

Island of Hope

Not merely an eco-friendly tourist resort, Chumbe Island in Zanzibar is truly sustainable in terms of its ecological footprint, conservation and educational programmes, reports Mark Atkinson.

THE GROWTH OF GLOBAL tourism has become increasingly exotic and diversified as tourists become more adventurous and mobile. Tourists have high expectations, but are also increasingly aware of their ecological footprint. The impact of tourism is clearly illustrated on Zanzibar, an island east of, and part of Tanzania. Visitors to the island grew from 64,000 in 1995 to 143,232 in 2007, with tourism generating 35 per cent of the island's annual total revenue. A further rise to

156,000 visitors is expected for 2008.

Despite the obvious economic benefits, the tourism boom is far from good news. On the contrary, it could spell disaster for the country's ecological resources, particularly its already scarce water supply – most of the island's one million inhabitants walk long distances every day to source water from depleting and salty underground wells. Sewage and waste disposal facilities are also unable to cope with the additional demand and the island suffers repeated power cuts.

“Water consumption is rising faster

than the island can provide,” says a recent United Nations report. “By 2015, Zanzibar Municipality alone will need more than 90,000 cubic metres of water per day, while average daily production is currently about 30,000.”

There is also little education or awareness about sustainable conservation management. Coral reefs are under threat from over-fishing, dynamite fishing, the sewage run-off from Zanzibar town and increasing number of beach hotels, and the bad anchorage practices of some tourist boats.

One resort that aims to increase community awareness, eradicate the negative aspects of tourism and instead build on its strengths is Chumbe Island – a small, previously uninhabited island, just off the southwestern coast of Zanzibar, with a rich and diverse coral reef ecosystem. Sibylle Riedmiller, founder of the island's eco-conservation programme, recalls her experiences after arriving in Tanzania in 1982.

“I developed a fascination for the incredible beauty of the fringing coral reefs and soon became a passionate sailor, snorkeller and diver,” says Sibylle. “I was shocked by the ongoing destruction by rampant dynamite fishing all along the Tanzanian coast, and the lack of political will of the government to take action.

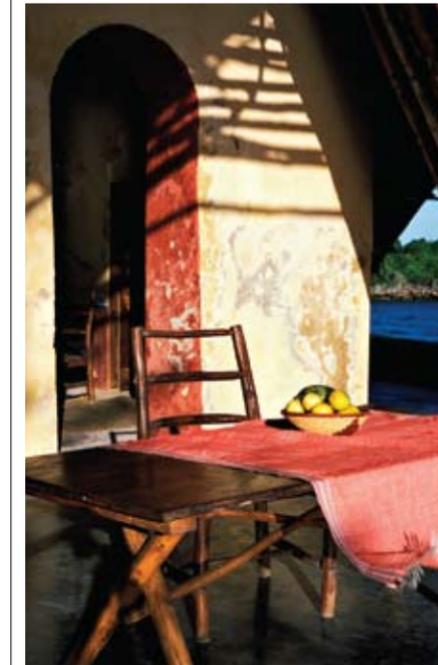
“**THE CHUMBE** idea germinated while running an environmental education consultancy in Zanzibar in 1990,” she continues. “I found very little awareness among people, including fishermen, of what coral reefs are – that they consist of millions of animals, not mere lifeless rocks – and why the reefs are important for the survival of their own and future generations.”

Based on her observations, Sibylle developed the island's first eco-tourist lodge and privately-run marine protection area in 1991, managed by the Chumbe Island Coral Park Ltd (CHICOP). The number of tourists is limited to 14, accommodated in seven bungalows that do not use fossil energy, are made of local materials and sympathetically designed to blend with the natural surroundings.

With no ground water source on the island, rainwater is captured from the specially designed roof of each bungalow during the rainy season. The rainwater passes through a complex filtration system and is then stored in underground cisterns. From there, water is hand-pumped through a solar-powered heating system into hot and cold water containers for use in the

bathrooms, fitted with specially designed water-saving shower heads. Used water from showers and basins is filtered once more and used to water the plant beds. Sewage is also used to form natural fertiliser in a compost chamber. Organic soaps produced by a local women's co-operative in Zanzibar are provided for guests.

Photovoltaic panels on bungalow roofs provide the power for lighting, while the open design of the accommodation allows a through draft for natural air conditioning.

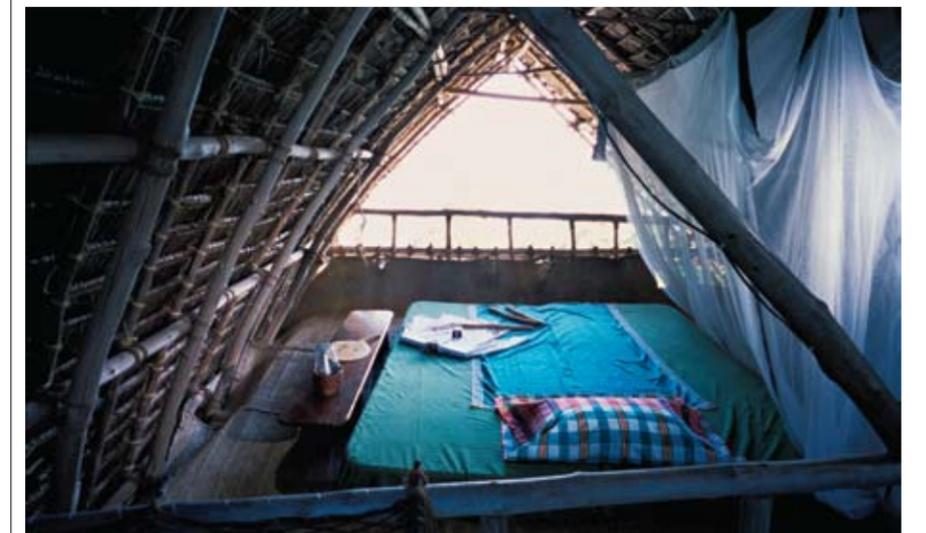


Advanced filters purify water for drinking, provided free of charge in glass bottles to avoid the use of plastic. To protect nocturnal animals from light pollution, the walkways, nature trails and beach areas are not artificially illuminated. Guests are provided with solar-powered torches to move around the resort at night.

The whole of Chumbe Island is a privately established nature reserve that was officially recognised as a coral reef sanctuary and forest reserve in 1994 by the government of Zanzibar. Fishing and scuba-diving are prohibited, although diving can be arranged to neighbouring reefs. Snorkelling, guided or unguided, to see the 400-plus fish species and 200 types of coral is allowed. Boat access and anchorage to the coral park is regulated by the tides to avoid damaging the reef.

The island is 90 per cent covered with coral rag forest, and park rangers (former local fishermen) show guests around the nature trails to see the enormous range of protected flora and fauna. These include the rare nocturnal giant coconut crabs that reach a colossal 45 centimetres in diameter and petrified stone corals dating back 15,000 years.

Research and monitoring is carried out at both the reef sanctuary and the forest reserve, and numerous baseline surveys



and other research reports have been commissioned regarding both marine and forest flora and fauna.

The greatest benefit a totally closed reef can give to the local fishing community is that it provides a breeding sanctuary for fish and other marine animals that help restock overfished areas. Indeed, visiting fishermen have, over the years, reported increased catches around the park.

Chumbe Island's 44-strong staff is almost entirely local, and local products are used and sold in the resort. Chumbe also runs a comprehensive Environmental Education Programme, that invites local schoolchildren and their teachers for day excursions to the island.

They learn how to snorkel and are taken along the forest trails and given environmental awareness talks in the education centre by the park rangers.

"Our Environmental Education Programme has to date covered all

secondary schools in Zanzibar, while over 2,500 schoolchildren and 500 teachers have visited Chumbe Island," explains Sibylle.

"Local people must understand why nature conservation is a good thing and also benefit from it," she continues. "This is why Chumbe Island has from the beginning recruited former fishermen from adjacent villages, who have been employed and trained as park rangers on the island. They are the key people in all outreach programmes to raise awareness among the local community on marine ecology and sustainable management of natural resources." As a result, monthly poaching incidents have reduced from an average of 14.3 in 1994 to a maximum of just 4.3 in 2007.

Are eco-tourist destinations such as Chumbe financially sustainable? The answer, believes Sibylle, is yes – if they are well run. "All our operations have been fully self-funded since the year 2000," she says.

"Although, according to a recent study, we employ three times more staff than the international average for eco-lodges, an occupancy rate of 40 per cent is sufficient to finance our park operations (Chumbe's occupancy rate has now grown to 86 per cent from just 14 per cent 10 years ago).

"**OUR MODEL** of helping to develop and fund marine parks and providing benefits to local people has also generated massive interest among international conservation organisations and won us numerous prestigious awards," she continues. "Our experiences and lessons learned could help develop policies for nature conservation and investment that encourage similar initiatives in Africa and the wider world."

Can we then, expect an expansion of Chumbe's operations? "For environmental reasons, we plan no expansion of the eco-lodge and visitor numbers," answers Sibylle. "However, we need expansion of

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environmental education and awareness programmes for both government officials and the general public. For example, bottom trawling and dynamite fishing have now led to the high number of catches at extremely rare sites of 'living fossil' coelacanths (fish that have not changed since prehistoric times) along the coast. A marine park is proposed to protect them. However, a new deep-sea harbour is now planned in the very same area where the coelacanths live, and there is not even a public discussion about this."

As tourists become more discerning and culturally and environmentally sensitive, the demand for sustainable eco-resorts can only increase. For the visitor, Chumbe is a fascinating and rewarding place to visit. For the island of Zanzibar, tourism management inspired by Chumbe could be its saving grace. ■