

PROJECT NAME:

Overall Concept

Our project, inspired by the sails of ships and the free-flowing movement of ocean waves, aims to fuse art, technology, and sustainability into a dynamic, interactive installation. This structure is not merely an environmental artwork but a small-scale infrastructure for renewable energy generation, sustainable water management, and cultural engagement with the local community. The visual identity of the installation draws from the organic and fluid forms of sails and waves, evoking a sense of freedom, motion, and deep connection with the sea. The sail-like structures are covered with semi-transparent photovoltaic fabrics (BIPV or solar textiles), which not only create shading and visual beauty but also convert sunlight into electricity. This integration of aesthetic and functional elements lies at the core of our design philosophy. Among these sail forms, lightweight vertical-axis wind turbines (VAWTs) are positioned, shaped like floating balloons. Designed to work effectively with the natural coastal winds, these turbines generate clean energy while adding playful movement and vibrancy to the installation. Their whimsical design strengthens the visual narrative of motion and interaction with natural forces.

The installation also incorporates a rainwater harvesting system as an essential component. The inclined surfaces of the sails guide rainwater toward integrated storage tanks, providing a sustainable source of water for irrigation, cleaning, or, after filtration, for drinking. Given the high levels of rainfall in Fiji, this system offers a practical and ecological solution for local water resource management. Community involvement plays a central role in the project's vision. Engagement occurs on three levels: Through educational workshops about sustainability and renewable energy, through the employment and training of local workers for construction and maintenance, and through the creation of interactive features such as manual micro-generators for children. These initiatives foster a strong sense of ownership, empowerment, and cultural pride among community members.

Throughout both design and execution, our approach remains firmly committed to environmental stewardship. Careful site selection avoids ecologically sensitive areas; eco-friendly materials are prioritized, construction methods are designed to minimize soil disruption, erosion, and habitat disturbance. Our design is intended to coexist naturally with the landscape, ensuring a minimal ecological footprint. Ultimately, this project is not simply a physical structure but a cultural and environmental statement: An invitation to live in responsible coexistence with nature, to strengthen local identity, and to experience beauty through the lens of sustainability. We believe that this installation can serve as a model for future projects in coastal communities—where art, science, and society move together toward a more resilient and inspiring future.

"The three wave-like elements are oriented parallel to the "As rain kisses the stepped platforms, it prevailing coastal winds, allowing the airflow to pass weaves through layers of pebbles, between them. As the wind moves through these cleansing itself naturally before resting channels, small turbines attached to the curved walls in the heart of the storage tanks." rotate, generating clean energy in harmony with the

energy for the community."

"Flowing like waves, the solar "Through playful hands and curious hearts, panels curve with the structure, children spin the small turbines, turning their capturing sunlight gracefully joy into clean energy and becoming the and transforming it into pure youngest stewards of a sustainable future."