

“Chumbe Island: Where Nature Writes Its Own Story”

By Badru Yahya

On the morning of 1st September, members of Mawimbi Youth Ocean Voices of Zanzibar, alongside KOICA volunteers and TROCEN staff, set foot on Chumbe Island, a privately managed Marine Protected Area since 1992. Known for its 16.64 hectares of coral rag forest, more than 200 coral species, and over 500 types of marine life, the island is more than a sanctuary; it is a living classroom. The team came to learn how conservation here blends science with eco-tourism, and why protecting this fragile ecosystem is vital for Zanzibar’s future.

Chumbe Island protects 16.64 hectares of coral rag forest, including mangrove patches that have persisted for decades. This forest is home to rare and endangered plant species, providing habitat for a remarkable array of wildlife. Visitors may encounter 104 bird species, including eagles, red-eyed doves, and fruit birds; 15 butterfly species; 48 reptiles; numerous insects; and mammals such as reintroduced antelopes and Ader’s duiker. The presence of 360 coconut crabs further illustrates the island’s unique ecological complexity.

This terrestrial biodiversity is not only valuable for its intrinsic ecological role but also serves as a living laboratory, demonstrating how forest ecosystems function, recover from disturbances, and support interdependent species. Protecting such habitats is critical, as forests like these regulate soil fertility, provide carbon sequestration, and maintain microclimates that directly influence surrounding marine and terrestrial systems.



Aerial view of Chumbe Island's coral rag forest

The coral reefs surrounding Chumbe Island host over 200 coral species and 525 species of marine life, forming one of the richest marine ecosystems in East Africa. These reefs provide critical nursery grounds, shelter, and food sources for marine organisms. Beyond local significance, marine ecosystems play a pivotal role in human survival. Approximately four in ten people globally rely on the ocean for food, while marine organisms produce 70 per cent of the oxygen we breathe. The ocean also acts as a giant planetary air conditioner, having absorbed 93 per cent of the heat trapped in the atmosphere by greenhouse gases over the past century.

In this context, conserving Chumbe's coral reefs is not only a local priority but also a contribution to maintaining global ecological balance, climate regulation, and food security.



Coral reef habitat supporting diverse fish species in Chumbe Marine Protected Area

Chumbe Island integrates active conservation, education, and sustainable tourism in a holistic model. Staff maintain walking trails through sensitive forest areas, monitor endangered species, and control invasive species such as rats and crows (*kunguru*). Eco-friendly infrastructure including solar-powered bungalows, rainwater harvesting systems, and composting toilets minimises human impact while allowing visitors to experience the island sustainably.

Conservation is paired with education. Youth groups, volunteers, and researchers participate in programmes that emphasise practical skills in habitat monitoring, species identification, and sustainable tourism management. These initiatives foster environmental stewardship among the next generation.



Mr. Khamis Khalfan Juma shares insights on Chumbe's conservation efforts with visitors

Chumbe Island's management aligns with both national and global biodiversity objectives. Tanzania recently engaged in the Kunming-Montreal Global Biodiversity Framework (KMGBF), particularly Target 3, which seeks the effective conservation of at least 30 per cent of marine areas by 2030. In addition, Tanzania's Biodiversity Finance Plan for Zanzibar (UNDP, 2023) aims to bridge funding gaps to address threats such as habitat loss, climate change, and unsustainable resource use. Furthermore, Tanzania's signing of the BBNJ Treaty in 2023 demonstrates its commitment to conserving biodiversity beyond national jurisdictions.

At a local scale, Chumbe Island's privately managed model provides a practical example of these frameworks in action. It integrates eco-tourism, research, and community participation to protect habitats and generate sustainable funding. The island illustrates how small-scale conservation efforts can directly contribute to global goals, while simultaneously creating local economic and educational benefits.

Despite its successes, Chumbe Island faces ongoing environmental pressures. Climate change including sea level rise and ocean acidification threatens coral reefs and alters ecosystem dynamics. Invasive species compete with native flora and fauna, disrupting ecological balance. These challenges highlight the fragility of even well-protected ecosystems and the need for adaptive management strategies.

Balancing conservation with educational visits, eco-tourism, and research activities requires careful planning, monitoring, and enforcement of sustainable practices. The significance of Chumbe lies not only in its biodiversity but also in its role as a model of resilient, sustainable conservation. It demonstrates how locally managed areas can simultaneously protect ecosystems, support livelihoods, and contribute to national and global environmental targets.

Chumbe Island exemplifies how careful management can protect fragile ecosystems. Its forests, coral reefs, and wildlife demonstrate that biodiversity can thrive when conservation and

sustainable practices are prioritised. Through integrated monitoring, eco-friendly infrastructure, and education, the island safeguards endangered species and vulnerable habitats while supporting both national and global biodiversity goals. Chumbe stands as proof that protecting nature is not only possible, but essential for the planet's future.