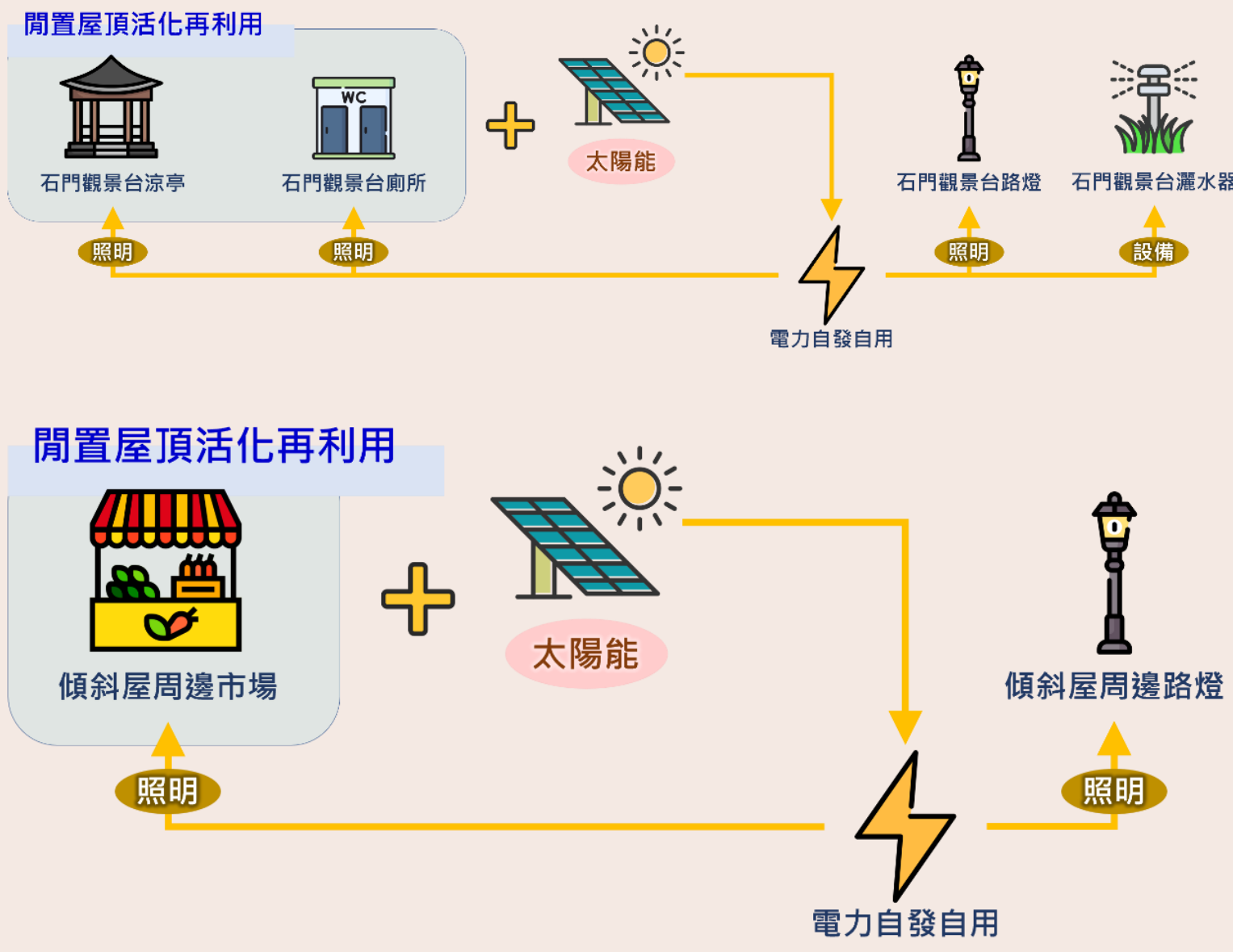


Demonstration Project for Implementing Net-Zero Carbon Emissions and Resilient Slope Measures in Large-Scale Landslide and Stream Management

The project supports the Nantou Branch of the Agricultural Rural Development and Water Conservation Agency (ARDSWC) by aligning its focus with the Ministry of Agriculture's (MOA) commitment to achieving net-zero emissions by 2040 and furthering the UN Sustainable Development Goals. The project utilizes two primary demonstration sites: the Jiufenerhshan Large-Scale Landslide Potential Area (Net-Zero Demonstration Area) and the Zungguakang Stream Restoration Project (Resilient Slope Measures Demonstration Area). The central objective is to transform abstract policy goals into tangible, understandable content for civil society, thereby demonstrating implementation effectiveness and serving as a crucial environmental education venue. For the net-zero implementation at Jiufenerhshan, the plan adheres to four main themes: Reduction, Sequestration, Circulation, and Green Trends. Project planning includes developing at least one source for self-sufficient green power, specifically proposing rooftop solar photovoltaic systems on existing legal structures such as the Stone Gate Observation Deck and the Slanted House market area, achieving self-generated, self-consumed power. Deliverables also encompass inventorying and updating all outdated guidance and interpretive signs throughout Jiufenerhshan. An introductory video is being produced, covering the site's unique geographical environment, disaster management, post-disaster reconstruction, and net-zero efforts, to be provided in Chinese, English, and Japanese versions. International collaboration is ongoing, assisting the Nantou Branch in liaison with the Kurikoma Geopark in Japan, including planning for exchange workshops and the renewal of the Sister Geopark Memorandum of Understanding (MOU).

Self-Use Green Energy Development Plan

- Existing facilities within the Jiufen Ershan Earthquake Memorial Park (such as public restrooms, pavilions, and market areas) were surveyed for rooftop solar installation. Solar panels are planned to be installed on existing legal rooftops, with structural assessments and necessary reinforcements to ensure safety. Based on a low-impact development approach, only existing rooftops are utilized, with an estimated monthly power generation of approximately 250 kW. Considering transmission costs and energy loss from selling electricity to the grid, on-site generation for self-consumption is recommended. The generated solar power will be used directly by nearby facilities, such as lighting for public restrooms and markets, and automatic irrigation systems, creating a sustainable green energy park.



Environmental Education Site Development

- The Jiufen Ershan Park has strong potential to be developed as an environmental education facility. In 2020, the Nantou Branch reviewed the certification requirements for environmental education sites and conducted a feasibility assessment based on the park's current conditions. The planning focuses on four key elements required for environmental education facilities: site characteristics, professional personnel, educational programs, and operation management. Site characteristics emphasize understanding environmental conditions and defining environmental and cultural education themes. Professional personnel planning includes staffing and partnerships based on organizational structure and expertise. Educational programs are designed to deliver practical environmental education courses tailored to different target audiences. Operation management covers service processes, safety maintenance, site management, carrying capacity, and financial planning.



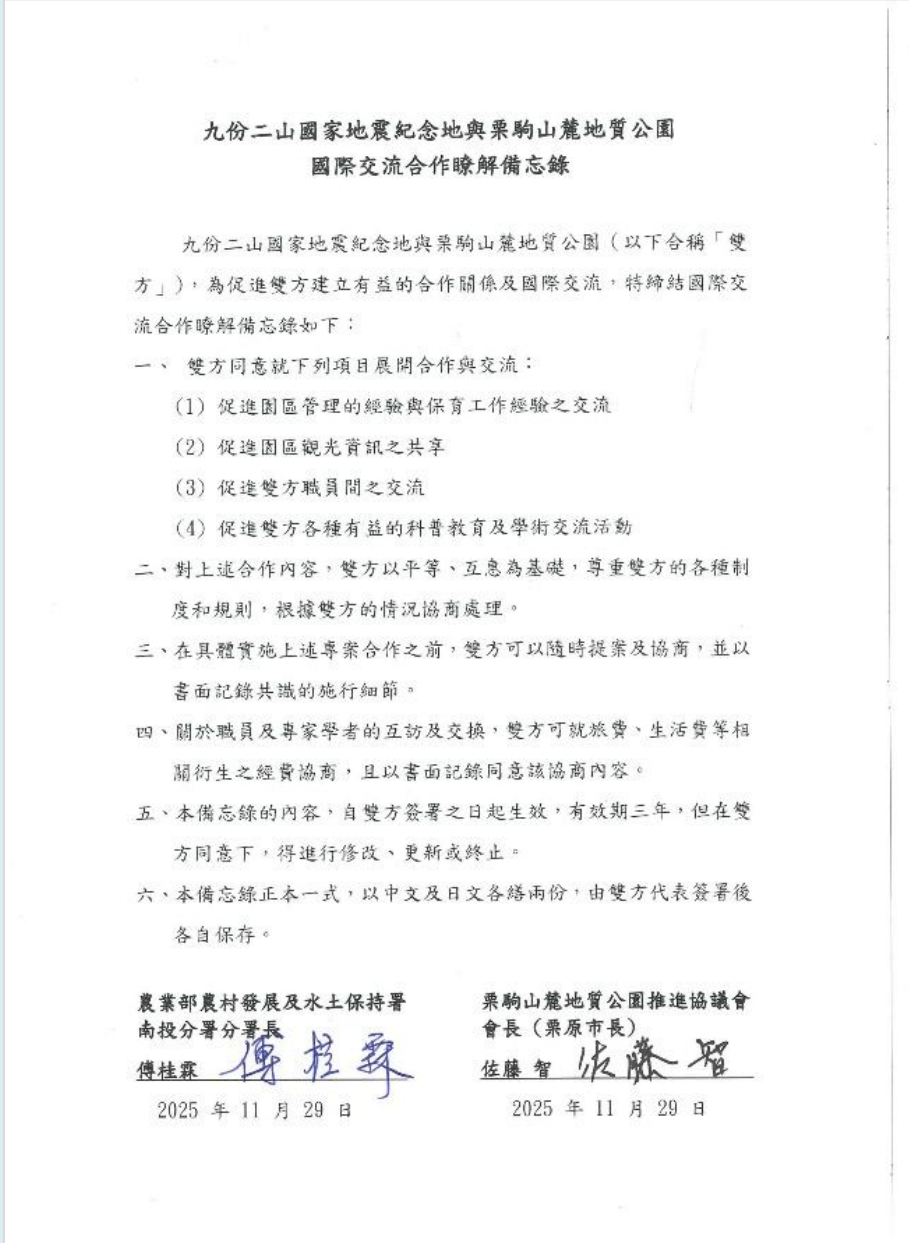
Resilient Slope Measures Demonstration Site

- Zhongguakeng Creek, located in Guoxing Township, Nantou County, was previously confined by high concrete revetments and grade-control structures, which blocked ecological connectivity, restricted community access, and deteriorated over time. Changes in land use and the creek's gentle slope also made such high-intensity structures unnecessary. Through innovative approaches by the Agency of Rural Development and Soil and Water Conservation, traditional revetments and structures were removed and replaced with eco-friendly sloped banks and timber-stone grade-control structures. This restored longitudinal and lateral connectivity, created natural pools and riffles, enhanced river vitality, and improved flood resilience. The project was highly recognized and awarded the 24th Public Construction Golden Quality Award (Outstanding Award, Water Resources Category) by the Public Construction Commission, Executive Yuan.



International Technical Exchange

- To strengthen international technical exchange and build upon existing cooperation, this project continued to support coordination and administrative collaboration between the Nantou Branch and its sister site, the Kurikoma Geopark in Japan. In response to the Geopark's 10th anniversary, a Taiwan-Japan exchange visit was conducted from November 27 to December 1, including a Disaster Prevention and Conservation Engineering Workshop. The project coordinated exchange activities, mutual visits, and cooperation arrangements, with advance planning to ensure smooth implementation.



農業部農村發展及水土保持署
Agency of Rural Development and Soil and Water Conservation, MOA

Contracting Agency: Nantou Branch, Agency of Rural Development and Soil and Water Conservation, Ministry of Agriculture
Contractor: GIS Research Center, Feng Chia University
Execution Period: January 2025 - December 2025

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