LAGI 2025 FIJI

LAND ART GENERATOR
RENEWABLE ENERGY CAN BE BEAUTIFUL

LAGI 2025 Fiji Narrative Template

Concept Narrative

Sere ni Siga ("Song of the Sun") is a regenerative pavilion inspired by the shape and symbolism of a blossoming flower. Situated in Marou Village on Naviti Island, Fiji, the structure features an array of solar 'petals' that unfold skyward. These petal-shaped forms are not only poetic metaphors of growth and resilience but serve as high-efficiency photovoltaic panels. The pavilion's radial symmetry provides a sheltered communal hub below, promoting gathering, play, and reflection in a cooling, shaded environment. Constructed primarily with durable, cyclone-resilient aluminum, marine—grade plywood for framing and anchored with reinforced concrete footings, the pavilion integrates seamlessly with its environment. Its curved canopy form channels rainwater to central storage tanks for potable and greywater use. The modular design allows for future expansion and replication in other island communities. This artwork-as-infrastructure project merges beauty with utility. Visitors experience an immersive environment where the interplay of light, shadow, and sound highlights the passage of the sun and invites quiet contemplation. Local plantings surround the pavilion, enriching biodiversity and offering opportunities for agroforestry or community gardening. Community engagement is embedded in every phase of the project from co-design and installation to educational programs, storytelling events, and daily use

Technical Narrative

Sere ni Siga incorporates 300 polycrystalline photovoltaic panels, each rated at 250W, to generate a total of 75 kW of clean energy. These panels are integrated into a diagrid petal structure, tilted to optimize solar exposure based on Marou's latitude. A lithium iron phosphate ($LiFePO_4$) battery bank stores energy to ensure round-the-clock power availability.

Rainwater harvesting is facilitated through integrated gutter channels running along the petals, funneling water to central UV-stabilized polyethylene tanks. The system includes first-flush diverters and fine mesh filters to ensure water purity. Based on rainfall data and catchment area calculations, the pavilion can supply up to 500,000 liters annually under optimal conditions.

System Inputs: Sunlight, Rainwater, Ambient Air

System Outputs: Electricity (AC/DC), Stored Potable Water, Shaded Public Space

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Prototyping and Pilot Implementation Statement

- Prototyping will begin with digital simulations and scale modeling, followed by a half-scale structural petal mock-up in collaboration with local artisans and technical stakeholders. Material selection will be tested for performance, resilience, and availability within the region.
- The pilot implementation in Marou Village will follow a co-creation model. Community members will be engaged through design workshops, building training sessions, and collaborative storytelling that embeds cultural narratives into the built form. Local procurement and labor will be prioritized to build capacity and deepen ownership.
- Collaborators will include renewable energy engineers, artists, construction managers, and Fijian cultural advisors to ensure both technical robustness and contextual appropriateness.

Operations and Maintenance Statement

The pavilion is designed for minimal operational complexity. Routine cleaning of solar panels and gutters, battery health checks, and basic maintenance of electrical components will be managed by a trained village maintenance team.

A community maintenance plan will be developed, supported by an illustrated manual in both English and Fijian. Initial oversight and refresher trainings will be facilitated by technical partners, with a goal of transitioning full operational responsibility to the village within one year.

Rainwater systems will be inspected bi-monthly and cleaned quarterly. All components are modular for ease of replacement, and remote monitoring via GSM-connected sensors will alert technicians in the event of system failure.

Environmental Impact Assessment

The pavilion sits lightly on the land, with a minimal foundation footprint and a design that allows for water permeability and natural airflow. By using prefabricated, transportable elements and recyclable materials, embodied carbon is reduced. No living materials are imported, and the structure is designed to resist cyclonic winds without harming nearby vegetation.

To mitigate environmental risks, native flora will be planted around the structure to prevent erosion and enhance habitat diversity. Stormwater runoff is redirected into existing channels, and solar-powered pumps distribute excess water for irrigation.

Impact studies suggest negligible disruption to existing ecosystems. Any disturbance during construction will be restored post-installation, with community-led replanting and long-term stewardship embedded in the project lifecycle.