**Project Update: May 2011**

**Background**

Native hardwood timbers from Mozambique attract huge foreign interest, predominantly led by Chinese companies. Favourable conditions include the availability of over hundred options of timber species and the possibility to export unprocessed logs of precious species. Over the past two decades after the civil war ended in 1992, the volume of native hardwoods harvested and exported have experienced unparallel peak of the country history. However, there are disperse and contrasting opinions about the benefits of the country in this domain. Some claim that if the current harvesting rate persists, the native forest will not only be rapidly depreciated but also impact negatively the integrity and role of native tropical forest as carbon sink. Other critics question or suspect that national forest inventories are tailored to overestimate the wood growing stock to provide legal ground for the current harvesting regime. Most notably, national forest inventories (Marzoli 2008; Sacket 1994) do not address maximum sustainable cutting volume per species. For example, in Mozambique there are two CITE timbers namely, *Spirostackhys africana* (Sandalwood**)** and *Dalbergia melanoxylon* (Blackwood), but no accounts about their harvesting quota is available. This scenario does not favour forest authorities and conservation organizations such as IUCN, CITES and WWF to either restrict or enforce maximum harvesting volumes of the aforementioned timbers. In fact, field observations across the main forests revealed uncontrolled harvesting with charcoal production and logging found to be the main threats for sandalwood. The less harming use of both blackwood and sandalwood are in form of raw material for wood crafts, commonly traded for tourists.

Fig.1 Sandalwood logs prior to ignition for a traditional charcoal production- Matutuine- Maputo, Mozambique.

The present project arranged several workshops with all stakeholders in timber sector to discuss procedures and formalities to determine what timber species should be protected. Timber species oriented inventory of critically endangered/overexploited species was suggested to be more suitable if any measure is successfully meant to halt the present situation. Obviously, costs associated with this approach were assessed and found to be affordable.

**BOTANICAL GUIDE FOR FIELD IDENTIFICATION OF THE CITES TIMBERS GROWING IN MOZAMBIQUE**
**SANDALWOOD**

*Spirostachys africana* - **(***Euphorbiaceae*)

**Tree features and natural distribution**

Sandalwood trees grow almost in all Southern African countries, excluding Lesotho. The largest trees reach up to 18 m in height. In Mozambique, sandalwood trees usually grow in monospecific clusters especially in stream banks, and occasionally in large groups of small trees.


Fig.2 Monospecific stand of sandalwood, Matutuine, Mozambique. Fig.3 Bark features of sandalwood trees. The crown is heavily branched. The leaves are elliptical, alternate to simple, slightly toothed in the margins and the largest size recorded is 75 x 30 mm.

Typically, the bark is rough darkened brown to black in colour, neatly cracked in square to rectangular blocks, mostly arranged in vertical rows (Fig)


Fig.4 Morphology of sandalwood leaves. Fig.5 Wooden coin holders and ashtray crafted from sandalwood timber.

The trees produce flowers between August and September before the new leaves appear. According to Palgrave (2002), the flowering spikes of this plant are of unusual appearance as the male flowers appear gold-coloured, most likely due the pollen while female flowers are blood red. The fruit is a capsule that is three-lobed and opens with an exploding sound during the hot summer period once ripe which often occurs from October to February.

**Macroscopic features of sandalwood timber**

Heartwood has streaks and shades of red or brown colour and appears darker than sapwood. This timber is regarded as dense (> 750 kg/$m^3$), often exuding a shiny liquid of very peculiar odour and its sawdust is known to cause blindness if contacted with eyes. Sandalwood is highly appreciated for manufacturing of expensive furniture and by artisans to produce wooden crafts.