

Maliau Basin Conservation Area's Commitment to Green Energy

The Maliau Basin Conservation Area (MBCA), often referred to as Sabah's 'Lost World', is a significant natural heritage site renowned for its rich biodiversity and unique geological features. As a protected area dedicated to conservation, research, education, and limited ecotourism, MBCA recognizes the importance of minimizing its environmental footprint. A key aspect of this commitment is the transition towards sustainable energy sources, reducing reliance on fossil fuels and embracing green energy solutions. This report outlines MBCA's current commitments and ongoing initiatives in the realm of green energy, highlighting planned developments and the crucial support from partners like IKEA. The move towards green energy within MBCA is a strategic imperative, aligning with global efforts to combat climate change and promote sustainability in protected areas. By adopting renewable energy technologies, MBCA aims to lower greenhouse gas emissions, reduce operational costs associated with diesel fuel, and serve as a model for sustainable practices in remote conservation areas.

Maliau Basin Strategic Management Plan Draft (2025-2036)

One of the core commitments is articulated in the draft management plan for Maliau Basin for the period 2025-2036. This plan outlines a clear objective: within the first 10 years of its implementation, the Maliau Basin Studies Centre (MBSC) will aim to utilize at least 20% green energy. This target signifies a dedicated effort to integrate renewable energy into the primary operational hub of MBCA, which houses research facilities, accommodation, and administrative offices. Achieving this 20% target will involve the implementation of various green energy solutions, contributing to a more sustainable future for the MBSC and setting a precedent for other facilities within the conservation area.

Implementation of Solar Energy Systems

A significant catalyst for MBCA's green energy transition has been the financial allocation provided by IKEA. This funding is specifically designated for the implementation of renewable energy systems at key locations within the Maliau Basin, including the Maliau Gate area and several satellite camps. The support from IKEA underscores a shared commitment to environmental sustainability and enables tangible progress in reducing the conservation area's reliance on diesel generators. The following provides a summary of the planned solar system installations utilizing this allocation:

A. Maliau Gate Complex

- i. The **SHELL Maliau Basin Reception and Information Building (SMBRIB)** at Maliau Gate houses facilities such as an exhibition gallery, café, patrol unit office (Damai), prayer room (surau), and a convenience store. This building is equipped with a 15kW solar power system, which was installed in 2023.

- ii. There are nine staff houses and one security guard post in this area. A proposal to install a 25kW solar system for this site has been submitted to the headquarters for approval by upper management.
- iii. Previously, the power supply at Maliau Gate Complex relied on generators, consuming an average of 1,500 liters of diesel per month, or approximately 18,000 liters per year.
- iv. Once completed, the area will operate fully on solar energy, potentially saving approximately 18,000 liters of diesel annually.

B. Ginseng Research Station

- i. Currently, the buildings at this station are only equipped with several solar-powered lights, with no electrical sockets for appliances. No generators are used at this site.
- ii. A proposal to install a 5kW solar system has been submitted to the headquarters for approval by upper management.
- iii. Once completed, the building will be powered by a solar energy system that will support not only lighting but also electrical outlets for charging equipment such as cameras and smartphones, as well as for kitchen appliances.

C. Nepenthes Research Station

- i. This camp still uses a 5kW generator, with an estimated diesel consumption of 50 liters per month or 600 liters per year.
- ii. Diesel usage for the generator depends on the number of visitors to the area.
- iii. A proposal to install a 5kW solar system for this location has been submitted to the headquarters for upper management approval.
- iv. Once completed, the area will rely entirely on solar energy, potentially saving around 600 liters of diesel annually.

D. Agathis Research Station

- i. The building at this site is still under construction (progress at 80% as of April 2025). It will include a reception area, dining hall, café/restaurant, gallery, visitor accommodations, kitchen, prayer room, and convenience store.
- ii. A proposal for a 40kW solar installation has been submitted to the headquarters for approval by upper management.
- iii. Upon completion, the entire area will be powered by solar energy.
- iv. Currently, the workers' quarters at the construction site are already equipped with a 3kW solar power system.

The Maliau Basin Conservation Area is demonstrating a strong and proactive commitment to integrating green energy solutions into its infrastructure and operations. The initiatives outlined in this report, driven by the long-term vision of the management plan and the

valuable support from partners like IKEA, represent significant steps towards reducing MBCA's reliance on fossil fuels and minimizing its environmental impact. The successful implementation of solar power systems at the Maliau Gate Complex, the proposed installations at the Ginseng and Nepenthes Research Stations, and the ambitious plans for the developing Agathis Research Station underscore MBCA's dedication to sustainable conservation management. As these projects progress, MBCA will serve as a leading example of how protected areas can embrace renewable energy to achieve their conservation goals while operating in an environmentally responsible manner. Further monitoring and evaluation of these green energy initiatives will be crucial in optimizing their performance and informing future sustainability efforts within the Maliau Basin Conservation Area.