



2023 TOP 100 GOOD PRACTICE STORY

Title: A Path Toward the Hideaway: Creating Access to the Hideaway Beach in Alapawan Through Sustainability Practices

Destination, Country: North Coast & Guanyinshan National Scenic Area Administration, Tourism Bureau, Republic of China(Taiwan)

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In the category: Destination Management Environment & Climate Thriving Communities
 Nature & Scenery Culture & Tradition Business & Marketing

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Summary:

While Heping Island Park boasts a wide variety of landscapes: wave-cut platforms, chessboard rocks, sea grooves, abrasion cliffs, tafoni, sea chasms, and pedestal rocks, its hideaway, widely known as Alapawan, one of the top 21 sunrise watching spots recommended by CNN, was closed to travelers for more than 10 years due to rockfall risks posed by abrasion made of sandy shales. Since 2021, we've sought help from professors in geology or ecology and a local operations team, collaborating to monitor rockfall, estimate the length of the hiking trails, and use ecological engineering practices with aims of planning a new hiking route that stays clear of the rockfall source areas and building eco-friendly trails with gabion walls. After the gabion baskets that are coated with meshes with many pores were placed over the trails, we continue to monitor environmental changes in this area, finding an increasing algal coverage and greater biodiversity around the area. We also seek to effectively manage Alapawan by determining the maximum number of tourists that can visit the area before and after the tide ebbs, recruiting local volunteers as docents for guided tours, and conducting a range of activities, such as beach cleanups, sunrise watching, and experience activities at intertidal zones.

Through the incorporation of academic research and advanced technologies, implementation of ecological engineering practices, efforts made by the local operations team that manage tourism, and guided tour volunteering in Alapawan, this hideaway is finally reopening for visitors while restrictions are partially lifted, and the intertidal zones are seeing greater biodiversity. The most spectacular sunrise spot is restored for locals and travelers alike to enjoy the idyllic sunrise.



Good Practice Story:

Destination description

Brief background of the destination.

Situated at the northernmost tip of Taiwan, Heping Island has entered the global arena since the 17th century when Spanish people built San Salvadors on the island. Given that the formation of the island comprises sandstones and sandy shales, it has developed a vast number of spectacular erosional landforms, such as wave-cut platforms, chessboard rocks, and pedestal rocks due to the northeast monsoon and coastal waves. On December 19th, 2022, Keelung City Government designated Heping Island Park as a municipal landscape in accordance with the Cultural Heritage Preservation Act, making it the first officially designated geopark in Keelung.

The highlight of the park, Alapawan, which meant “a place where one gets lost easily” in the Amis dialect, is located in the western area of the park. Alapawan possesses a broad range of erosional landforms, including wave-cut platforms, chessboard rocks, and pedestal rocks, and has developed a rich ecosystem in its intertidal zones. Globally known for its stunning sunrise, Alapawan has been rated among the top 21 sunrise watching spots. Now as a famous recreational resort, this hideaway has the potential for implementing environmental education.

Issues faced

Problems/issues solved with the Good Practice Story.

Alapawan, the hideaway that showcases an array of stunning geologic landscapes, was closed to tourists due to the following reasons:

1. **Travel risks posed by geological conditions and the natural weathering processes:** Alapawan is prone to rockslides due to its geologic conditions, which involves Yehliu sandstones (a subdivision of the Taliao formation) cropping up around the area and then forming steep fault scarps and sea notches in the weathering processes caused by the northeast monsoon over a long period of time.
2. **The locals and tourists were denied the beautiful scenery and environmental education:** Alapawan was closed for many years when it was managed by other authorities. After management was transferred to NCGNSAA, Alapawan was temporarily open to tourists in summertime. However, the beautiful hideaway was once again closed after deep consideration by the operations team on August 30th, 2020 due to a few rockfall events. “In-depth Environmental Guided Tour” and “Applications to the Sunrise Tour” were also suspended for the same reason. Consequently, the locals and tourists were denied the beautiful scenery and environmental education for years.

Methods, steps, and tools applied

Solutions implemented to address the sustainability problems or issues.

For Alapawan to reopen for visitors, we take measures to ensure a safe environment and sound management of the hideaway:

1. **Creating a diversified consultation team:** NCGNSAA has invited a wide number of experts in geology, oceanography, and intertidal zones and research institutes to thoroughly assess the situation of Alapawan.
2. **Implementing the Landslide Monitoring and Tourism Carrying Capacity Program:** To better understand the causes of rockslides that occur around the slopes of Alapawan, the Geoparks Association of Taiwan has been entrusted by NCGNSAA with conducting

the Heping Island Park Landslide Monitoring and Tourism Carrying Capacity Program since January 1st, 2021.

- A. Historical data, including weather records and earthquake reports from CWB stations and the data about rockslides that previously occurred over the hiking trails, have been regularly collected. Local self-assessed weather stations collect data every 15 minutes.
 - B. Drones with a GPR is used to monitor the potential rockfall areas timely.
 - C. Recreation carrying capacity has been determined by assessing the area capacity, trail capacity, parking capacity, and facility capacity, which includes the number of services provided by the Visitor Center, pavilions, restrooms, and public facilities zones.
- 3. Planning a new hiking route through the estimation of the rockfall source areas:** A new hiking route has been planned by rockslide monitoring and then mapping and estimating the rockfall source areas so as to avoid the hazards of rockfalls due to weathering processes.
 - 4. A local company that has won the bid takes charge of building gabion walls using ecological engineering methods over the trails:** When building the trails, it is of utmost importance to ensure the safety of travelers while protecting the environment and maintaining ecological balance. As Taitung's Fugang Geopark had installed gabion baskets to fortify the surface of the trail, NCGNSAA decided to follow suit. After discussing engineering practices with the Department of Earth and Life Science, University of Taipei, NCGNSAA opted for using gabion baskets that are filled with packed cobbles and then covered with plastic meshes. The fine pores between cobbles help to create a habitat for marine animals, thus reducing negative impacts on ecosystems and increasing biodiversity.
 - 5. We endeavor to manage tourism in Alapawan by lifting some restrictions for arriving tourists and raising tourist awareness and attitude about sustainable tourism.**
 - A. Partial access to Alapawan: Alapawan is only open for tourists for three hours daily between May and September to protect travelers from potential hazards during the northeast monsoon and tide rising times. The maximum number of visitors is 300. Online reservation in advance is required.
 - B. Code of conduct for tourists: Tourists are required to wear a helmet and a safety vest when entering Alapawan. Regularly scheduled guided tours are provided for tourists. When showing tourists around Alapawan and telling them things about the geological environment of the coastline and marine culture, our docents also educate tourists about responsible tourism and ensure code of conduct compliance.
 - C. Environmental education workshops and activities, such as beach cleanups, sunrise watching, and guided tours around the hideaway, are conducted to promote sustainable tourism.
 - D. Only local residents are allowed to pick seaweeds in intertidal zones.
 - 6. Ecological changes are regularly monitored to ensure the restoration of the intertidal zones in Alapawan.**

Key success factors

Critical elements that led to successfully solving the issues.

- 1. Stakeholder participation:**

- A. In compliance with the Act for Promotion of Private Participation in Infrastructure Projects, NCGNSAA has sought to attract a local business with shared beliefs to co-manage Heping Island Park. The contract dictates that the bid winner must hire local employees (at least 50% of the staff) and the operations team must consist of industry professionals who have expertise in tourism and recreation, geology and landscape, and/or environmental education.
 - B. NCGNSA has sought professional help from a number of academic institutions, including National Taiwan university, National Taiwan Ocean University, National Taiwan Normal University, and Wild Bird Society of Keelung, in order to make a comprehensive appraisal of the natural and humanistic resources of the park and record their development processes.
 - C. NCGNSA has actively attempted to inform and engage residents and communities, making sure that local people participate in the decision-making process and their needs are met by offering discounts, issuing a special pass, or rational rationing. This ensures local residents have access to regional resources.
- 2. The introduction of technology monitoring and ecological engineering practices:**
- A. A number of monitoring instruments, such as panoramic security camera, drones, and sensors, are used to monitor people flow and activities timely to detect potential hazards or high-risk behavior instantaneously.
 - B. With rockslide monitoring, a new hiking route in Alapawan has been planned to keep clear of the rockfall source areas. Eco-friendly gabion baskets are also placed to fortify the surface of the hiking trails.
- 3. Managing tourism in Alapawan and promoting code of conduct for travelers:**
- A. Tourism carrying capacity in Alapawan: Approaches such as online bookings and tourist rationing are used to limit the number of tourists to Alapawan so as to reduce the risk of crowding and overuse of resources in the area.
 - B. Tourism education and tourist code of conduct: Through the promotion of tourism education, docent guided tours, and environmental education activities, tourists' awareness of safety and ecological knowledge are established. Tourist code of conduct is also implemented.
- 4. Early warning systems and emergency response measures:**
- A. Early warning systems: An early warning system is created using technology monitoring, tourism carrying capacity systems, alarm devices, and an emergency broadcast system to promptly notify the authority and tourists of any unexpected incidents or imminent hazards.
 - B. Emergency response measures: With an effective emergency response plan and complementary procedures in place, staff are routinely trained to develop emergency response skills in handling emergency situations, including natural disasters, illness or injuries, and evacuation procedures.

Lessons learned

Challenges faced while implementing the Good Practice and their solutions.

- 1. Building consensus and a sense of trust between the competent authority and the local operations team**
- 2. The impact brought by heavy equipment to the trails at early stages of construction:**
During the initial stages, heavy equipment was inevitably used to install gabion walls, which posed threats to benthic organisms in some areas. To cope with this situation, we

regularly monitored ecological changes in these areas in the construction and post-construction phase. We were pleased to find that after the completion of construction, algal coverage has been slowly increasing, species are revived, and biodiversity is gradually restored, as animals are allowed to hide and live in the fine pores of meshes of gabion baskets.

3. **Taking tourism carrying capacity and the needs of local residents into consideration:** Considering that tourism carrying capacity affects local people's rights and access to the area, we use rational rationing to ensure locals have access to the regional resources, such as picking seaweeds in the intertidal zone. Furthermore, we have actively sought the views of local people and successfully engaged local communities with aims of creating a long-term partnership with communities through continuous communication and adjustments and guaranteeing the effectiveness and sustainability of the tourism carrying capacity plan.

Achievements and Results

Direct and indirect results of the Good Practice.

1. **After completion of gabion walls over the trails, we are seeing an increase in algal coverage and greater biodiversity.**
 - A. Algal coverage
 - a. During the initial phase of construction (Quarter 1), two monitoring stations reported 6-9 types of algae, with a coverage rate between 11 and 15.02%. After the completion of construction (Quarter 4), 3-11 types of algae were reported around this area, with a coverage rate between 15 and 30.04%, indicating a reviving of large algae.
 - B. Monitoring the distribution of benthic organisms throughout four seasons
 - a. During the initial phase of gabion wall construction (Quarter 1), two monitoring stations reported 18-22 types of benthic organisms in the area, and species density was between 43.71 and 61.80 (number/m²). After the completion of construction (Quarter 4), two stations reported 25-28 types of benthic organisms; species density was between 59.14 and 232 (number/m²), indicating a marked increase in the number of benthic species and species density. Some dominant species, including *Batillaria sordida* and *Alaba picta* that feed on green algae have been resurrected, too.
2. **Species worth noting**
 - A. The size of the coronate moon turban is bigger than the average size due to the restoration of intertidal zones in Heping Island Park.
 - B. Little ringed plovers, a winter migratory bird, were first found to be breeding around the rock shore in 2021. This is the third year for them to breed here.
3. **Environmental education and conservation efforts**
 - A. 479 environmental education workshops have been held to raise public awareness, attracting 12,536 participants.
 - B. Up to 690 beach cleanups have been conducted, attracting 10,601 participants. 100.2 tonnes of waste have been removed.
 - C. Since its reopening in 2018, Heping Island Park has attracted up to 2.65 million visitors as of April 2023.

Tips for other destinations

1. **Introducing technology monitoring and decision-making that is supported by expert advice to ensure that participants stay safe in outdoor activities**
 - A. Unmanned aerial vehicles are used to create a digital orthophoto map and a digital terrain model of the rockfall source areas of Heping Island Park. Meanwhile, continuous monitoring of the potential rockfall source areas has been conducted to conduct an analysis and then create early warning systems. Maximum effort has been put to ensure tourist safety and security in Heping Island Park.
2. **Achieving a balance between the ecological environment, recreational tourism, and the safety of tourists through stakeholder participation**
 - A. Professionals who have expertise in geology and ecology, the local operations team, and local docents/ volunteers jointly collaborate to achieve a balance between the ecological environment, recreational tourism, and the safety of tourist while ensuring the rights of local residents.
3. **Managing tourism in Alapawan and promoting code of conduct for travelers**
 - A. To effectively manage Alapawan, we've imposed restrictions on its opening hours, the types of activities, and the maximum number of tourists arriving at a time through online bookings and tourist rationing in order to reduce the risk of crowding and overuse of resources in the area.
 - B. Tourist code of conduct is implemented. As tourists are educated by local docents on guided tours about how to be a responsible traveler, they are also guided by signboards when exploring designated areas. This is to ensure travel safety.

Recognitions and Additional references

Recognitions and awards the Good Practice received and supporting evidence.

1. Recognitions

- A. International recognition: "A Historical Harbor Heping Island Geopark Renewal": an Outstanding Award granted by IFLA AAPME Awards 2022
- B. National awards:
 - a. 2021 Heping Island Park's Parking Lot Operations-Transfer Project was awarded the 19th Excellence Award by the Ministry of Finance, R.O.C.
 - b. The Outstanding Award for Recreational Tourism of 2021 Taiwan Landscape Awards
 - c. The Outstanding Award for Environmental Culture 2022 of FIABCI-Taiwan Real Estate Excellence Awards
 - d. "Sustainability of Heping Island: a Joint Collaboration by the Public and Private Sectors": awarded with the Service Awards 2022 by MOTC
 - e. "International Sustainable Travel Program" awarded with the National Sustainable Development Awards 2022

2. Additional references

- A. The official site of Heping Island Park <https://www.hpigeopark.org/>
- B. 2022 National Sustainable Development Awards –Government Agencies <https://ncsd.ndc.gov.tw/Fore/en/Award#Achievement>
- C. Heping Island's Landslide Monitoring and Tourism Carrying Capacity Program (Visit <https://reurl.cc/jDvz7n>)
- D. Ecological data gleaned throughout the stages of gabion installation in 2022 (Visit <https://reurl.cc/GAK8ky>)