bamboo for heating and cooking. Church, school, and community activities can take place under the spreading shade of the *Albizia correa*. People's perceptions of forest conservation have changed, and many are learning about nutrition. According to the Forestry Department of Nyando Subcounty, with whom we partner, rain is beginning to return and the water collected is now cleaner.

We are also working to sow and conserve indigenous trees, including the African fig, which shelters mosquito-eating bats; *Albizia correa*, whose every part has medicinal value; Ethiopia's *Kegelia Africana*, or "sausage tree," which serves as an antiseptic; and beautiful thorn trees such as the *Acacia Lufthansa*, which attracts honey bees, and the yellow fever acacia, which attracts wild animals for game reserves. It is drought resistant and has several medicinal uses. We are sowing *Terminalia brownii* and *Markhamia lutea*, which make beautiful hardwood for furniture for school desks and church pews. Another declining tree that we are helping bring back is *Grewia occidentalis*, whose fruit birds enjoy. Some woodpeckers who thrive on the tree benefit the area by eating ticks that cause east coast fever, so farmers do not have to use pesticides on their cattle. The *Grewia* is indigenous and weather resistant, and can be easily dispersed by wind, animals and insects.

Further Efforts and Successes

In addition to growing and distributing trees, we have been educating community members on the benefits of reforestation and on ecologically sound agricultural practices. In 2019 and again in 2021 we upgraded our equipment, purchasing not only water tanks but a large tent and chairs for outdoor educational events. We have provided training on poultry care, beekeeping, organic farming, tree planting, and fruit production, as well as energy conservation and microfinance. Our work has been widely accepted, attracting Christians and non-Christians alike who love creation. Agricultural clubs in schools have especially benefited from partnership with us.

As a result of our work, not only is the rain slowly returning to some areas, but we are beginning to see birds again that had migrated to neighboring Tanzania and Congo. Many of these birds provide further help in disseminating trees such as the figs and guavas, as well as

boosting ecotourism in the Awasi hills near the Rift Valley, where we have planted many trees and educated farmers. One community leader, Jonathan Wadire, who had migrated to Tanzania and returned in the early 1990s, testifies that today he can see birds in our hills that he saw in Tanzania and Congo, because the trees have attracted them back.

We have been using the grounds of our office to grow seedlings and to train farmers. But this space has become too small for all we wish to do. Thanks to the Africa Inland Church of the Lake Victoria region, we are sometimes able to travel to churches to offer workshops and trainings. And at times individual farmers and schools offer space for trainings and in return receive more seedlings to plant. Even community members who do not attend church have reserved lands for trainings. However, COVID regulations have restricted our ability to do follow-up training in many places.

Current Challenges

Since 2016, we have seen great progress toward our ever-expanding goals, but we have yet to realize our larger visions. We face challenges as we seek to grow. We find ourselves in need of additional resources, including materials and equipment, seeds, transportation, expanded space, and volunteer and expert help. We would like to promote and expand our workshops, invite more private landowners to join our reforestation efforts, and seek solutions for the social needs that lead to deforestation. We are now looking for partners in our work, people who are committed to creation care, environmental education, and climate justice, who can work with us to increase both our expertise and our base of financial support.

Making Soil from Spoil

Our work would especially benefit from acquisition of a truck, which would help tremendously in transporting seedlings to recipient sites, bringing manure and other materials to our planting sites, and helping with special conservation projects. (See the picture gallery below.)

Our Future

Beyond developing the current programs and resources, we dream of:

- Acquiring a larger property for the tree nursery;
- Building a demonstration garden exemplifying tree sowing and fruit production;
- Training farmers in organic and regenerative methods of farming and food production, both plant and animal, that glorify God and honor God's good creation;
- Connecting the church more closely to the community; and
- Building a retreat center for education, meetings and creation care conferences, with the hope that a small income from these programs will help sustain the entire program.

Please see the charts and photo gallery below for more specifics on our work. With the creativity and drive of local volunteers and the forward-looking participation of national and international partners, we dream of increasing our impact, not only on the Lake Victoria region of Kenya, but on global efforts at restoring and regenerating God's green, resourceful earth.

Trees Distributed

2017

SPECIES	DISTRIBUTED
Gravelia	6,000
Blue Gum	4,000
Pine	2,000
Cypress	1,800
Total	13,800

2018

SPECIES	DISTRIBUTED
Gravelia	1,500
Blue Gum	4,000
Pine	2,000
Cypress	1,000
Indigenous Conserved	50
Total	8,550

2019

SPECIES	DISTRIBUTED
Gravelia	3,000
Blue Gum	5,000
Pine	5,000
Cypress	3,000
Bamboo	1,800
Total	17,800

2020

SPECIES	DISTRIBUTED
Gravelia	4,000
Blue Gum	6,000
Pine	6,000
Cypress	3,000
Bamboo	1,600
Total	20,600

In 2020, because of COVID, trainings and travel were restricted, so we spent more time growing trees, resulting in increased production.

FRUITS 2019-2020

SPECIES	DISTRIBUTED
Mango	400
Oranges	300
Avocado	200
Passion	80
Pawpaw	50
Total	1,030

Fruits are especially important for us. They are so much in demand that we can sell the seedlings to help replenish our accounts and make our program sustainable. So in 2019 we began experimenting with growing them.

Picture Gallery



We have used our office backyard to grow the seedlings and to train farmers.

Farmers' training on trees, fruit production, beekeeping, and poultry



Schools have greatly benefitted from our trees. Groups of students like this one can quickly learn to plant a great many trees, and can form extracurricular clubs and societies offering education on earth care, which has both a moral and a spiritual emphasis.





A tree distribution at Oyoo High School of Kisumu. We began planting trees here even before we established our nursery. They have a club called Young Farmers.

Mrs Orandi, the agriculture teacher, with her students, very excited about their trees.



Education often occurs in the churches. We have engaged and trained fifteen local teachers to lead workshops, especially creation care and organic farming. Some of these are volunteers, giving hours of training per day, and others require only transportation costs.



The cars we use to transport the trees cannot carry all that we can grow. We pray for a pickup truck like this one to transport seedlings, as well as manure and supplies for the nursery.



There are many construction sites in the city where resources are wasted. Soil from road construction is often left to dry up and be washed away. With a van or truck we would be able to remove and reuse it. Soil like this, when mixed with the manure the farmers give us, would be a blessing for us rather than refuse for the community. We could help keep the street clean while benefitting our tree nursery.

Chicken manure is another good example of spoil that could become rich soil for us.





This tree was felled for a real estate development, the trunk left at the roadside. With the proper equipment, we would be able to use the wood and soil to enrich our ground for new growth.

