

Forests

As well as helping farmers to plant trees in their farms, Excellent Development is also planting protective forests. These forests focus on endangered indigenous trees to provide a long term resource for the communities. After farmers have satisfied their need for trees for firewood, building materials, fruit and fodder etc. they are able to consider growing trees for medicines and therefore incomes.

Wellington Muli, Traditional herbalist - *'Over 80% of the population living in these regions rely on traditional medicine for primary health care. It is actually becoming increasingly very difficult to obtain the raw materials in the form of the plants, that is in barks and roots and leaves, and also flowers, because most of the plants that we are using for herbals medicines have been cleared. The trees are being chopped down for fuel, they are being chopped down for building, and they are being chopped down for all sorts of activities.'*

The forests will act as living seed banks being able to provide seeds for communities to use in their nurseries. The forest nurseries enable farmers to learn how to germinate and propagate the notoriously difficult trees. The forests themselves demonstrate that successful growing is possible. In future workshops they'll also help to teach farmers how to sustainably harvest the trees to obtain valuable medicinal products to use or sell. And of course as they mature, the trees will add to regional biodiversity and contribute to improving the global environment through their absorption of Carbon Dioxide.

Cornelius Kyalo, Field manager - *'The Utooni medicine forest, I have to say that we are growing indigenous trees which grow in the area and some of the indigenous trees are endangered and so, we have brought them in the farm to be grown, and then if they are going to be grown in this farm, they are going to be used later as a way of providing seeds for the endangered trees. So for that purpose they are going to be conserved and they are going to be available in the future, because now they are almost getting extinct and in the Red List (of Threatened Species).'*

The species selected for the forest are chosen because they're locally, nationally or globally endangered and the majority of them also have medicinal properties. All but two of these are indigenous; Horse-radish tree and Neem, both of which have valuable medicinal use and are being planted in addition to indigenous varieties.

Endangered species of trees planted include *Prunus Africana* (or Red Stinkwood), which is protected, and *Dalbergia* (or African Blackwood) and African pencil cedar, which are both on the RUCN Red List. The exotic tree *Maringa* is known as the miracle tree. Weight for weight *Maringa* leaves contain more Vitamin A than carrots, more calcium than milk, more iron than spinach, more Vitamin C than oranges and more potassium than banana, whilst the protein quality of *Maringa* leaves rivals that of milk and eggs. Not only that, it has been used for centuries in traditional Indian medicine and can even purify water – a miracle tree indeed.

Neem is another exotic tree native to India and can treat 40 different illnesses including malaria. In addition it can be

used as a substitute wood for carving and its ground leaves act as an insecticide. *Prunus* amongst other things is able to cure a range of prostrate problems. Its bark was exported from Kenya at the rate of 10 metric tonnes a year for 10 years to Western pharmaceutical companies. This supported a \$220 million annual market for prostrate remedies. Not common to the Machakos district, Excellent Development and farmers in their Self Help groups are successfully growing it for income and conservation purposes.

Prof. Mugambi, University of Nairobi – *'This tree actually grows on the slopes of Mount Kenya, and the Aberdares - quite far from here, much higher - and it requires a lot of water, and yet it is growing this well here. I'm very surprised.'*

Wellington Muli, Traditional herbalist - *'You know they (Excellent Development) are also growing Prunus Africana, although it takes a bit of time to grow, which is allowed. We will buy, of course, from them.'*

Warbugia is another rare tree grown by Excellent. It's taken as a cure for stomach ache, toothache, muscular pains and malaria too.

Joshua, Excellent Development co-founder – *Warbugia tree is one of the special medicinal trees we have in Africa and especially in Kenya. Again, its one of those seriously endangered trees, or species, disappearing from the country. People have been stripping it for making medicines, and out of that because of bad harvesting, the trees have been killed, and they are very rare now to find. We are encouraging farmers, and trying to locate seeds to enable them to plant them so that we can return back the trees.'*

Excellent also plant a number of trees identified by local traditional healers, and TRAFFIC, the International organisation which monitors the trade in endangered species.

Cornelius Kyalo, Field manager - *'This is the lucky bean tree, or erythrina abessinica, and it is an important tree in the area because of its medicinal properties. The roots feature in the treatment of syphilis and snake bites.'*

Dalbergia or African Blackwood may be a medicinal tree but it's more under threat for its use for carving and woodwind instruments like clarinets. Commercially extinct in Kenya, Tanzania still earns \$2 million a year from the international musical instrument industry. Excellent is planting the tree in Kenya where it's particularly under threat. Whilst it's legally protected, carvings are still begin produced and worse still, other endangered medicinal trees like African Wild Olive are being used instead.

Conservation efforts have also promoted the use of alternative faster growing trees for carving, like *Milia* and *Neem*. Excellent has just started a forest focusing entirely on the problems caused by carving use. They're planting African Blackwood, African Wild Olive and substitute carving woods, *Milia* and *Neem*. Whilst the planting of forests makes a vital contribution to the conservation of endangered species it's the work of Excellent in enabling communities to grow the trees in their farms, that will ensure their long term survival.