

Background Brief

Conservation, Community Development and Reef-Positive Tourism in the Pemba Channel, Tanzania.

Table of Contents

1. Tanzania and Zanzibar: Regional Context
2. Zanzibar Archipelago Explained
3. Pemba Island: The Green Heart of the Archipelago
4. The Pemba Channel: A Global Marine Biodiversity Corridor
5. Manta Resort: Conservation-Led Hospitality and the Blue Economy Corridor
6. The New Underwater Room / Underwater Hotel Concept
7. Kwanini Foundation: Community-Led Livelihood Transformation and Conservation
8. Conclusion: A Blueprint for Reef-Positive Development

In short

Location: [Google Map Link](#) | Facts on Pemba: [Wikipedia link](#)

1. Tanzania and Zanzibar: Regional Context

The United Republic of Tanzania is one of East Africa's most ecologically diverse nations, home to globally renowned landscapes ranging from Mount Kilimanjaro and the Serengeti Plains to the coral-rich islands of the Indian Ocean.

Tourism plays a vital role in Tanzania's economy, accounting for a significant share of national employment and foreign revenue. Yet, as in many coastal regions, the country faces a growing challenge: how to ensure tourism contributes to long-term environmental stewardship rather than resource depletion.

Zanzibar — a semi-autonomous archipelago within Tanzania — has become an increasingly important focal point for marine conservation, blue economy development, and sustainable tourism initiatives, particularly in the lesser-known island of Pemba.

2. Zanzibar Archipelago Explained

Pemba Island is part of the Zanzibar Archipelago, lying north of Unguja (commonly called Zanzibar Island), but it has a distinct historical trajectory. For centuries, Pemba was deeply integrated into Indian Ocean trade networks, influenced by Arab, Persian, and Swahili cultures. It became a major center for clove cultivation under Omani Arab rule in the 19th century, when Zanzibar emerged as the capital of the Omani Sultanate. Although Pemba was administered together with Zanzibar during the Sultanate and later under British colonial rule, it often remained economically and politically peripheral. After the 1964 Zanzibar Revolution and the subsequent union with Tanganyika to form Tanzania, Pemba was formally incorporated into Zanzibar's

semi-autonomous government, while retaining a strong sense of regional identity shaped by its unique history and social structure.

3. Pemba Island: The Green Heart of the Archipelago

Pemba Island, located north of Unguja (Zanzibar's main island), is often referred to as "the Green Island" due to its fertile hills, dense vegetation, and agricultural abundance. Historically known for spice production, Pemba is also recognised as one of the most biodiverse areas in the Zanzibar archipelago.

The island is home to the Ngezi Forest Reserve, one of the last remaining indigenous forests in Zanzibar, supporting several endemic species including four endemic bird species.

With a population of approximately 550,000 people, Pemba's coastal communities rely heavily on marine ecosystems for food security and income. This dependence makes the health of coral reefs, fisheries, and mangrove systems inseparable from long-term community wellbeing.

4. The Pemba Channel: A Global Marine Biodiversity Corridor

Between Pemba Island and mainland Tanzania lies the Pemba Channel, a deep-water marine passage reaching depths of 400–1,000 metres. It is one of the Western Indian Ocean's most ecologically significant seascapes.

The channel functions as:

- A migratory route for marine mammals
- A refuge for threatened reef species
- A biodiversity hotspot linking coastal and deep-sea ecosystems

Surveys have identified at least 13 cetacean species in these waters, alongside complex coral reef systems and abundant pelagic fish populations.

The wider ecosystem includes:

- More than 40 threatened marine species
- Approximately 10 mangrove species
- Around 12 seagrass species

Together, these interconnected habitats form a highly productive but sensitive marine environment requiring coordinated protection across land and sea.

5. Manta Resort: Conservation-Led Hospitality and the Blue Economy Corridor

Introduction

Manta Resort is a conservation-led hospitality operation situated on the northern tip of Pemba Island. Established with the explicit goal of aligning tourism with long-term ocean protection, the resort functions not as a standalone lodge but as an anchor institution within a wider seascape-scale initiative: the Pemba Channel Blue Economy Corridor.

Through its presence, partnerships, and guest contributions, Manta helps finance marine protection, scientific monitoring, and community-led economic alternatives supporting both biodiversity and livelihoods.

The Pemba Channel Blue Economy Corridor

The corridor represents a large-scale, co-managed conservation and development framework supported by the Zanzibar Ministry of Blue Economy and Blue Alliance, a Zanzibar-based NGO.

Key elements include:

- 27,000 hectares of marine protected area
- 1,300 hectares of coral reef under active recovery
- 1,500 hectares of mangrove forests conserved
- Protection of 40+ threatened species

This governance model combines government authority, scientific management, and community participation.

Manta's Role

Manta Resort plays a direct financial and operational role in sustaining the corridor. Guest stays contribute to:

- Marine patrols
- Ecological monitoring
- Enforcement of protected areas
- Conservation planning

The resort demonstrates how tourism can function as reef-positive economic activity, helping sustain long-term protection rather than accelerating degradation.

Community Partnerships

Manta's impact is delivered through collaboration with:

- Blue Alliance / Ministry of Blue Economy – Corridor management, monitoring, reef-positive enterprise development
- DIRA – A community-owned development organisation ("vision" in Swahili)
- Kwanini Foundation – Livelihood diversification, education, alternative income generation

Together, these partnerships ensure conservation outcomes are directly linked to tangible community benefits.

6. The New Underwater Room / Underwater Hotel Concept

Architectural Concept, Engineering and Environmental Design

Overview

The Manta Underwater Room is a standalone underwater unit designed for accommodation and immersive experiences below the sea surface. The structure is developed for permanent placement in a marine environment, with high requirements for safety, durability, and comfort.

The unit represents a next-generation evolution of an established concept, built on more than a decade of documented operational experience. All systems, materials, and design solutions have been refined to deliver a significantly enhanced level of performance, reliability, and guest experience.

Beyond its technical innovation, The Manta Underwater Room is developed as a platform for marine conservation, community engagement, and sustainable coastal development.

Technical Overview

Floating underwater accommodation unit integrating marine structural systems and natural materials across multiple levels

Configuration:

- Submerged guest environment combined with above-water living and recreational spaces
- Compact underwater footprint optimized for structural efficiency and guest immersion
- Multi-level design enabling functional separation between technical, guest, and service areas

The unit is engineered as a fully integrated system, balancing stability, comfort, and long-term durability in dynamic marine conditions.

Structure & Materials

Load-bearing structure: Engineered marine-grade steel construction designed for long-term offshore use

Surface protection: Advanced multi-layer corrosion protection system adapted for tropical marine environments, ensuring extended service life

Superstructure: Hardwood-based decks and frameworks selected for durability and performance in harsh marine climates, sourced from responsibly managed suppliers

Windows

- Custom-engineered panoramic viewing systems with reinforced structural integration
- Designed to withstand significant hydrostatic pressure while maintaining optical clarity
- Panoramic configuration providing uninterrupted views of surrounding marine ecosystems

Equipment & Systems

The Underwater Room is equipped as a fully self-contained marine accommodation system:

- Integrated climate control system adapted for tropical environments
- Controlled ventilation systems ensuring air quality and comfort
- Hybrid energy system combining shore connection, renewable inputs, and backup capacity
- Advanced remote monitoring and control systems with continuous shore connectivity
- Marine-adapted wastewater and waste management systems
- Safety and emergency systems in compliance with applicable classification standards

Installation & Mooring

The unit is constructed and commissioned in a controlled shipyard environment before deployment.

Installation is carried out through marine transport and precision positioning at the final site.

The structure is secured using a proprietary mooring system designed to:

- Allow controlled movement in response to environmental forces
- Minimize structural loads
- Reduce impact on the seabed and surrounding marine environment

Each installation is adapted to local site conditions, including tidal variations and seabed characteristics. Following installation, full verification of stability, functionality, and safety is conducted.

Classification & Compliance

Design and verification are performed in collaboration with internationally recognized classification bodies, including DNV (Det Norske Veritas).

All critical aspects—such as structural integrity, stability, safety systems, and operational performance—are reviewed in accordance with relevant international standards.

As a specialized marine structure, The Manta Underwater Room applies adapted engineering solutions within a fully verifiable regulatory framework.

Community, Fisheries & Marine Conservation Commitment

The Manta Underwater Room is fundamentally structured as a conservation-driven initiative, where tourism directly supports marine protection and local communities.

- Close collaboration with local fishing communities to promote sustainable practices and reduce pressure on marine ecosystems
- Creation of alternative livelihood opportunities linked to conservation and eco-tourism
- Direct guest engagement with marine environments, increasing awareness and education
- Long-term support for local employment, skills development, and community integration
- Ongoing monitoring and protection of surrounding reef systems

All revenue and proceeds generated through The Manta Underwater Room operations are reinvested into marine conservation and community programs.

This includes:

- Coral reef restoration and protection initiatives
- Marine research and environmental monitoring
- Fisheries management and sustainability programs
- Education and community-based conservation efforts

Unique and Distinguishing Features

- Permanent underwater living experience within a high-end hospitality framework
- Direct and immersive interaction with marine ecosystems
- Proven concept with long-term operational track record
- Integrated floating and submerged structural design
- Engineered for minimal environmental impact
- Fully aligned with conservation-driven operational model
- Designed for long service life in tropical marine environments

Summary

The Manta Underwater Room represents a refined integration of marine engineering, architecture, and experience design. The unit enables safe, long-term underwater habitation while maintaining high levels of comfort and operational reliability. The real underwater dream.

At its core, the project transforms premium tourism into a direct funding mechanism for ocean conservation—where all proceeds are reinvested into protecting coral reefs, supporting local communities, and preserving marine ecosystems for future generations.

7. Kwanini Foundation: Community-Led Livelihood Transformation and Conservation

Introduction

Kwanini Foundation is a Zanzibar-based NGO headquartered in Makangale, Pemba. Registered officially in 2018, it works at the intersection of community development, environmental conservation, and sustainable livelihoods.

Its guiding principle: environmental protection is inseparable from social and economic wellbeing.

Core Programme: KASA Savings and Livelihood Incubation

Launched in November 2023, KASA strengthens household resilience through:

- Village Savings and Loans groups (HISA)
- Livelihood diversification training
- Sustainable agriculture and regenerative farming
- Clean cooking solutions reducing deforestation

Over 250 participants have engaged, with women comprising nearly 70% in many groups.

Eco-Bricks and Plastic Waste Reduction

A flagship initiative converting plastic waste into construction materials has produced:

- Over 28,000 eco-bricks
- Approximately 7 tonnes of plastic removed
- Classrooms and benches built for local schools

Eco-bricks function as both environmental action and household savings value.

Education and Youth Engagement

Through the Lessons in Conservation programme:

- 185+ children have participated
- Activities link classroom learning with outdoor ecosystem stewardship

8. Conclusion: A Blueprint for Reef-Positive Development

Across tourism, fisheries, and community development, the Pemba Channel initiatives represent a rare integrated model of reef-positive growth:

- Hospitality financing marine protection
- Fisheries reform restoring ecosystems while raising incomes
- Community-led savings and livelihoods reducing extractive dependence
- Local governance strengthening long-term stewardship

Together, Manta Resort, Samaki Bluu, and Kwanini Foundation demonstrate how sustainable tourism and regenerative blue economy models can safeguard biodiversity while supporting thriving coastal communities in one of the world's most important marine regions.