

Conservation news

First commercial timber harvest from a community-managed forest in Tanzania

After over 20 years of policy development and implementation the first commercial timber harvest has taken place in a community-managed forest in Tanzania. The timber was felled during September and November 2009 in a Village Land Forest Reserve managed by Kikole village in Kilwa District, south-east Tanzania. This forest is covered under a Forest Stewardship Council (FSC) certificate—the first for a community-managed natural forest in the whole of Africa. Kikole were assisted in this endeavour by the Mpingo Conservation Project, an FFI partner, which also administers the FSC certificate on behalf of member communities.

Kikole received a payment of TZS 2,400,000 (c. USD 1,800) in return for 15 m³ of African blackwood *Dalbergia melanoxylon*. Previously the community would only have received TZS 100 (USD 0.08) per log. In all Kikole were able to realize an income nearly 400 times more than they would have received previously on the 63 logs sold. Kikole intend to spend the money they have raised on improving the road to the village, improving market access for impoverished farmers and providing local employment.

The harvest, whilst being a considerable achievement, is the start of a long process from forest to completed product. Other community forestry projects around the world (*Small-scale Forest Economics, Management and Policy*, 2, 327–341) have struggled because the timber available has not met market demands. Issues can include species, wood quality, quality of sawing, and quantity. Mpingo Conservation Project, and its partners Environment Africa Trust and FFI, have therefore worked to address these concerns from early on in the project. Funding came from the Darwin Initiative, the Dutch Ministry of Foreign Affairs, WWF and Comic Relief.

African blackwood is exported to developed countries in the form of sawn billets to make musical instruments—an industry that is extremely demanding in terms of quality such that often > 90% of timber entering a sawmill is wasted (15 m³ of logs is sufficient to make c. 1,000 clarinets and oboes). Mpingo Conservation Project and its partners resolved this issue by partnering with an existing sawmill in Tanzania, Sandali Wood Industries, who already operate profitably in this market and have a reputation for delivering high quality products. Sandali Wood Industries' management was open to the idea of collaborating in a scheme with significant potential environmental and social benefits and succeeded in obtaining a Chain of Custody certificate from FSC.

Meanwhile, in the UK, Environment Africa Trust and FFI investigated the supply chains and market opportuni-

ties involved in delivering blackwood to British and Irish musical instrument manufacturers, and the subsequent retailing of woodwind instruments. Potential partner manufacturers were identified and approached, leading to the first orders for FSC-certified blackwood in December 2009. Environment Africa Trust are providing technical assistance to partner manufacturers through the process of obtaining their own Chain of Custody certificates from FSC, which will allow manufacturers and their retail partners to sell the final product under an FSC label. The billets will need to be properly seasoned, a process that takes at least 1 year. It is therefore anticipated that the first FSC-certified blackwood instruments will be on sale mid 2011.

To kick-start the market in a new product line no price premium was attached to the timber by Kikole, and Sandali Wood Industries expect to sell the sawn billets with no, or minimal, mark-up on their normal prices. However, once the first certified instruments reach the market, Environment Africa Trust and partners will launch a marketing campaign under the banner Sound and Fair to convince musicians of the merits of buying FSC-certified instruments. Market research suggests that, once the issues have been explained to them, musicians are prepared to pay 5–25% more for ethically labelled instruments. On high end instruments that commonly retail in excess of USD 5,000 this will yield substantial additional income for collaborating sawmills, manufacturers and retailers. For villages such as Kikole, who could eventually earn USD 40,000 per year or more on sales of African blackwood, the returns will amply justify the investment in the project. For more information see <http://www.mpingoconservation.org>

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Rediscovery of the Taveuni blind snake

Much of the herpetofauna of the two main Fijian Islands (Viti Levu and Vanua Levu) has been decimated by human-induced habitat modifications and the introduction of exotic predators. Cats, rats and mongooses are the major predators on terrestrial reptiles and on those arboreal species that frequently descend to the ground for feeding or movement. The mongoose is a major driver of extinction or near extinction. Its level of lizard predation is readily seen by contrasting the density of the ground-living white-bellied striped skink *Emoia cyanura* on Viti Levu (mongoose present) and Ovalau (mongoose free): < 5 individuals ha⁻¹ versus > 1,300 individuals ha⁻¹, respectively.

activities throughout the State. The three corridors, with an estimated population of c. 300,000 people, cover an area of c. 2 million ha and include seven state protected areas, 280 micro-catchments (small topographical planning units) and 63 municipalities.

An important aspect of the Project was to emphasize inter-agency and inter-community interactions, including capacity building, development of production systems compatible with biodiversity conservation, and incorporation of the local community and other stakeholders in management and monitoring of local and regional issues. Conservation of existing native forests and expansion of forested areas, particularly along the corridors connecting protected areas, was accomplished through several integrated, complementary activities that benefited a total of 251,000 ha. A total of 48,000 ha were directly supported through implementation of 67 pilot and demonstration sub-projects (investments in biodiversity-friendly production systems implemented by groups of farmers), and an additional 18,000 ha of registered forests under the state legal framework. Riparian forest restoration included 35,000 ha along watercourses in gallery forest. The Project also provided technical assistance to promote environmental practices within the buffer zones of conservation units, totalling an area of 150,000 ha. The state agency for agricultural extension, a key partner in the Project, provided demonstration sites for local landholders, encouraging them to adopt new conservation criteria and techniques, going beyond sustainable use of soil and water by the incorporation of biodiversity good practices.

The Project also provided the means to develop planning and regulations for private nature reserves, another way of involving the private sector in conservation, with the addition of 23,000 ha of protected areas either declared or in the process of being declared as private nature reserves. Despite the difficulties of assessing the effects of biodiversity conservation and management implemented in the Project, inherent in the slow process of forest recovery, satellite images indicate a recovery of fragment connectivity in the area—mostly in the restoration of riparian vegetation and the addition of new private conservation units. Recovery is more visible in the Atlantic Forest than in the Araucaria corridor. The main problem in the latter forest was not fragmentation but rather poverty and a high rate of deforestation.

The Project provided significant benefits and incentives in terms of capacity building to government agencies in Parana, including the development of a State biodiversity monitoring system that will contribute to the long-term conservation of biodiversity. Seventy-one indicator species were selected for baseline evaluations, 150 field monitors were trained, and there were other training, extension and education activities.

Mainstreaming of conservation into the institutional (mainly agricultural extension systems) and private rural sector is crucial to safeguard biodiversity outside traditional protected areas. This project could serve as a model for other similar initiatives.

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Don't feed the bears!

In Finland the practice of establishing sites for the artificial feeding of brown bears, with dog pellets and farmed salmon, has the potential to have major negative effects on bear populations. This economically lucrative practice began several years ago in the Finnish Karelia, for recreational tourism. New feeding points were established in other areas of eastern Finland in spring 2009, and it is likely that more sites will be developed in the future.

Finnish bear populations play an important role in the migration of brown bears, linking the populations in Russian Karelia (believed to exceed 100,000) with those in Norway and Sweden (> 3,200 bears). The provision of food to bears in the Finland–Russia border region could cause: (1) an increase in transmission of infectious disease through direct physical contact or indirectly through animals sharing food; (2) disruption of the patterns of animal movement (through alterations to normal daily or seasonal movements as individuals converge on feeding areas) and distribution (through increases in population density in the vicinity of artificial food sources); (3) enhanced fighting and injury because of increased competition around artificial food sources; and (4) population increases exceeding the local carrying capacity. Bears conditioned to artificial feeding may also lose their natural instinct to avoid people and become aggressive towards humans while protecting the artificial feeding sites. This is most likely to occur in the case of females that repeatedly visit feeding sites with their cubs; females with cubs are among the most dangerous types of bear for people. Additionally, cubs that are reared under artificial feeding conditions may fail to learn crucial natural foraging behaviour and could starve if the artificial sources are removed.

Artificial feeding may affect wildlife populations other than the target species. Diseases have been reported to affect multiple species in communities, and competition among species for limited resources often increases as the density of animals increase in an area with food. The presence of feeding points also has the potential to cause

changes in the composition of local animal communities. One example is an increased concentration of facultative scavengers (e.g. corvids) in the immediate vicinity of feeding sites, and a consequent increase in nest predation (*Animal Conservation*, 12, 85–88).

A further issue is that the food supplements may be nutritionally unfavourable. The consumption of farmed salmon may expose bears to a variety of persistent bioaccumulative contaminants, particularly organochlorines that have been linked to cancer and abnormal mental development in humans (*Science*, 303, 226–229), and dog pellets can contain animal by-products, antibiotics and pesticides, artificial colours and chemical preservatives. Many of these have known harmful effects associated with chronic disease (e.g. dehydration, diabetes, foetal abnormalities, liver damage, obesity).

Unfortunately the provision of food to wildlife has economic drivers. Many people visit Finnish bear-feeding sites each year and the best periods for bear watching and photography are booked 1 year in advance. This has encouraged the continuation of artificial feeding despite the overwhelming evidence of its negative effects.

New feeding sites are being developed in some so-called wildlife centres and nature parks, and on private land. The conservation issues arising from the proliferation of artificial feeding sites require national legislation to limit, regulate and control the situation. Those promoting and implementing development of feeding sites must be required to guarantee food quality and control quantity. Above all, the health of Finnish bear populations must be preserved and not risked by economic imperatives. Many examples exist of humans adopting an arrogant and self-defeating attitude towards nature: this so-called techno-arrogance fails to recognize the limitations to, and ramifications of, attempts to control nature (*Conservation Biology*, 6, 350–354). Feeding dog pellets and farmed salmon to bears represents the first step towards recreational arrogance.

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Global Tree Specialist Group News

The first meeting of the IUCN/Species Survival Commission Global Tree Specialist Group took place in Chicago, USA, on 30 June–2 July 2009, hosted by the Morton Arboretum. The main intention of the meeting was to discuss how best to update the current tree species assessments on the IUCN Red List, many of which are now out-of-date, and how best we can plan more effectively to fill in the gaps in tree species conservation information. Can we realistically propose a global tree conservation assessment? What are the immediate priorities for tree Red Listing?

This first meeting successfully reinforced the great potential for the Group to continue working together and to expand its roles both in Red Listing and in supporting the Global Trees Campaign. The positive discussions throughout the meeting stimulated a range of new ideas for working together at all levels. By providing the Group's Secretariat, Botanic Gardens Conservation International (BGCI) will look at ways to enhance communication and exchange of information between Group members.

With regard to Red Listing it was agreed that without significantly increased funding it is not feasible to undertake a comprehensive re-evaluation of tree species currently on the IUCN Red List but that the entire Group's work contributes towards a continual process of updating. Some clear priorities were identified, with a particular focus on selected genera including *Camellia*, *Diospyros* and *Ilex*. New genera for assessment can, of course, be suggested at any time and members are strongly encouraged to carry out additional assessments on smaller genera and individual taxa of interest to them.

With regard to promoting the Global Trees Campaign, suggestions from Gerry Donnelly were enthusiastically welcomed. Within the USA the potential to link the in situ work of the USDA Forest Service with the ex situ holdings of the arboretum network could lead to major gains for tree conservation.

The concept developed by Amy Hinsley, of FFI, to have a Trees to Save public awareness focus for the Global Trees Campaign was also enthusiastically supported. Working with FFI and members of the Global Tree Specialist Group, BGCI will help to facilitate the further development of both suggestions, and thus to promote the Campaign to a wider audience.

The full report of the meeting is available at <http://www.globaltrees.org>

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