

Tima Dago

Title: Marine Conservation Journey

My name is Tima Dago, and I am from the southern coast of Kenya. Having been born and raised in Kwale County, Msambweni sub-county, in a small village called Mwaembe, I developed a deep passion for the marine environment during my childhood. I attended Msambweni Primary School and later joined Sheikh Khalifa Secondary School in Mombasa County. As a child, I would often spend my free days exploring the reefs or relaxing on the beach, as we lived just 500 meters away from the ocean. Many times, I would walk along the beach with groups of young girls, gathering firewood washed up by the sea, locally known as "*Visakawa*," for fuel. Occasionally, we would also collect plastic objects carried by strong waves and use them as toys. However, one regrettable aspect of my childhood was the routine of gathering shells, which consumed much of our attention as women and children in our village. This activity provided an easy source of income, apart from fishing, which was exclusively reserved for men in our Digo community. Our mothers and elder sisters would take us to the reef during low tides, armed with buckets and *sufurias*, to collect cowrie shells that were exposed in the intertidal zones, particularly on sea grass beds and under rocks. This became a regular occurrence on weekends, holidays, and after school hours. Every household had heaps of cowrie shells drying in the fields, awaiting collection by a local merchant who would pay us a small amount for each kilogram of cowrie shells sold. Sometimes, we would even venture into the mangrove grounds to collect mud creepers, oysters, and clams as a source of food. These activities seemed attractive and profitable, not only in our village but also in the neighboring villages along the southern coast. Little did I know that if carried out unsustainably, they would contribute to the degradation of our pristine marine habitats. As a result, today we witness the disappearance of numerous shells and other shoreline organisms.

In June 2001, an advertisement was published in our local papers regarding the need for Kenya Wildlife Service rangers. I participated in a rigorous recruitment exercise, at Shimoni Channel, where swimming skills were one of the main criteria for selection, among other tests. Although I was not a perfect swimmer, I fared well and emerged as the top candidate among the participants. On June 30, 2001, I joined the paramilitary course at the then Manyani Field Training School in Taita Taveta County for a duration of six months. After graduation, we were posted to various field stations. While some of my colleagues were assigned to terrestrial parks, I was fortunate to be posted at Watamu Marine Park as my first work station on January 14, 2002.

Throughout my conservation career, I have worked at Watamu, Lamu station, Shimba Hills, and I am currently stationed at Mombasa Marine Park. Our primary duties involved revenue collection from visitors in our marine parks, responding to animal control issues, and conducting general surveillance within our work stations. After a few years, our organization decided to hire customer care personnel to handle revenue collection, allowing us rangers to focus on active marine conservation and overall protection in our Protected Areas (PAs). This was a relief for me, as I could now direct my energy towards what I loved the most.

In 2012, while stationed in Lamu, I realized that something was missing in my knowledge base. Reflecting on my childhood practices of unsustainable fishing, it motivated me to delve deeper into the principles of Wildlife conservation. I felt it was the right time to pursue a better understanding of the subject. Subsequently, I requested study leave and enrolled in the Kenya Wildlife Training Institute (now known as the Wildlife Research Training Institute) in Naivasha for a two-year Diploma Course in Wildlife Management. Two years later, after graduating, I decided to further specialize in my favorite field—Marine. I requested a transfer from Lamu to Mombasa Marine Park to pursue a bachelor's degree in marine studies, offered by the Technical University of Mombasa. I am grateful to Dr Arthur Tuda, who was

the Senior Warden at the Coast Conservation Area at that time. Without hesitation, he granted my request. This period was challenging as I had to balance my job, studies, and family responsibilities. I made significant sacrifices socially and economically, but I was determined to enhance my knowledge to better serve nature. Through resilience, self-motivation, and passion, I successfully completed my studies while meeting my organization's expectations. Engaging in online short courses focused on Marine Protected Areas (MPAs) became my hobby, and this is when I discovered WIO-COMPAS, a crucial marine assessment conducted by an independent panel of assessors from the Western Indian Ocean Marine Science Association (WIOMSA). In 2019, I completed Level 1 and earned certification as an MPA Pro. I received recognition from my Warden, Mr. Wambua, who praised me as the most improved ranger among others and presented me with a commendation letter. Through diligent work, experience, and resilience, I was promoted to the next level of command (Corporal) in July 2021. I played a significant role in using scientific methods in Mombasa Marine Protected Area Management, leading our team in ecological data collection, processing, and analysis. This approach, known as Strategic Adaptive Management (SAM), aimed to improve MPA management effectiveness. On February 28, 2022, I had the honour of receiving the SAM CHAMPION Award from Dr Jennifer O'Leary, currently working for the World Conservation Society.

As a conservationist, my contribution is paramount, especially when I recall the unsustainable fishing practices of my childhood in our local community. I feel a responsibility to bridge the gap in marine biodiversity protection and conservation. I go the extra mile by providing marine education and awareness programs in schools, targeting the younger generation, local communities, hoteliers, beach operators, and local small-scale fishers. As an armed ranger, it can be challenging to convince various groups that I am working for the betterment of our environment which is in service of their livelihoods, while also prepared to take action against anyone who degrades it. Nonetheless, I face the public with passion and love, delivering what is required for the conservation of marine ecosystems.

In the past, my peers and I used to collect plastic debris along the beaches at our homes for toys. Today, we refer to it as beach cleanup, with the aim of creating a cleaner and healthier environment. In collaboration with the Beach Management Program staff at our station, we regularly organize beach cleanups involving various groups, ranging from academia to the private and public sectors. These initiatives have been instrumental in controlling solid waste that often finds its way into the ocean and poses a threat to sea creatures, such as turtles. To ensure the optimal health of marine ecosystems, including seagrass beds, coral reefs, beaches, and mangroves, we conduct monthly aquatic monitoring and surveys. I collect data on coral cover, seagrass, water clarity, fish, turtles, and invertebrates.

In response to climate change, I have actively engaged in passive seagrass restoration in Mombasa MPA since 2020. These seagrass meadows had been degraded due to anthropogenic pressures and climate change. The restoration project involved several components, including awareness campaigns, intensified surveillance, and research work. My fellow rangers and I ensured strict gear control and restrictions, particularly on beach seine nets that tend to damage seagrass meadows. As the project is relatively cost-effective, it is ongoing to achieve full recovery of the currently improved seagrass ecosystems, which are ecologically and biologically significant. I have also been working tirelessly to promote co-management in our Marine Protected Areas, including Locally Managed Marine Areas (LMMAs), Beach Management Units, and Community-Based Organizations. Despite resource limitations, I remain committed to putting more effort into ensuring that the fragile underwater ecosystems are in equilibrium by mentoring and supporting young professionals. With adequate financial resources, I hope to engage in active coral restoration in the future, particularly in our marine reserve.

As a woman from a traditional coastal background, venturing into the maritime field presented numerous challenges. However, I persevered and excelled in this field. I even

registered for SCUBA diving courses and earned my certification, enabling me to work extensively underwater. I encourage my fellow female marine practitioners to step forward and embrace marine conservation work as a calling. Our planet's health is dependent on the well-being of our oceans, and it is encouraging to see that 85% of our staff members are women. However, having a significant number of staff is not enough. I am committed to ensuring that my colleagues and I are equipped with the knowledge and skills necessary to make a difference. I remain eager to learn new things and implement them effectively. I sincerely call upon my fellow women in the Kenya Wildlife Service and other stakeholders to join me in marine conservation activities, which can be physically challenging but also incredibly rewarding.

Finally, I would like to urge both the local and international communities to promote the sustainable utilization of our marine natural resources and minimize pollution, not only in the Western Indian Ocean region but worldwide. Despite limited resources, I personally do everything within my capacity to ensure that we are living in a healthier blue planet.