

A Pioneer of Sustainable Water & Sanitation Technologies in Tanzania – Chumbe Island Coral Park Ltd

www.chumbeisland.com

Introduction

The Tanzanian coast and Zanzibar archipelago are water poor areas with a fast growing population and tourism industry. Poor water resources management leads to depletion of limited fresh water aquifers, eutrophication of coastal waters and in particular, coral reefs. **Chumbe Island Coral Park is a privately managed Marine Park and Forest Reserve** that has since 1998 pioneered sustainable zero-pollution water and sanitation technologies that work well in tropical climates. Environmental Education programs have over the past 15 years showcased these technologies to the Government of Zanzibar, the tourism industry, general public and schools, including over 5600 students, 900 teachers and 300 community members in Zanzibar up to mid 2013.

Rainwater harvesting

Chumbe Island has no groundwater. Therefore, rainwater is harvested for shower and kitchen use. All buildings have large palm-thatched roofs designed to collect seasonal rainwater that is channeled through sand and gravel filters and stored in cisterns of 15 - 25.000 liters capacity under each building.



Grey Water Filtration Systems

All seven guest bungalows and staff quarters have grey water filtration systems that clean shower water with sand and gravel filters leading into specialized plant beds that absorb nitrates and phosphates. The more heavily polluted kitchen grey water is cleaned through grease traps and an artificial wetland.



Composting toilets

No black water or sewage is produced at all on Chumbe Island. The Visitors' Centre, guest bungalows and staff quarters all have composting toilets. These decompose organic waste and reduce it to a nutrient rich dry matter that is re-used in toilets and plant beds. The aerobic composting process is powered by a ventilation system of small wind-wheels fitted on top of long ventilation pipes.



Reduced water and energy consumption

All showers have water-saving showerheads that economize water consumption. The water is hand-pumped from underground cisterns up into technical towers.



Solar power systems

Renewable energy of the sun is used to heat water, to provide energy for lights, freezer and for recharging batteries of laptops, cameras and phones.



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