



# KWETU TRAINING CENTRE FOR SUSTAINABLE DEVELOPMENT

Kenya



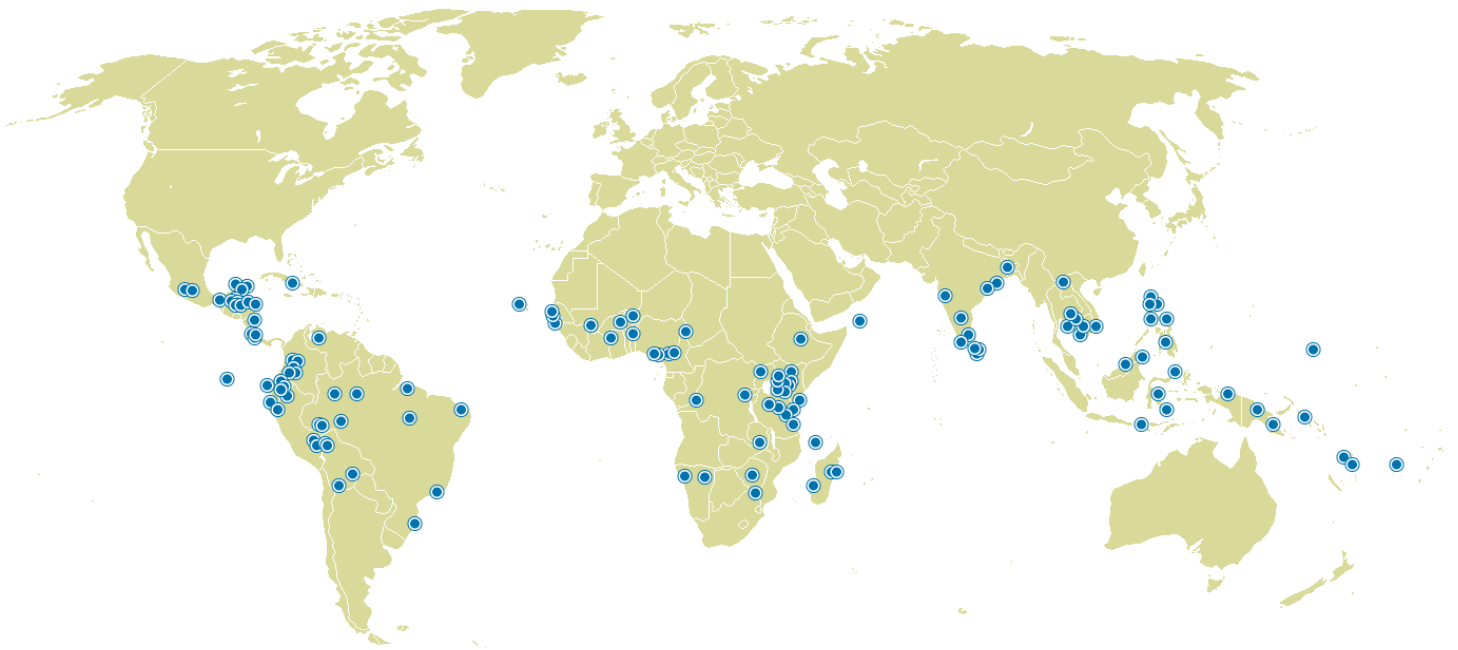
## Equator Initiative Case Studies

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# UNDP EQUATOR INITIATIVE CASE STUDY SERIES

Local and indigenous communities across the world are advancing innovative sustainable development solutions that work for people and for nature. Few publications or case studies tell the full story of how such initiatives evolve, the breadth of their impacts, or how they change over time. Fewer still have undertaken to tell these stories with community practitioners themselves guiding the narrative.

To mark its 10-year anniversary, the Equator Initiative aims to fill this gap. The following case study is one in a growing series that details the work of Equator Prize winners – vetted and peer-reviewed best practices in community-based environmental conservation and sustainable livelihoods. These cases are intended to inspire the policy dialogue needed to take local success to scale, to improve the global knowledge base on local environment and development solutions, and to serve as models for replication. Case studies are best viewed and understood with reference to *'The Power of Local Action: Lessons from 10 Years of the Equator Prize'*, a compendium of lessons learned and policy guidance that draws from the case material.



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## Kenya

### PROJECT SUMMARY

Kwetu Training Centre is based in Kenya's coastal district of Kilifi where it uses a model demonstration site and extensive youth group engagement to promote sustainable environmental management of the coast's mangrove forests. This has involved voluntary reforestation efforts and development of silviculture based around the mangrove ecosystems, such as crab farming, bee keeping and ecotourism. To this end, the centre has recently constructed a boardwalk through the local mangrove forests.

As local illiteracy rates are high, Kwetu uses methods such as dance, drama, and music to convey conservation messages to local communities, and especially youth, while the group also runs a campaign to raise HIV/AIDS awareness. Its role as a critical support system for local initiatives has resulted in widespread impact along the coast, including the planting of more than 190,000 mangrove seedlings since 2007.

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### KEY FACTS

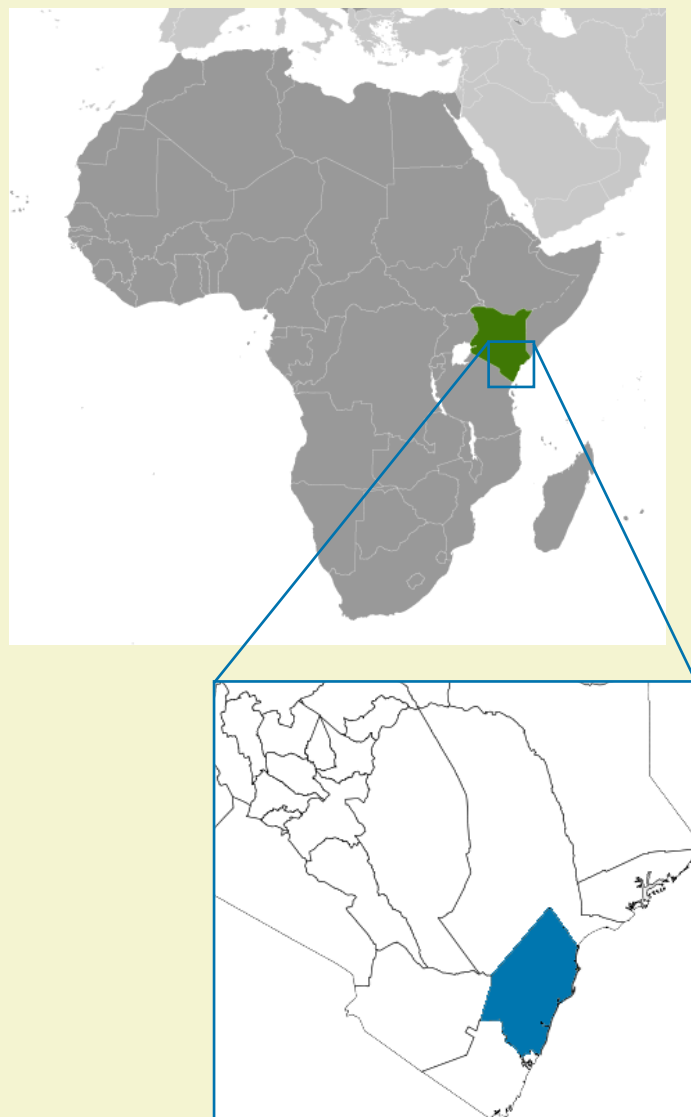
EQUATOR PRIZE WINNER: 2008

FOUNDED: 1997

LOCATION: Kilifi District, Coastal Province

BENEFICIARIES: youth and women's groups

BIODIVERSITY: mangrove conservation





# Background and Context



Kwetu Training Centre for Sustainable Development promotes community participation in the sustainable use and conservation of mangrove forests through silviculture innovations on Kenya's Swahili coast. The organisation supports local groups of young people, women and artisanal fishermen engaged in fish-farming, bee-keeping and ecotourism activities in coastal communities. Kwetu was founded in 1996 and has been registered as a non-profit organisation since 1997. The centre owns a 2.5 acre plot on Mtwapa Creek in Kilifi District, Coastal Province, from which all its programs are run. Although the surrounding area has no connection to public water or the electrical grid, Kwetu is self-sufficient, generating energy through solar panels and taking its water from a well. A small staff oversees training and funding for their partner groups, much of which is conducted at Kwetu's own demo sites, used for fish-farming and bee-keeping, while the headquarters also houses a solar drier. A 133-metre boardwalk through its mangrove forest has recently been constructed, serving as a pilot ecotourism attraction.

## *A focus on disenfranchised youth*

The organization was founded by a German national living in Kenya who saw the vast underutilized natural resources along the coast, where people were nonetheless living in adverse poverty due to high unemployment. Along with five other individuals, she established Kwetu (Kiswahili for "home") in the mid-1990s, engaging ten youth members from the local community in the building of the centre. The vision of Kwetu has stayed true to this initial catalyst for action, primarily working with youth through outreach and awareness-raising activities. Kilifi District has a population of approximately half a million people, of whom more than 60% are below the age of 25.

The district is one of the poorest in Kenya, with low economic productivity, inadequate availability of water, lack of adequate educational facilities and environmental degradation (Kilifi District Development Programme, 2001) among other challenges.

The main sources of income in the district are agriculture and fishing, together engaging 80% of its labour force. Cassava and maize are the main food crops, with diets supplemented by fish. Kwetu's chief area of activity is a former settlement scheme for the Giriama people, in which most families were given 12-acre plots. Many owners have subdivided and sold the majority of their land, using only a small portion for cultivation, and have depleted the soil through monoculture and slash-and-burn practices. Agricultural productivity is therefore very limited, compounded by a lack of fertilizers and pest control, and natural resources such as the mangrove forests are exploited unsustainably.

Within the last decade, the town of Mtwapa has grown into a thriving destination for tourists on the Swahili coast. This has not been a rich source of direct employment, however. Kwetu has therefore identified great potential for accessing this industry through small eco-enterprises, producing goods such as honey, fish and shellfish, processed fruit chutneys, and medicinal products, or establishing ecotourism attractions centred on the mangrove forests. With these challenges in mind, Kwetu's specific objectives are: to promote and establish silviculture technologies in Kilifi and Kwale Districts; to diversify the livelihood options of local communities dependent on mangrove wetlands for their subsistence; and to advocate for the conservation and sustainable use of mangroves in coastal communities.

*"Local communities must be empowered and involved in decision making, as they are the direct users of the mangrove forests. Unless they are involved our mangroves will be depleted."*

*Mercy Mbogho, Executive Officer, Kwetu Training Centre for Sustainable Development*



# Key Activities and Innovations



The main focus areas of Kwetu's work are raising awareness on conservation and health through outreach activities, and identifying and developing alternative livelihood activities in partnership with local groups.

## *Combining reforestation and education*

Since 2007, Kwetu has enabled the planting of over 190,000 mangrove seedlings along the Kenyan coast in conjunction with local community-based organisations (CBOs). Much of this replanting has been undertaken in conjunction with outreach activities aimed at raising awareness of environmental issues. Kwetu has used local, national and international occasions – from school celebrations to World Environment Days (June 5th) – to either hold events at their own headquarters, or conduct trainings and workshops on site with other groups. Many of these activities have involved environmental education with local primary and secondary schools, or reaching out to remote communities along the coastline. Due to high levels of illiteracy, Kwetu has used innovative methods of conveying their central messages, such as dance, theatre or music, often in Swahili, or other indigenous languages typical of the Giriama people. They have also used their relationship with government agencies, such as the Kenya Marine Fisheries and Research Institute (KMFRI) or the Kenya Forest Research Institute (KEFRI), to take schoolchildren on educational field trips.

Kwetu has used its partnerships with youth and women's groups to raise awareness of vital health issues, in addition to messages on conservation. HIV/AIDS, among other diseases, has a high prevalence rate (one in seven of Kilifi's population is HIV positive.) To date, Kwetu has established mobile Voluntary Counseling and Testing services in surrounding communities, and has also used Adolescent Sexual Reproductive Health campaigns to educate young people on diseases such as HIV/AIDS. Peer education has been an important means of conveying these messages, often through drama and dance. In 2010, KWETU received support from UNDP Kenya's Civil



Society Democratic Governance Facility, through its 'Amkeni Wakanya' program, to promote youth participation in local governance. A Kikambala Youth Divisional Council has been formed, representing eleven sub-locations.

## *Alleviating local pressures on mangrove forests*

The second component of Kwetu's work has been developing viable alternative livelihood activities that reduce pressures on mangrove forests. This is done in partnership with local community-based youth and women's groups. Kwetu's contributions involve identifying market opportunities, such as the demand for shellfish from local hotels and restaurants serving tourists to the area, and developing innovative techniques for meeting this demand through research conducted at their demo site. They then help the individual CBOs to find initial funding, and provide training and equipment for their livelihood ventures. In this way, Kwetu plays an important role in linking different stakeholders to facilitate the sustainable use of natural resources.



# Impacts



## BIODIVERSITY IMPACTS

Since 2007, Kwetu has coordinated the planting of over 190,000 mangrove seedlings, helping to repopulate areas of coastline forests that have been over-exploited by local communities. This has included species such as *Rhizophora mucronata*, *Ceriops tagal*, *Avicennia Marina*, *Sonneratia alba*, and *Bruguiera gymnoriza*, and has involved six different groups from local communities. These have included youth groups at Matzangoni, Mtepeni, Majaoni, and Dabaso, where approximately 16,000 seedlings have been planted, and women's groups at Nkonazini and Makongeni, who have planted 10,000 seedlings. Kwetu's own demo site has an extensive mangrove nursery, and has also been substantially reforested. In addition to mangrove seedlings, casuarina nurseries have been established at 14 primary schools. Over 4,200 casuarina seedlings have been planted by primary schools, while 1,200 were planted on Kadaina Island to mark World Environment Day 2010.

Monitoring has been undertaken by Kwetu along with partner organisations such as Kenya Forestry Research Institute (KEFRI), Kenya Forest Service, the Coastal Development Authority (CDA), and Kenya Marine and Fisheries Research Institute (KMFRI), who have also given management training for Kwetu staff. Research has been undertaken at Kwetu's demo site by academics from Moi University, with the final results being shared with Kwetu. Individuals from KMFRI have also trained community groups on mangrove planting with support from the Regional Coastal Management Programme of the Indian Ocean Countries (ReCoMaP), while other research bodies have conducted research at Kwetu's demo site.

## SOCIOECONOMIC IMPACTS

Kwetu works with the community-based youth and women's groups mentioned above to develop eco-enterprises that directly benefit local livelihoods and incomes. Other socioeconomic benefits are felt through Kwetu's youth work, and indirectly through the improvements in local infrastructure.

**Majaoni:** Majaoni Youth Group began working with Kwetu in 2003, initially focused on mangrove conservation. The group was formed of eighty young men who had come together to address the devastation caused by the presence of a Somali refugee camp on two kilometres of Mtwapa Creek from 1991 to 1997. Mangroves had been harvested unsustainably to make tents for use as timber and for firewood. Since 2004 the group has engaged in income-generating activities based on the mangrove ecosystem, after two representatives visited Kwetu for training in apiculture and mariculture. They were given bee hives and equipment for constructing two fish ponds. In 2005, they harvested 5kgs of milkfish from the two ponds; by 2008/9 their harvest had increased to over 30kgs from a total of eight ponds, having constructed six further ponds with external donor funding. They also farm prawns and crabs, all of which are sold in local markets. Currently they conserve two kilometres of mangrove forests in Mtwapa Creek.





The group itself now consists of just 13 members, but has been able to find significant sources of funding and is looking to increase its income through higher fish yields and a proposed ecotourism project. With initial funding from the Toyota Foundation and ReCoMaP, and support from the Anglican Church of Kenya/Pwani Christian Community Services (ACK/PCCS), Majaoni Youth Group has been able to construct a 100m boardwalk through their mangrove forest leading to the creek; they plan to increase this to 500m. This has been used for crab and mangrove monitoring, and will also serve as the basis for a planned ecotourism attraction. Members of the group are now being paid to construct a similar boardwalk at Kwetu demo site.

**Dabaso:** Dabaso Youth Group, located north of Kwetu in the town of Gede, has been in existence since 2000, and is currently engaged in mangrove conservation, crab farming in cages, and ecotourism. The ecotourism project features a 500m boardwalk through its mangrove forest to a banda platform where tourists can view Mida Creek. The initiative has so far generated KSh200,000 (approximately USD 2,500) for the group members. The youth group was the inspiration for Dabaso Mangrove Conservation Group, which is composed of

30 fishermen from Dabaso and works within the 32km<sup>2</sup> of the Mida Creek region, part of the Watamu Marine National Park and Reserve. It is also a member of the Mida Creek Conservation Committee, a CBO that represents and oversees all 11 creek community groups with an interest in nature conservation. An associated women's group is engaged in bee-keeping.

### *A support centre for local initiative*

Kwetu's role in both Dabaso and Majaoni has been to write project proposals on their behalf for funding, as well as supplying the initial equipment, training, and extension services necessary to begin their work. Training can be both on-site and on-station, at Kwetu's demo site. The initiative has also been involved in monitoring the success of the fisheries up until harvesting, and holds regular planning meetings with the community stakeholders to discuss their budgets and identify key challenges. In this way, Kwetu fills the roles of both an extension service for rural communities and an incubator for local innovation, supporting community-based action to maturation by facilitating linkages with external funding and assistance.



## *Developing sustainable income generation*

Mariculture is not well established in the coastal area, and no site has generated significant income so far. Kwetu have explored techniques to boost production so that the demand for locally-farmed fish can be met. To this end, they have obtained long-term funding from ReCoMaP to develop community-based silvofisheries. This effort has focused on the fish farms at Dabaso and Majaoni, as well as at Makongeni and Kwetu's own demo site. In January 2011, Kwetu harvested 91kgs of milk fish, increased from 67kgs in November 2010. ReCoMaP's support has included bringing consultants from Tanzania to advise those involved in fish-farming, while they also sponsored a peer-to-peer learning exchange for several community representatives at Tanga, on the northern Tanzanian coast. One of the problems faced by fish farmers is the seasonality of wild fish hatchlings, so research has focused on the potential for creating hatcheries, to replenish pond stocks throughout the year. Even after this project phased out in November 2010, ReCoMaP continued to support Kwetu in constructing backyard nurseries for fingerling collection during the high season to mitigate scarcity, with investments targeted at improving pond management for monitoring water quality and maintaining the necessary requirements to reduce high mortality rates in fingerlings.

Value-added secondary processing of natural resources is another area in which Kwetu has been able to provide technical advice and training to local groups. Solar-drying technology has been used to produce medicinal goods from Neem plants, as well as dried fruit products. Kwetu currently produces candles, soaps, creams, and detergents from Neem oil, as well as a medicinal tea made from crushed dried Neem leaves. The plant's pungent aroma repels mosquitoes, making it an important local anti-malarial remedy. Over three hundred local people have been trained in Neem production. Two production centres have been established in Chumani (Kilifi District) and Msabaha (further up the coast, in Malindi District) to process the plant, with support from OXFAM. These are currently managed by local farmers.

Prior to 2008, Kwetu had used funds from the European Union's Micro-Enterprise Support Programme to process fruit. Kwetu used a solar drier to dry mangoes, pickles and tomatoes for use in organic chutneys, jams and preserves. These were marketed and sold on a small scale. However, production was halted due to a lack of trained personnel and locally-available equipment.

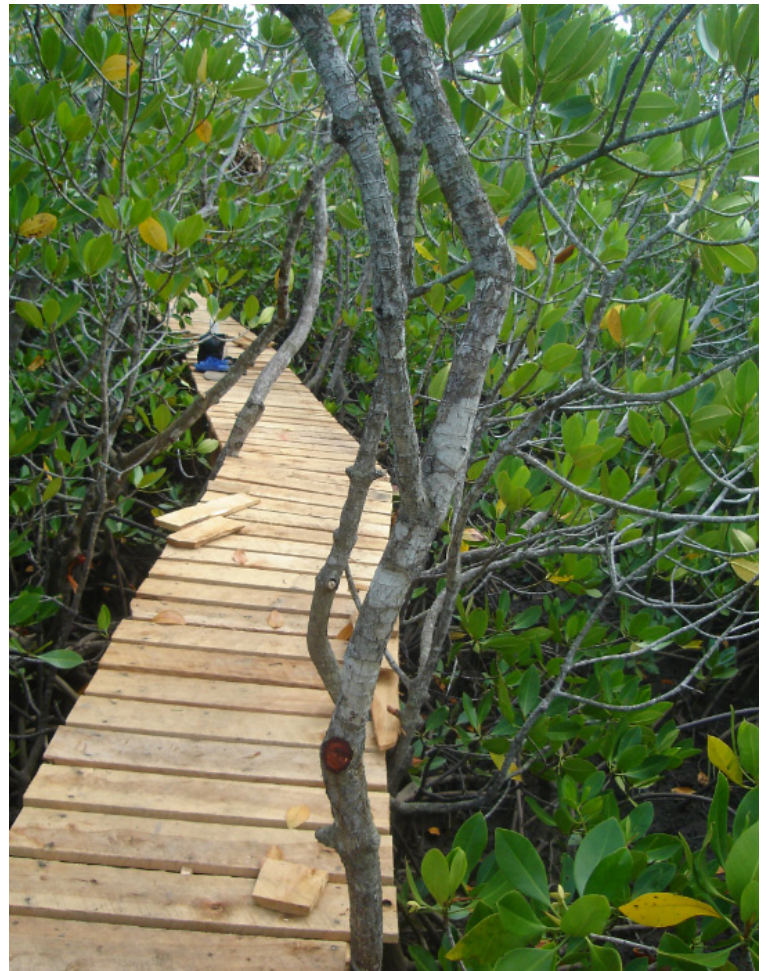
## *Mainstreaming health messages in youth outreach*

Much of Kwetu's work has been with youth groups. With Global Fund financial support, Kwetu has established ten Youth Resource Centres in the area, with one based at Kwetu Training Centre and others at local health centres and schools. These house computers with internet capability and promote mobile counselling and testing for HIV/AIDS, increasing the accessibility of VCT services. Kwetu marked World AIDS day 2010 with an awareness-raising event in Kikambala Division. In partnership with Care International Kenya, at least 18,447 male and female clients from Kilifi and Kaloleni districts have been tested and received their results through the "Hamasa Ya Afya Kwa Jamii" testing campaign.

Outreach to local schools has taken the form of training "peer educators" and organising competitions on conservation. Kwetu has encouraged the formation of schools' Environmental Clubs and tree nurseries, and have awarded water tanks to schools as competition prizes.

## **POLICY IMPACTS**

Kwetu has been given support by Kenya's Community Development Trust Fund (CDTF) to implement an advocacy project for community participation in conservation of mangrove forests. In order to review existing legislation on this issue, Kwetu convened a group to study the relevant policies governing marine ecosystems and mangrove forests. The outcome was shared with representatives from different community groups. A proposed action plan was developed, and the gaps in existing policies were brought to the attention of policy-makers at a workshop, held in Kilifi during April 2010. Prior to this, capacity building exercises were conducted with local village elders, chiefs, and community group leaders working within mangrove ecosystems to help them mobilise to advocate for policy changes. Kenya Forest Service (KFS) has also granted licenses to some groups to encourage the forming of a Community Forestry Association (CFA) composed of the Mtwapa Creek communities. This process is ongoing, and would give the communities a mandate for the management of the creek's mangroves.





# Sustainability and Replication



## SUSTAINABILITY

Currently, Kwetu is not financially self-sustaining – it relies on donor funding, while pursuing various strategies for achieving a higher level of sustainability. The further development of ecotourism based on its boardwalk and mangrove forest represents a prime potential source of revenue. The Coastal Development Authority (CDA) has conducted an assessment for the feasibility of this project. The attraction would serve as a stop for tourist boat-trips along Mtwapa Creek.

Offering paid training workshops to larger NGOs is another income-generating activity for the organisation. Similarly, developing processing methods for natural products using Neem and dried fruit would represent a viable source of revenue, based on previous experiences. These products would need to be marketed and produced on a larger scale to meet demand for them. Funding and trained personnel are crucial for this scaling up; another important step is to attain the Kenyan Bureau of Standards (KEBS) Diamond Mark of Quality for Kwetu's products.

Finally, the ongoing attempt to establish fish-farming as a livelihood activity would also provide Kwetu with a means for generating funds from their demo site. With ReCoMaP's support, Kwetu and its communities hope to increase harvests of fish from fish farms to meet the demand from hotels and restaurants involved in the coastal tourist industry.

## REPLICATION

Kwetu has been able to replicate its model on a smaller scale with many of the groups it works with, while also scaling up its own work. Three community groups – Kidongo, Maya, and Kilifi – have recently implemented successful mangrove conservation and fish farming projects along the lines of the Kwetu model. Replication efforts have been facilitated through community outreach events which

have raised awareness of the success of Kwetu's own work, while their demo site has allowed other groups to attend training sessions for a variety of activities. This work has been assisted by NGOs such as Coastal and Marine Resources Development (COMRED) and PACT Kenya, while government institutes have also played a role in disseminating Kwetu's model.

## PARTNERS

Government authorities have played a key role in Kwetu's work. The initiative maintains a close relationship with Kenya Forest Service (KFS), the Fisheries Department, Kenya Marine Fisheries and Research Institute (KMFRI), Agricultural Training Institute, Coast Development Authority (CDA), Ministry of Public Health and Sanitation, Kenya Forest Research Institute (KEFRI), National Environmental Management Authority (NEMA), Ecotourism Society of Kenya, Community Development Trust Fund (CDTF), and Kenya AIDS NGOs Consortium (KANCO).

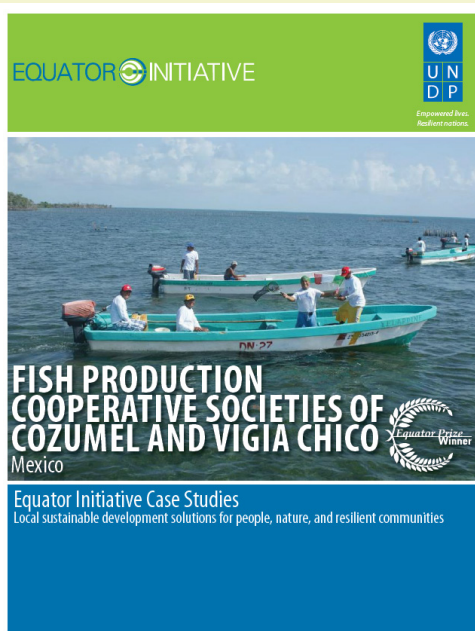
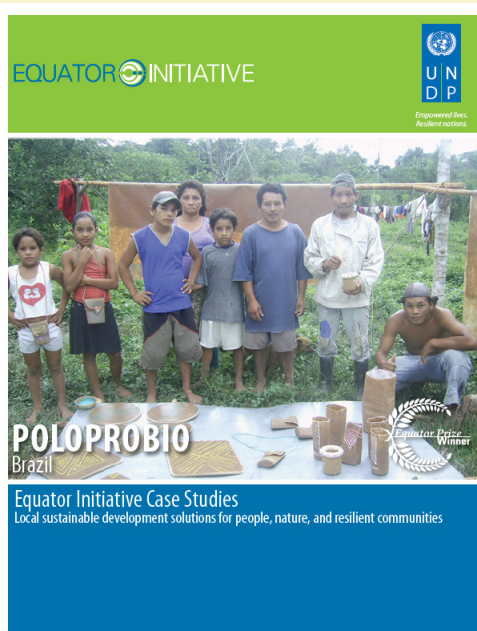
External donors have also been critical to Kwetu's success. ReCoMaP's long-term commitment to developing commercialised mariculture initiatives is fundamental to the organisation's long-term sustainability. A GEF-Small Grants Programme (SGP) grant was also received for 2008-10. Other donors include Kindernothilfe, the German Foundation For World Population (DSW), Oxfam, SIDA, National Aids Control Council, Toyota Environmental Activities, the Global Fund through CARE Kenya, UNDP's "Amkeni Wakenya" programme, the European Union's Micro Enterprise Support Programme, GlZ, and Alma Tetra Pak.

Finally, universities including Kenya's Moi University have sent research teams to Kwetu and its partner CBOs' mariculture projects. American University, Pwani University, and Kenyatta University have also sent students to complete study tours at Kwetu on mariculture, contributing to the initiative's knowledge base on best practices in small-scale mariculture.

## FURTHER REFERENCE

- Kwetu website: <http://www.kwetukenya.org/>
- Kwetu PhotoStory (Vimeo) <http://vimeo.com/15780594> (English) <http://vimeo.com/15780685> (Swahili)

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