

Livable
Hualien
Vol. 2

因為
對

深入花蓮永續行動

Exploring Hualien's
Sustainable Initiatives

山海

的

承諾



Hualien

Republic of China

23.5°N

A Pledge
to Preserve
the Beauty of
Our Land

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在山海之間， 堅守永續承諾

您喜歡花蓮的什麼地方呢？自然環境？藝術文化？或是溫暖人情？

花蓮依著中央山脈，傍於太平洋左岸，在自然與文化的交融中，編織美好生活。近年來，隨著全球吹起「永續風」，各行各業包括農林漁牧業、製造業和觀光旅宿業等，以自身的力量，落實聯合國永續發展目標（Sustainable Development Goals, SDGs），一方面回應全球趨勢，展現更深遠的社會責任；同時也深植在地，不斷探索與這塊土地共存、共好、共榮的可能。

花蓮總體施政以「國際智慧城市，觀光友善花蓮」為主軸，從社會、經濟環境、族群與文化，進行整合性的縣政治理。秉持「共好精神」，於各個施政面向深化永續發展的概念，並實踐在日常生活中。

2022年發行第一冊《因為對大山大海的承諾》後，受到各方熱烈迴響，不僅是花蓮縣民，也引起其他縣市及國際旅客的關注，大家透過此書，認識到花蓮對「永續」的重視及努力，堅守這樣的初衷，今（2024）年持續挖掘更多企業負重前行故事，介紹給大家。

推動永續發展並不是一蹴可幾，希望透過本書，帶領大家認識花蓮公、私部門以及在地企業如何實踐永續行動，將「永續種子」種在讀者心中，每個人都從自身做起，發揮影響力，逐步擴大至家庭、社會。榛蔚期許，我們一起從「此時、此刻」開始做起，延伸至無盡的未來，讓山海依舊壯美，歲月總是靜好。

花蓮縣長

徐榛蔚

謹誌

Between the Mountains and the Sea, We Uphold Our Sustainability Pledge

What do you love about Hualien? Is it a stunning natural environment? The rich art and culture? Or the warmth of its people?

Located on the left shore of the Pacific Ocean, Hualien has a backdrop of the Central Mountain Range. In the merger of nature and culture, *la dolce vita* is woven. In recent years, with the “sustainability trend” spreading worldwide, various industries, including agriculture, forestry, fishery, animal husbandry, manufacturing, tourism and accommodation, etc., have used their power to implement the United Nations Sustainable Development Goals (SDGs). On the one hand, responding to global trends and demonstrating profound social responsibility; on the other hand, deeply rooted in the land, constantly exploring the possibility of coexistence, common good, and common prosperity.

The overall governance of Hualien is based on the main theme of “International Smart City, Tourism-Friendly Hualien”, with integrated county governance conducted from the perspective of the social and economic environment, ethnic groups, and culture. Upholding the “spirit of mutual benefit”, the concept of sustainable development in all aspects of governance is cultivated and integrated into daily life.

After the first volume *Livable Hualien: A Pledge to Preserve the Beauty of Our Land* was released in 2022, it received an enthusiastic response, not only from Hualien County residents, but also attracting the attention of other counties and cities and international tourists. Through this book, everyone has seen that Hualien, adhering to its original intention, attaches great importance to and strives for “sustainability”. This year (2024), we will continue to discover more stories of enterprises moving forward as they overcome challenges and share them with everyone.

Promoting sustainable development cannot be achieved in one fell swoop. Through this book, it is hoped that everyone will be led to understand how the public and private sectors and local enterprises in Hualien implement sustainable actions, to plant “seeds of sustainability” in the minds of readers. Everyone can start from themselves by taking actions as individuals, then gradually promote sustainability to family and beyond.

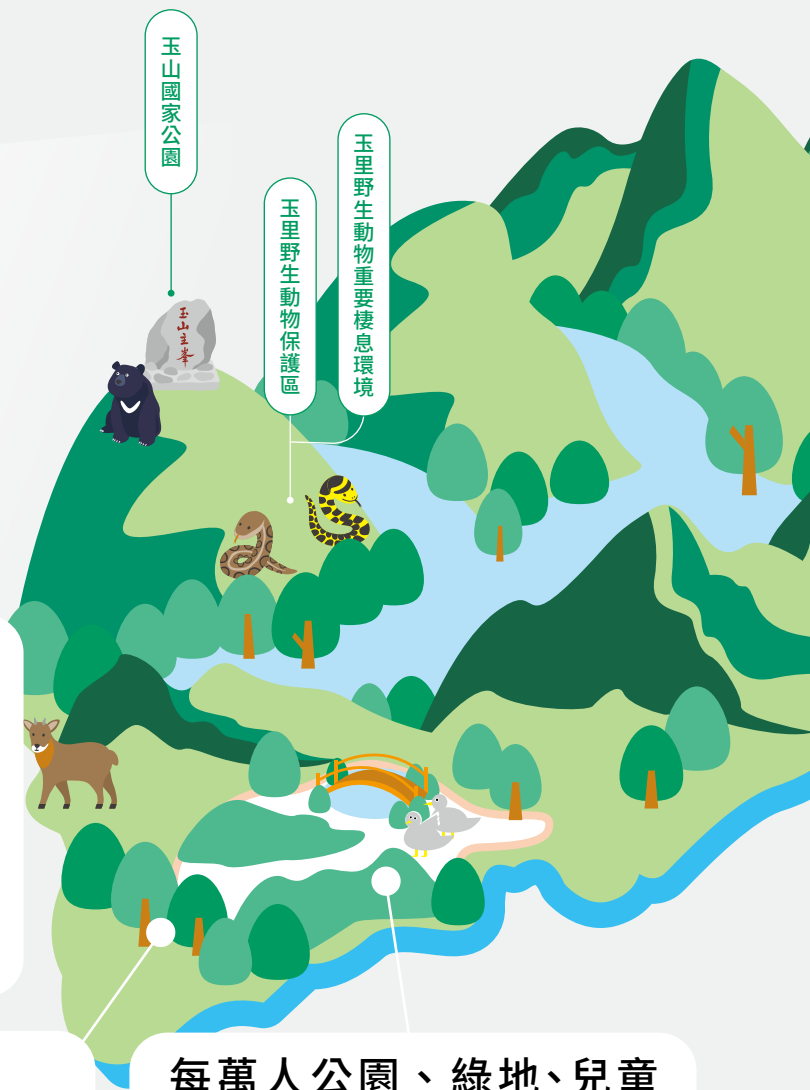
We will start from “this moment” and extend into the future, so that the mountains and seas retain their magnificent beauty and the days will always be peaceful.

Sincerely,

Hualien County Mayor

Hsu Chen-Wei

數據大解析



臺灣面積最大的縣級行政區

南北長約 **137.5** 公里

東西寬約 **43** 公里

總面積為 **4,628.57** 平方公里

花蓮林地面積

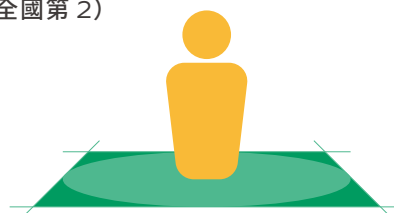


資料來源：林務局林業統計年報

每萬人公園、綠地、兒童遊樂場、體育場所及廣場面積數

0.1733 平方公里

(全國第 2)



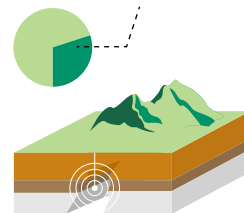
資料來源：國家發展委員會



花蓮地震次數

臺灣年平均地震 **40,000** 次
 花蓮年平均地震 **12,000** 次

佔臺灣年平均 30%



臺灣百岳

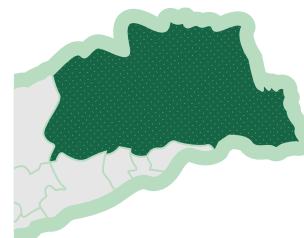
在花蓮縣內佔了 **43** 座



秀林鄉

一縣內面積最大行政區

面積 **1,641** 平方公里
 全臺灣面積最大的三級行政區



清水斷崖

海拔 **800** 公尺



海岸線

長 **119** 公里



資料來源：經濟部水利署

花蓮環境保育

野生動物保護區 **1** 處 ----- 玉里野生動物保護區
 (全國有 21 處)

野生動物重要棲息環境 **2** 處 --- 玉里野生動物重要棲息環境
 水璉野生動物重要棲息環境
 (全國有 39 處)

國家公園 **2** 座 ----- 玉山國家公園
 太魯閣國家公園

環境部 112 年度環境保護績效考核，
 共計 11 個績效考核獎項，花蓮縣榮獲

2 項特優：

- 🏆 空品維護與噪音管制績效考核
- 🏆 垃圾處理及環境管理考核

4 項優等：

- 🏆 環境影響評估與環境教育考核
- 🏆 水質保護及土壤整治考核
- 🏆 淨零綠生活考核
- 🏆 源頭減量及資源回收考核

Data Breakdown



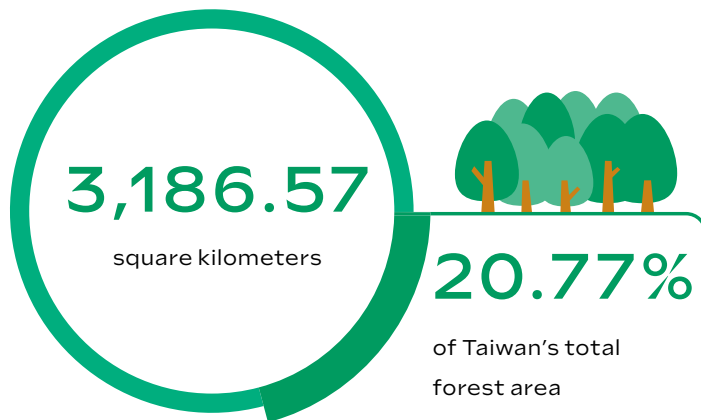
Largest county-level administrative area in Taiwan

Approx. **137.5** km long from north to south

Approx. **43** km wide from east to west

Total area of **4,628.57** square kilometers

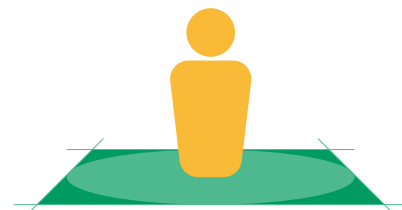
Forest area in Hualien



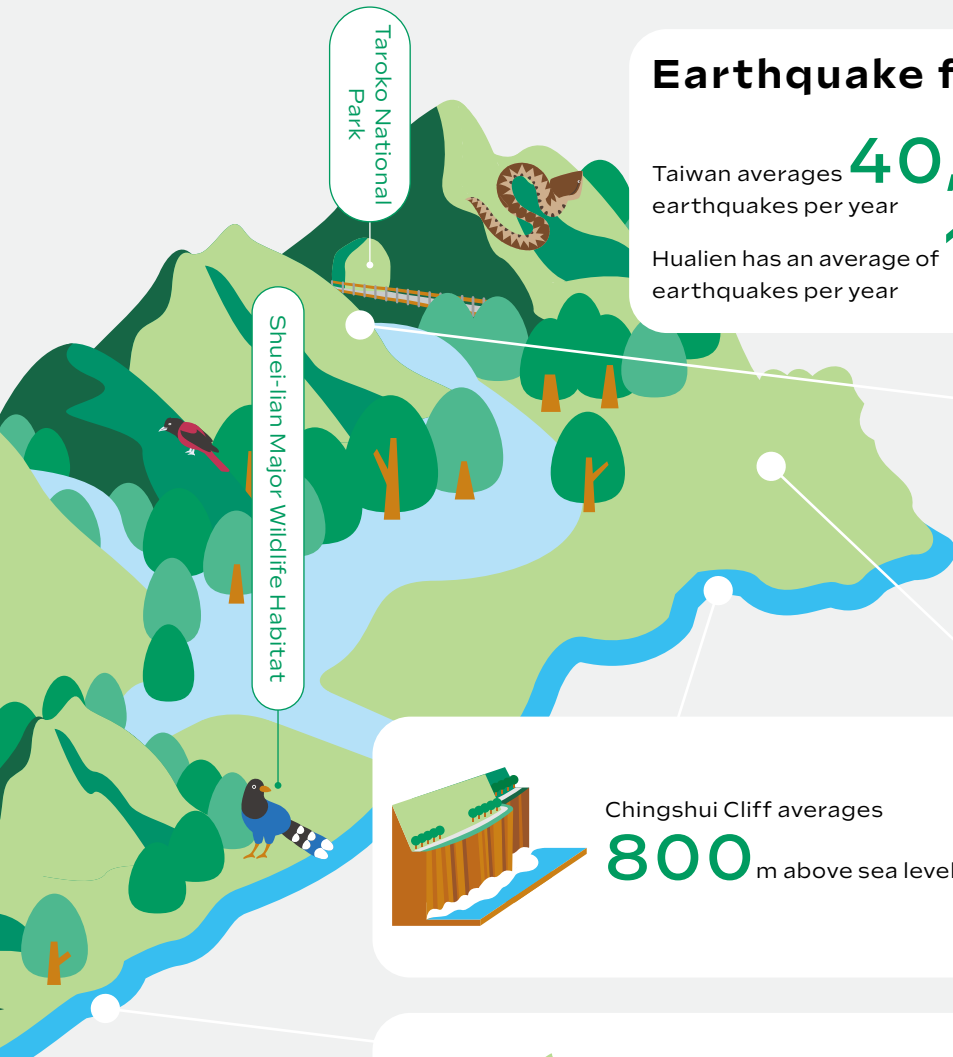
Source: Forestry Bureau Annual Report of Forestry Statistics

Area of parks, green spaces, children's playgrounds, sports facilities, and plazas per ten thousand people

0.1733 square kilometers
(2nd highest in Taiwan)



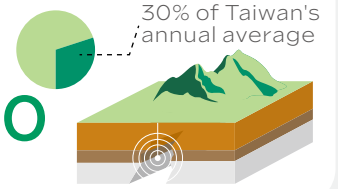
Source: National Development Council



Earthquake frequency in Hualien

Taiwan averages **40,000** earthquakes per year

Hualien has an average of **12,000** earthquakes per year



100 Peaks of Taiwan

43 are in Hualien County

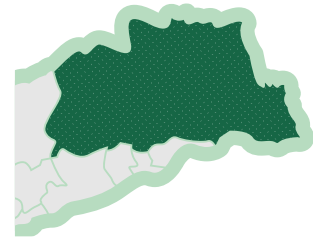


Chingshui Cliff averages **800** m above sea level

Xiulin Township—Largest administrative area in Taiwan

1,641 square kilometers

The largest third-level administrative division in Taiwan by area



119 km long coast

Source: Water Resources Agency, Ministry of Economic Affairs

Environmental protection in Hualien

1 wildlife conservation area
(21 locations in Taiwan)

----- Yuli Wildlife Refuge

2 major wildlife habitats
(39 locations in Taiwan)

----- Yuli Major Wildlife Habitat, and Shuei-lian Major Wildlife Habitat

2 national parks

----- Yushan National Park, Taroko National Park

In the 2023 Environmental Performance Index (EPI) conducted by the Ministry of Environment, a total of 11 performance evaluation awards were given. Hualien County received:

2 High Distinction Awards:

- 🏆 Air Quality Maintenance and Noise Control Performance Evaluation
- 🏆 Waste Management and Environmental Management Evaluation

4 Excellence Awards:

- 🏆 Environmental Impact Assessment and Environmental Education Evaluation
- 🏆 Water Quality Protection and Soil Remediation Evaluation
- 🏆 Net-Zero Green Living Evaluation
- 🏆 Source Reduction and Resource Recycling Evaluation

人口與醫療

1

性別與老年人口結構



男性 | 50.2%

158,530 人



女性 | 49.8%

157,281 人

人口總數

315,811 人

65歲以上老年 | 20.3% (超高齡社會)

64,110 人

2

族群結構



原住民

29.7%

93,805 人

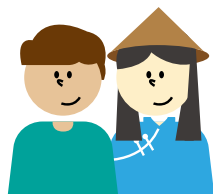
花蓮縣是臺灣原住民最多的區域，佔全縣總人口 29.7%，包括阿美族、太魯閣族、布農族、噶瑪蘭族、撒奇萊雅族、賽德克族，以阿美族分布最廣、人數最多。



客家人

34.2%

108,008 人



新住民

2.6%

8,233 人

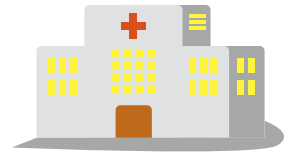
人口數資料來源：花蓮縣政府民政處、內政部移民署，客家人數引自客委會「110 年度全國客家人口暨語言基礎資料調查研究」百分比估計值

3

醫療設施配置

醫療院所 **278** 處

醫學中心 1 家，區域醫院 2 家，
地區醫院 7 家，診所 268 家



巡迴醫療服務點

137 處

花蓮醫療院所

每萬人口執業醫事人員數

200.48 人

(全國第 2)

資料來源：衛福部中央健保署

4

高齡照護規劃

文健站

109 間



主要為偏遠地區、福利資源缺乏且不易取得照顧服務之部落，提供部落長者預防性、關懷性及連續性之照顧服務

資料來源：原住民族委員會 113 年原住民族文化健康站清冊

社區式照護據點

383 間



主要服務對象為 65 歲以上健康、亞健康之長者，透過社區照顧關懷據點，進而增進社會參與，並延緩長者失能老化及降低衰弱風險

資料來源：花蓮縣衛生局

長照服務資源

長照機構

45 間居家式服務類長照機構

41 間社區式服務類長照機構

3 間綜合式服務類長照機構

長照服務涵蓋率：**108.17%**

8 間交通接送服務特約單位

70 間喘息服務

資料來源：衛生福利部長照機構暨長照人員相關管理資訊系統，統計至 112 年

Population and Healthcare

1

Gender and the Elderly Population



Male | 50.2%

158,530 people



Female | 49.8%

157,281 people

Total population

315,811 people

Elderly people over 65 | 20.3%

(Super Aged Society)

64,110 people

2

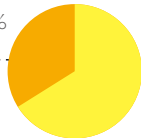
Demographics



Indigenous persons

29.7%

93,805 people



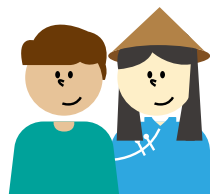
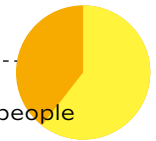
Hualien County has the largest indigenous population in Taiwan, accounting for 29.7% of the population of Hualien. This includes the Amis, Taroko, Bunun, Kavalan, Sakilaya, and Seediq peoples, with the Amis being the most populous and widespread.



Hakka

34.2%

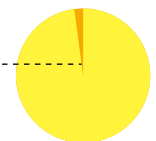
108,008 people



New immigrants

2.6%

8,233 people



Source: Hualien Civil Affairs Department, Ministry of the Interior National Immigration Agency; the number of Hakka people is estimated based on the percentage shown in the "2021 National Basic Data Survey Research on Hakka Population and Language" conducted by the Hakka Affairs Council.

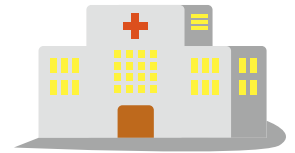


3

Medical facility distribution

278 medical institutions

1 medical center, 2 regional hospitals, 7 local hospitals, 268 clinics



137

mobile healthcare service stations

Hualien medical centers

200.48 medical practitioners per 10,000 people

(2nd highest in Taiwan)

Source: National Health Insurance Administration, Ministry of Health and Welfare



4

Geriatric health care planning

Culture Health Station



109 in total

These centers are mostly set up in remote areas that lack welfare resource and access to care. They provide elders with preventative, caring, and continuous care services.

Source: 2024 Register of Indigenous Cultural and Health Stations, Council of Indigenous Peoples

Community-based care center



383 in total

Mainly cares for elderly people with good health and sub-optimal health aged 65 or older, providing community care services to facilitate community participation, delaying disability and aging and reducing the risk of frailty.

Source: Hualien County Health Bureau

Long-term care resources

Long-term care facilities

45 home-based long-term care facilities

41 community-based long-term care facilities

3 integrated long-term care facilities

Long-term care coverage: **108.17%**

8 contract transportation services

70 respite care service facilities

Source: Long Term Care Facilities and Personnel Information Systems, Ministry of Health and Welfare. Statistics up to 2023.

經濟與產業

營利事業營業家數

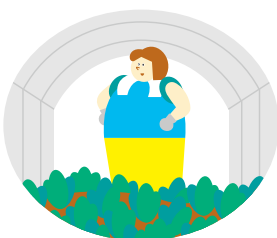


22,979 家
(統計至 113 年 6 月)

資料來源：財政部



花蓮稻作收穫面積 **16,931** 公頃



有機栽培種植面積 **3,833** 公頃
(全國第 1)

資料來源：112 年農業統計年報、113 年 10 月農糧署公務統計



農牧業家數
16,503 家

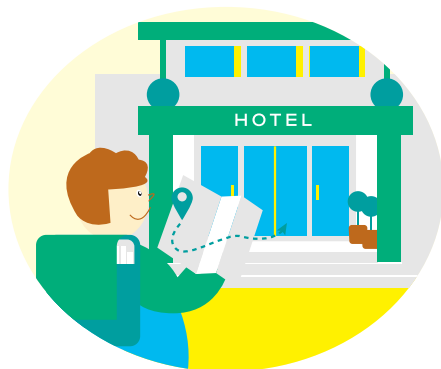


林業家數
4,054 家



漁業家數
542 家

資料來源：109 年農林漁牧業普查報告



觀光人次

14,698,111

(統計年度: 112 年)

資料來源: 花蓮縣政府觀光處

合法旅宿業者

1,839 家

資料來源: 交通部觀光局



文化資產數 131 件

資料來源: 國家文化資產網

文創產業總計家數 998 家

資料來源: 2022-2023 臺灣文化創意產業發展年報

Economy and Industry

No. of for profit businesses



22,979

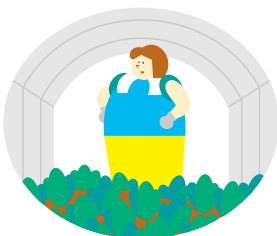
(Statistics as of June 2024)

Source: Ministry of Finance



Hualien rice cultivation area covers

16,931 hectares



Organic farming land area: **3,833** hectares
(Largest in Taiwan)

Source: 2023 Agricultural Statistics Yearbook,
October 2024 Agriculture and Food Agency



Agriculture and animal husbandry
companies:

16,503



Forestry companies:

4,054



Fishery companies:

542

Source: 2020 Census of Agriculture, Forestry,
Fishery, and Animal Husbandry



Tourists:
14,698,111
(data from 2023)

Source: Hualien Tourism Department

Lawfully registered
hospitality companies:
1,839

Source: Tourism Bureau, Republic of China



Cultural assets: **131**

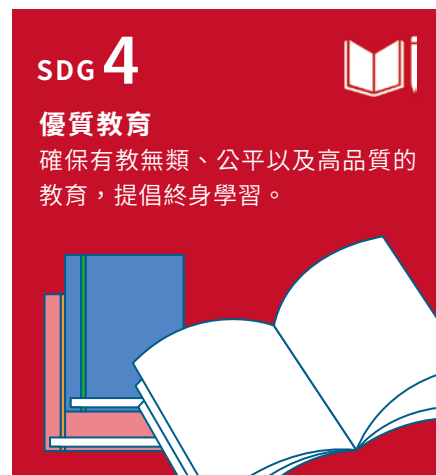
Source: National Cultural Assets Network

Cultural creative industry companies: **998**

Source: 2022-2023 Taiwan Cultural & Creative Industries Annual Report

SDGs 聯合國永續發展目標

致力達成人類與地球未來的共榮藍圖，2015年9月，聯合國永續發展會議（UN Sustainable Development Summit）通過2030年永續發展議程（2030 Agenda for Sustainable Development），在兼顧「經濟成長」、「社會進步」與「環境保護」等三大面向下，共提出17項永續發展目標（SDGs）與169項細項目標（Targets），目標在2030年前，共同解決包括貧窮、水污染、氣候變遷、城市永續等問題。

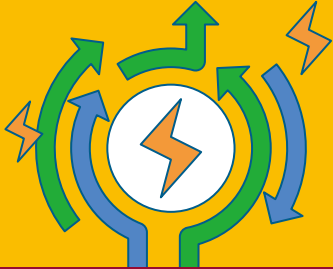


SDG 7



可負擔的潔淨能源

確保所有人獲得可負擔、安全和永續的現代能源。



SDG 8



合適的工作及經濟成長

促進包容且永續的經濟成長，讓每個人都有一份好工作。

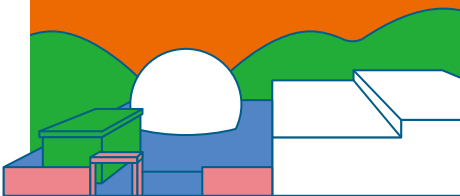


SDG 9



產業創新與基礎設施

建設具有韌性的基礎設施，促進包容性和永續的工業化，推動創新。

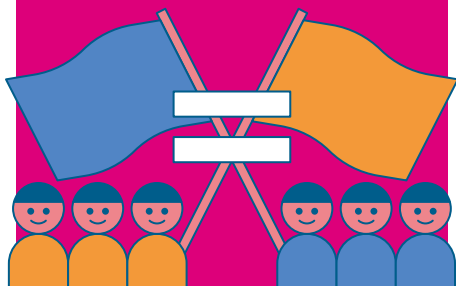


SDG 10



減少不平等

減少國家內部和國家之間的不平等。

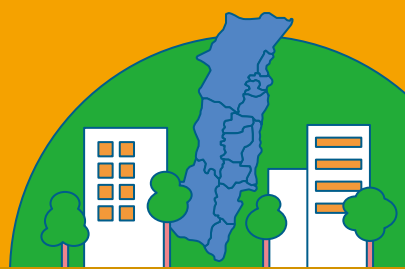


SDG 11



永續城市與社區

建設包容、安全、有抵禦災害能力和永續的城市和人類社區。



SDG 12



負責任的消費與生產

確保採用永續的消費和生產模式。

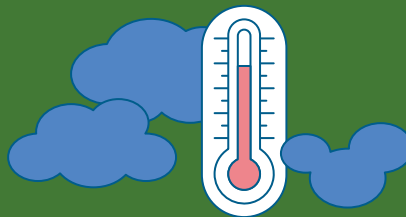


SDG 13



氣候行動

完備減緩調適行動，以因應氣候變遷及其影響。

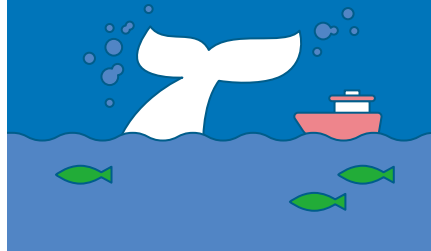


SDG 14



保育海洋生態

保護永續利用海洋和海洋資源促進永續發展。

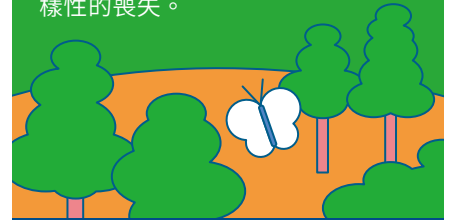


SDG 15



保育陸域生態

保護、恢復和促進陸域生態系統永續利用。維護森林防治荒漠化，制止並扭轉土地退化，以及遏制生物多樣性的喪失。



SDG 16



和平、正義及健全制度

倡建和平、包容的社會以促進永續發展，讓所有人都能訴諸司法，在各級建立有效、負責和包容的機構。



SDG 17



多元夥伴關係

建立多元夥伴關係，協力促進永續願景。



**SUSTAINABLE
DEVELOPMENT
GOALS**

UN SDG S

Committed to realizing a blueprint of shared prosperity for the future of mankind and the Earth, the UN Sustainable Development Summit adopted the 2030 Agenda for Sustainable Development in September 2015, taking “economic growth”, “social progress”, and “environmental protection” into account in establishing 17 sustainable development goals (SDGs) and 169 targets with the goal of working together to resolve issues such as poverty, water pollution, climate change, and urban sustainability by 2030.

SDG 1 
No Poverty
End poverty in all its forms everywhere.




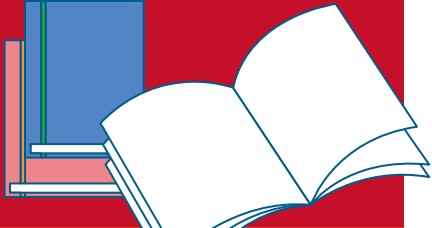
SDG 2 
Zero Hunger
End hunger, achieve food security and improved nutrition and promote sustainable agriculture.



SDG 3 
Good Health and Well-being
Ensure healthy lives and promote well-being for all at all ages.



SDG 4 
Quality Education
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.



SDG 5 
Gender Equality
Achieve gender equality and empower all women and girls.



SDG 6 
Clean Water and Sanitation
Ensure availability and sustainable management of water and sanitation for all.

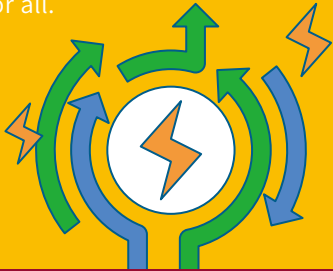


SDG 7



Affordable and Clean Energy

Ensure access to affordable, reliable, sustainable and modern energy for all.



SDG 8



Decent Work and Economic Growth

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

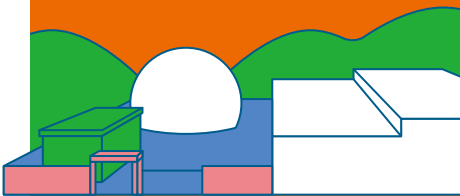


SDG 9



Industry, Innovation and Infrastructure

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

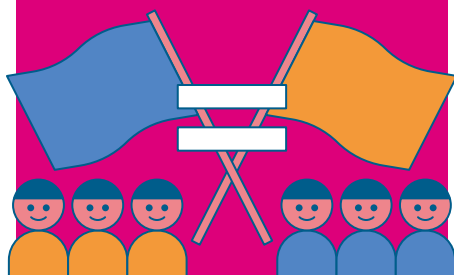


SDG 10



Reduced Inequalities

Reduce inequality within and among countries.

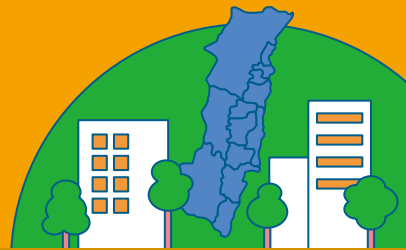


SDG 11



Sustainable Cities and Communities

Make cities and human settlements inclusive, safe, resilient and sustainable.



SDG 12



Responsible Consumption and Production

Ensure sustainable consumption and production patterns.

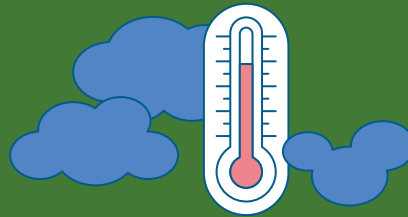


SDG 13



Climate Action

Take urgent action to combat climate change and its impacts.

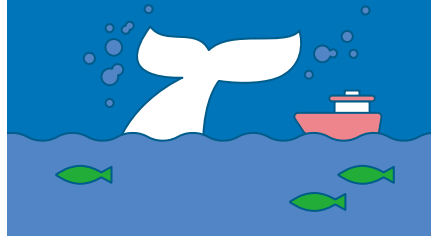


SDG 14



Life below Water

Conserve and sustainably use the oceans, seas and marine resources for sustainable development.



SDG 15



Life on Land

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.



SDG 16



Peace, Justice and Strong Institutions

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.



SDG 17



Partnerships for the Goals

Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.



**SUSTAINABLE
DEVELOPMENT
GOALS**

譜一首洄瀾永續交響曲，向世界播送

Composing a Symphony of Sustainability in Hualien, Sharing It with the World

2015年，聯合國宣布了「2030永續發展目標」(Sustainable Development Goals, SDGs)，其中包括17項核心目標，以及169項細項目標和230項指標，做為全球邁向永續、共同努力的依據。

緊接著在2017年，積極參與國際永續發展行動的臺灣，公布了首部「國家自願檢視報告」(Voluntary National Review, VNR)，從經濟、社會、環境、政府治理及全球夥伴關係等五大面向，揭櫫臺灣永續發展的方向；到了2022年，行政院國家永續發展委員會又再發布了第二版VNR。

花蓮，這個依山傍海的城市，同樣積極投入永續的實踐。除了縣府持續發布「花蓮縣自願檢視報告」(Voluntary Local Review, VLR)，各個產業也從自身做起，實踐永續行動。

例如，醫院看準東部地區交通不便、高齡長者多，致力運用最新科技發展智慧醫療，長期投入偏鄉部落的社區照護，守護人們的健康與福祉。漁牧業者則採取友善的畜養和養殖法，以達到責任消費及生產。水泥、石材業者，紛紛研發低碳節能產品，發展創新循環經濟。而旅宿業者則是從整建旅宿空間、照明、取消一次性備品等措施做起，試圖在經濟發展與自然生態永續之間，取得平衡；至於招聘在地員工、保障同仁福利，都已是各企業行之有年的日常。更重要的是，不同業者間甚至會彼此串聯，像是伴手禮、觀光旅宿業者便廣泛使用在地食材、研製特色產品，與地方一同尋求共榮、共好。

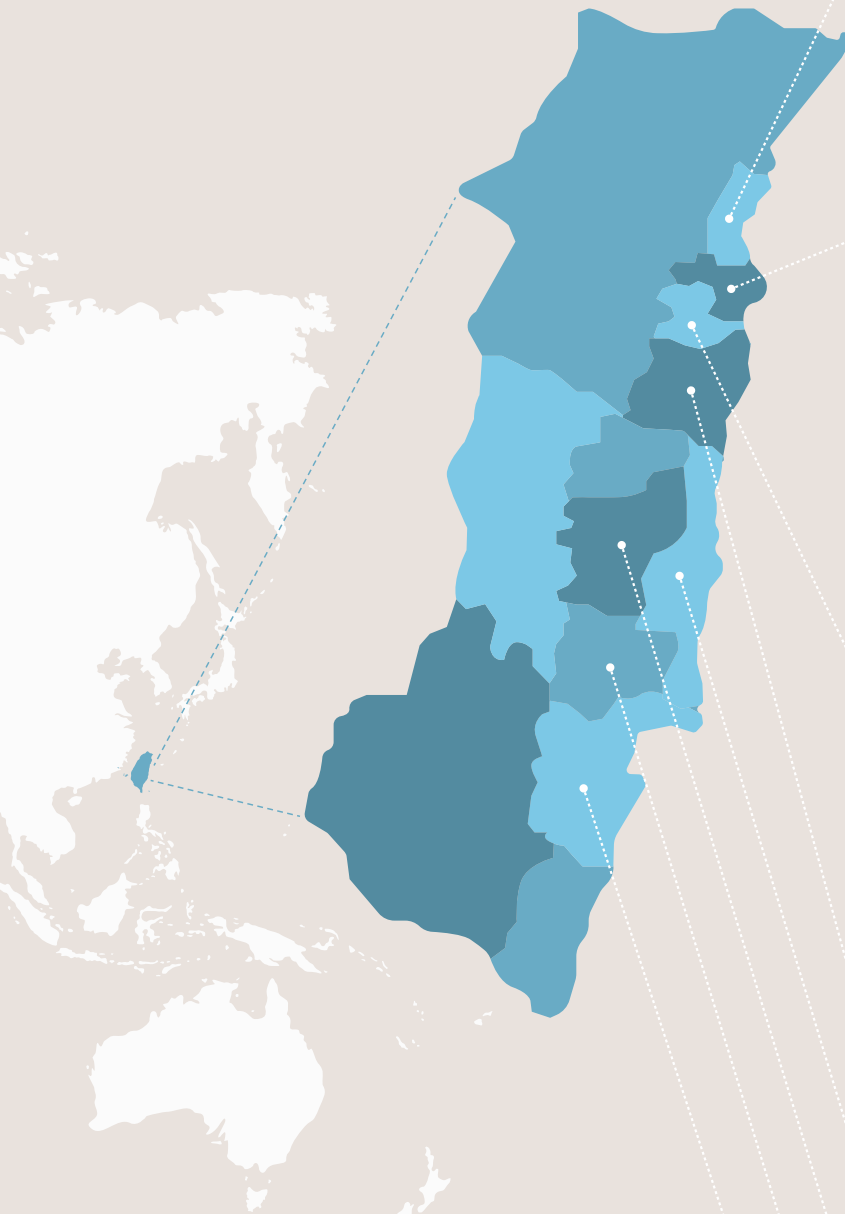
這些行動或許微小，但當眾志成城、點滴匯聚時，除了帶來創新、升級的機會，更能在邁向永續的過程中，成就獨一無二的洄瀾，最終與全球接軌，向世界傳遞花蓮的能量。

In 2015, the United Nations introduced the “2030 Sustainable Development Goals” (SDGs), a set of 17 core goals, 169 targets, and 230 indicators that serve as a global roadmap toward a more sustainable future.

Following this, Taiwan, actively engaged in international sustainability efforts, released its first “Voluntary National Review” (VNR) in 2017. This report highlighted Taiwan’s commitment to sustainability through five key areas: economy, society, environment, governance, and global partnerships. In 2022, the National Sustainable Development Committee of the Executive Yuan released a second edition of the VNR.

Hualien, a city embraced by mountains and sea, is also dedicated to sustainability. Beyond the continuous publication of the “Voluntary Local Review” (VLR) by the county government, industries across the region have taken significant steps to implement sustainable practices.

For example, local hospitals have responded to the region’s limited transportation and aging population by leveraging cutting-edge technology to develop smart healthcare solutions and offering long-term community care in rural and indigenous areas, safeguarding the health and well-being of residents. Fishermen and farmers have adopted eco-friendly methods to ensure responsible consumption and production. The cement and stone industries are innovating with low-carbon, energy-saving products, while also driving a circular economy. In the hospitality sector, businesses are balancing economic growth with ecological preservation by renovating properties, upgrading lighting systems, and eliminating single-use amenities. Hiring local staff and ensuring employee welfare have become standard practices for many enterprises. More importantly,



collaboration between industries is on the rise. For example, souvenir producers and hospitality businesses are increasingly using locally sourced ingredients to develop distinctive products, fostering a sense of shared prosperity with the community.

These actions, though small in isolation, come together to create opportunities for innovation and growth. As these efforts build momentum, Hualien is carving out a unique path toward sustainability, connecting with the world and sharing its energy on a global stage.

新城鄉

亞洲水泥股份有限公司花蓮製造廠
Asia Cement Corporation Hualien
Manufacturing Plant

東昌定製漁場
Dong Chang Fishing Ground of Set Net

光隆生化科技股份有限公司
Kung-Long Ocean Biotech

東潤水資源生技股份有限公司
East Life Biotech Corp.

花蓮市

佛教慈濟醫療財團法人花蓮慈濟醫院
Hualien Tzu Chi Hospital

東大門國際觀光夜市
Dongdamen International Tourist Night Market

棟隆企業股份有限公司
Don Loong Enterprise Co., Ltd.

臺灣基督教門諾會醫療財團法人門諾醫院
Mennonite Christian Hospital, Taiwan
Christian Mennonite Foundation

德利豆乾
Derli Food

台肥集團・台海生技 台灣海洋深層水股份有限公司
Taiwan Fertilizer Group • Taiwan Deep Ocean
Water Co., Ltd.

吉安鄉

阿美麻糬
Amis Mochi

秧悅美地度假酒店
Gaeavilla Resort

泰清鐵材股份有限公司
TIR CHN CO.,Ltd.

財團法人石材暨資源產業研究發展中心
Stone and Resource Industry R&D Center (SRDC)

嘉太企業有限公司
Chia Thai Marble Co. Ltd

壽豐鄉

立川漁場
Li Chuan Aquafarm

吉籟獵人學校
Cidal Hunter School

豐濱鄉

高山森林基地
Gao Shan Forest Tribal Ranch

光復鄉

台糖花蓮旅館
Taisugar Hualien Hotel

瑞穗鄉

吉蒸牧場
J. J. Farm

瑞穗天合國際觀光酒店
Grand Cosmos Resort Ruisui, Hualien

玉里鎮

綠點酒莊
The Green Farm

璞石閣畜牧生質能源中心
Poshike Biomass Energy Center

全臺唯一七感療癒花園 帶來健康與幸福

*Taiwan's Only Seven-Sense Healing Garden Hotel:
Bringing Health and Happiness*

秧悅美地度假酒店
Gaeavilla Resort



還沒走進花蓮縣吉安鄉的秧悅美地度假酒店，就能聞到空氣中隱隱透出的香草、薰衣草和迷迭香味。能有此與眾不同的舒暢體驗，正因為秧悅是全臺唯一的「七感療癒」花園酒店。

秧悅的前身，是1990年成立的君達休閒農場。過去曾任護理師的君達集團董事長尹純綢，從有機、無毒的理念出發，在農場裡種植香草、鑽研「香草養生學」。有感於只著重香草培育的模式太單一，2009年，尹純綢再花費10年時間，運用視覺、聽覺、味覺、觸覺、嗅覺和意、境等七感療癒元素，於2019年打造出她夢想中的「秧悅美地」。

Before even stepping into Gaeavilla Resort in Ji'an Township, Hualien County, you can catch the subtle scent of herbs, lavender, and rosemary in the air. This unique and refreshing experience is due to Gaeavilla being Taiwan's only "seven-sense healing" garden hotel.

Gaeavilla's origins date back to 1990 when it was established as Junda Leisure Farm. The chairwoman of the Junda Group, Yin Chun-chou, who previously worked as a nurse, started with the idea of organic and toxin-free farming, cultivating herbs on the farm while delving into "herbal health science." Realizing that focusing solely on herb cultivation was too limited, Yin Chun-chou spent another 10 years, beginning in 2009, to create her dream "Gaeavilla" in 2019, incorporating the seven-sense healing elements of sight, sound, taste, touch, smell, intention, and ambiance.

採綠色建築工法 與自然生態共存

Using Green Building Techniques to Coexist with Nature

當初將農場改建為酒店時，尹純綱堅持採用環保建築工法，讓酒店與自然生態共存。像是酒店外牆，有花蓮的蛇紋石，襯著大片的綠色植栽牆；館內所有的污水，都能轉為園區的灌溉水使用；為了降低碳排，秧悅選用空調型熱泵，兼具熱水器、除濕機、冷氣降溫、空氣濾淨等多重功能。

由於一般飯店是用鍋爐燒熱水，秧悅空調設備採用熱泵成本較鍋爐高出 2-3 倍，尹純綱費了功夫向董事會爭取，好不容易才落實綠色建築的目標。事後也證明秧悅的努力沒有白費，2023、2024 年，秧悅連續榮獲 G.T.S (Green Travel Seal) 國際永續綠色旅遊認證兩顆星的殊榮。歐盟委員前來審查時，所有人都對秧悅的成果感到驚豔。

綠色建築之外，還少不了「綠色餐食」。尹純綱強調，酒店農場裡的香草、蔬菜和水果，堅拒農藥、化學肥料，都採「有機」種植；作物收成時，秧悅也幾乎是零碳排，蔬食、水果從自家農場採摘後，走幾步路就到廚房洗滌烹調，兩小時內就能「從農場到餐桌」。

當視覺、聽覺、味覺、觸覺、嗅覺等五感都有了，遊客還要如何獲得意、境的療癒？「有人雖然健康，但不一定會快樂。快樂要從心和靈開始。」尹純綱解釋，秧悅除了辦理國際健康瑜珈療癒節、設計戶外遊程等種種軟性活動，還打造舒適的住房、瑜珈房，甚至浴室芳療空間，「目的就是讓消費者感受到身心靈的愉悅、自我的生命價值。」

In transforming the farm into a hotel, Yin Chun-chou insisted on using eco-friendly construction methods, ensuring that the hotel would coexist harmoniously with the natural environment. For example, the exterior walls of the hotel are made of Hualien serpentine stone, complemented by extensive green plant walls. Inside, all wastewater is recycled to irrigate the park. To reduce carbon emissions, Gaeavilla Resort chose an air conditioning heat pump system that performs multiple functions, including water heating, dehumidification, cooling, and air purification.

Typically, hotels use boilers to heat water; however, the cost of the heat pump used in Gaeavilla Resort's air conditioning system is 2-3 times higher than that of a boiler. Yin Chun-chou had to work hard to convince the board to realize the goal of green building. Her efforts paid off, as Gaeavilla was awarded the G.T.S. (Green Travel Seal) international sustainable green tourism certification with two stars in both 2023 and 2024. When European Union commissioners came to inspect the hotel, they were amazed by Gaeavilla's achievements.

In addition to green building, "green dining" is also essential. Yin Chun-chou emphasizes that the herbs, vegetables, and fruits grown on the hotel's farm are organic, completely free of pesticides and chemical fertilizers. The farm's operations are nearly carbon-neutral; produce is harvested, transported a few steps to the kitchen, and prepared within two hours, creating a true "farm-to-table" experience.

With the five senses—sight, sound, taste, touch, and smell—engaged, how can visitors achieve healing through intention and ambiance? "Some people are healthy but not necessarily happy. True happiness comes from the heart and soul," explained Yin Chun-chou. In addition to hosting international health and yoga healing festivals and designing outdoor activities, Gaeavilla Resort offers comfortable accommodations, yoga rooms, and even aromatherapy spaces in the bathrooms. "The goal is to help guests experience joy, inner peace, and a renewed sense of self-worth."





不因疫情裁員減薪 將員工視作家人

No Layoffs or Pay Cuts during the Pandemic; Treating Employees Like Family

為了維護用心打造出的七感療癒環境，秧悅聘僱一群理念一致的夥伴。所有同仁一進酒店，都必須先接受三天的教育訓練，了解餐飲、休閒等所有部門的規範，例如禁止使用農藥、烹飪時不能放味精和調味料等。這群理念相同的員工裡，有70%的在地人、15%的原住民，還有超過一半的員工，已經在此工作逾五年，尹純綢強調，秧悅向來格外照顧同仁，「我們是把員工當成『家人』。」2021年疫情期間，政府宣布旅宿停業，秧悅第一時間宣布不裁員、不減薪、不放無薪假，還安排專家來為員工「練功」，以迎接解封後的旅遊熱潮。2022年恢復旅遊後，秧悅果然一房難求，團隊也戰鬥力十足，只想把酒店最好的一面向旅客呈現。

To maintain the carefully cultivated seven-sense healing environment, Gaeavilla Resort hires a team of like-minded partners. Every employee undergoes a three-day orientation upon joining, during which they learn the standards of all departments, including food and recreation, such as the prohibition of pesticides and the avoidance of MSG and artificial seasonings in cooking. Among this group of employees, 70% are locals, 15% are indigenous people, and more than half have been with the resort for more than five years. Yin Chun-chou emphasizes that Gaeavilla treats its employees as “family.” During the pandemic in 2021, when the government mandated the temporary closure of hospitality businesses, Gaeavilla immediately announced that there would be no layoffs, no pay cuts, and no unpaid leave. Instead, experts were brought in to train the staff in preparation for the anticipated surge in tourism after restrictions were lifted. When travel resumed in 2022, Gaeavilla was fully booked, and the team was highly motivated, eager to present the best of the resort to their guests.

秧悅的力量不只在酒店內萌發，還擴及整個花蓮。早在 2016 年籌備秧悅時，尹純綢即與團隊走訪花蓮縣的小農，尋找餐食要用的契作農產，結果她發現，在地小農大多「會種不會賣」，因此秧悅開幕後，除了大力收購青農種植的有機稻米、芋頭，酒店內的樂活館還開闢小農專區，協助 60 幾位小農包裝、販售通過有機認證的產品，朝農產六級化的目標邁進。

看好花蓮農改場的黃豆是特好的品種，且是優良的蛋白質來源，國內卻多從美國進口，不僅曠日費時，還會影響新鮮度，尹純綢也鼓勵青農投入黃豆種植，現在的青農團隊，已從當初的 3 位擴大至 10 多位，種植面積則達 70 公頃。同時，秧悅還和經濟部、周邊的干城社區合作，設計用手機便能做為載具的「智慧導覽」，傾聽「最初的声音」為主題，從酒店出發的遊客，在打開手機定位後，會看到沿途的黃牛與白鷺鷥相依偎、水鴨在湖中悠游的場景，並聆聽在地的往昔故事與歷史。

Gaeavilla's impact extends beyond the hotel itself and reaches the entire Hualien area. As early as 2016, while preparing for Gaeavilla's opening, Yin Chun-chou and her team visited small farmers in Hualien County to source produce for the hotel's meals. They discovered that many local farmers were skilled at growing crops but struggled with

sales. After Gaeavilla opened, in addition to purchasing organic rice and taro grown by young farmers, the resort's LOHAS Center also established a special section to help over 60 small farmers package and sell their organic-certified products, advancing towards the goal of developing a six-level agricultural industry.

Recognizing that soybeans, a rich source of protein, are a specialty of the Hualien Agricultural Research and Extension Station but are mostly imported from the United States, which affects freshness and takes time, Yin Chun-chou also encouraged young farmers to engage in soybean cultivation. Today, the team of young farmers has grown from three to over ten members, and the cultivation area has expanded to 70 hectares. Additionally, Gaeavilla has collaborated with the Ministry of Economic Affairs and the nearby Gancheng Community to design a "smart guide" accessible via mobile devices. This guide, themed around "listening to the original sounds," allows tourists departing from the hotel to see scenes of water buffalo and egrets side by side and ducks swimming leisurely in the lake, while listening to local stories and history.





如今，遊人都知道，在秧悅啜飲的水、嚐到的餐食、感受的氛圍，都有別於其他酒店。剛開始，可能有造訪秧悅的旅客，期待著重口味的大魚大肉，沒想到在嚐過有機、原味的料理後，他們隔天反而主動說：「整個人沒有負擔，變得好健康。」後來更成為秧悅的常客。

近來，秧悅經東華大學永續發展中心完成碳盤查，發現旅客在此消耗每次入住一晚的碳排量，較其他旅宿少了 50 公斤，讓來賓在「綠色旅遊」度假的同時，也愛地球，「這證明大自然真的能帶給人們健康與幸福。我們會堅持目標，讓『七感療癒』成為送給每個客人的最佳禮物。」

Now, visitors know that the water they drink, the food they taste, and the atmosphere they feel at Gaeavilla are unlike any other hotel. Initially, some guests who visited Gaeavilla might have expected rich, heavy-flavored meals. However, after tasting the organic and natural dishes, they often remarked the next day, “I feel so much lighter and healthier.” Many of these guests have since become regulars.

Recently, Gaeavilla underwent a carbon inventory conducted by the Center for Sustainable Development at Dong Hwa University, which revealed that the carbon footprint of each guest’s stay is 50 kilograms less than that of other accommodations. This allows guests to enjoy a “green travel” experience while also caring for the Earth. “This proves that nature truly brings health and happiness to people. We will continue to strive to make Seven-sense Healing the best gift for every guest.” said Yin Chun-chou.

秧悅美地度假酒店 Gaeavilla Resort

成立時間：2019 年

Date of establishment: 2019

全臺唯一以有機香草為主題的七感療癒花園酒店

Taiwan’s only seven-sense healing garden hotel themed around organic herbs.



花蓮縣吉安鄉干城二街 100 號

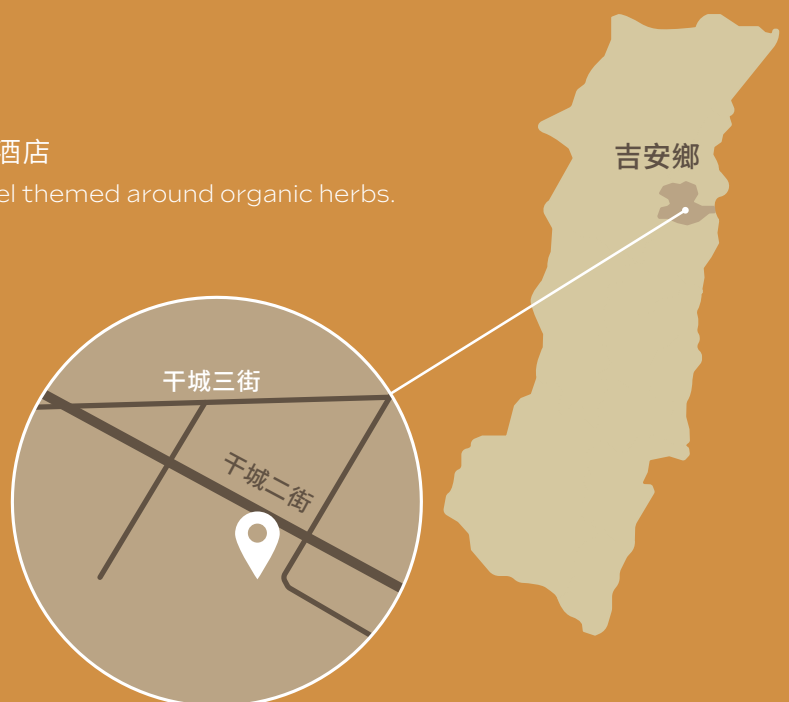
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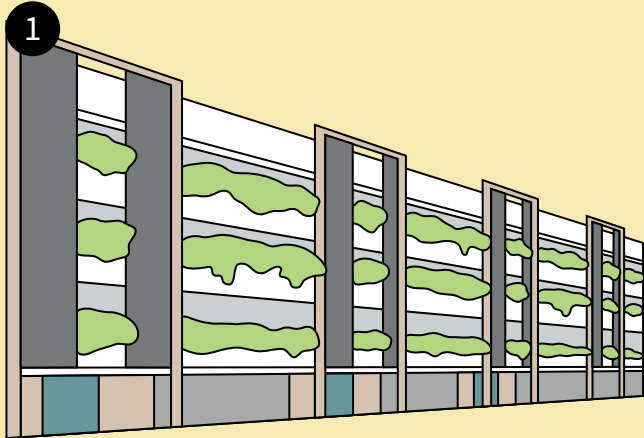


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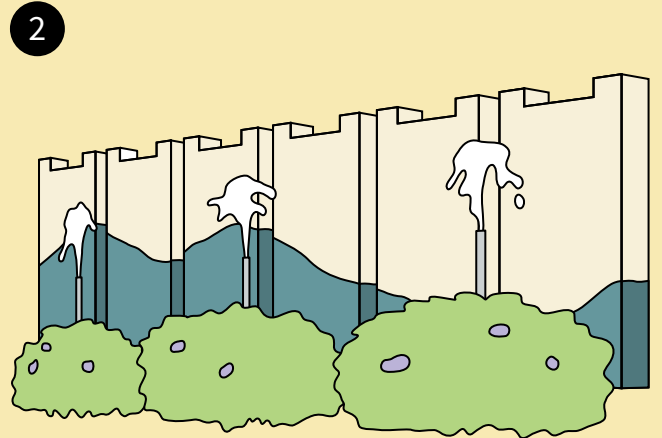
www.gaeavilla.com





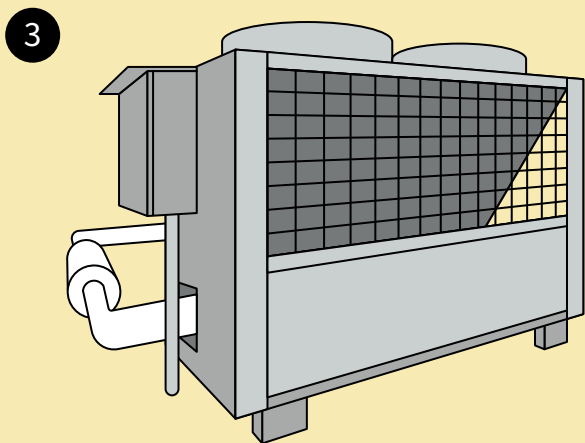
建造綠色建築：酒店外牆採用花蓮蛇紋石，搭配大片綠色植栽牆

Green Building Construction:
The exterior walls of the hotel are made of Hualien serpentine stone, complemented by extensive green plant walls.



建構污水處理系統：將館內污水再循環利用作為農場灌溉水

Wastewater Treatment System:
The hotel's wastewater is recycled and reused as irrigation water for the farm.



採用熱泵：節能省電的永續理念，不惜高成本投入興建

Adoption of Heat Pumps:
Embracing sustainable concepts of energy saving and electricity conservation, the hotel invested heavily in the construction of heat pumps despite the high costs.



打造有機農場：有機種植、堅拒農藥，一小時內從農場到餐桌，幾近零碳排

Organic Farm Development:
Organic farming practices are strictly pesticide-free, ensuring that produce goes from farm to table within an hour, with nearly zero carbon emissions.



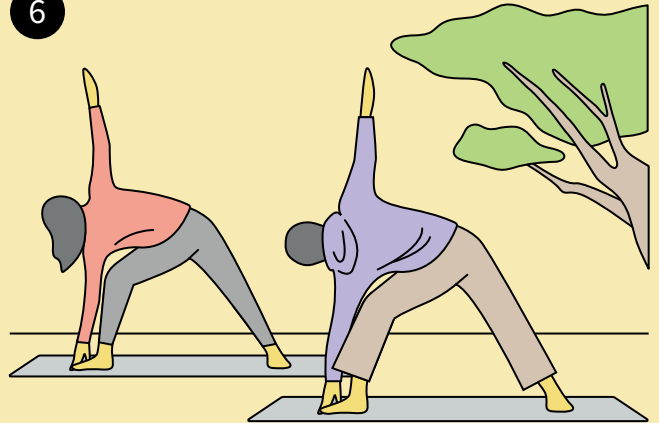
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不提供一次性備品，旅客入住秧悅美地一晚，較其他旅宿少了50公斤碳排

No Single-Use Facilities:
Guests staying at Gaeavilla produce 50 kg less carbon emissions per night compared to other accommodations.

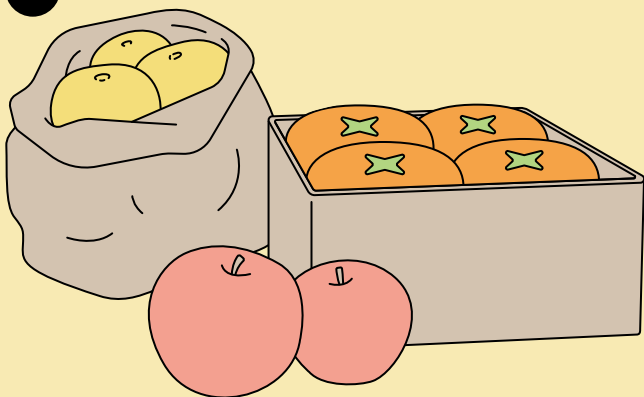
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辦理國際健康瑜珈療癒節，達到意、境療癒

International Health and Yoga Healing Festival:
Organized to achieve healing through intention and environment.

7



設立整合銷售平台，販售在地小農作物

Integrated Sales Platform:
Established to sell crops from local small farmers.

8



與地方社區合作，設計戶外遊程

Collaboration with Local Communities:
Designed outdoor activities in partnership with nearby communities.

生態、經濟和人文三管齊下 引領花蓮觀光新風貌

Leading Hualien Tourism with Ecology, Economy, and Culture

瑞穗天合國際觀光酒店

Grand Cosmos Resort Ruisui, Hualien



2019年開幕、有「臺版迪士尼」之稱的瑞穗天合國際觀光酒店，是國內首座結合星級觀光飯店、格蘭別墅、親子別墅、溫泉黃金湯／金色水樂園和悅華莊 SPA 等多元休閒設施的酒店。

Opened in 2019, Grand Cosmos Resort Ruisui, Hualien, dubbed the “Disneyland of Taiwan,” is the first in the country to combine a star-rated hotel, grand villas, family villas, a golden hot spring water park, and the Yaward SPA.





做為天成飯店集團的一員，「瑞穗天合」和位在臺北的臺北天成大飯店、臺北花園大酒店，以及瞄準年輕族群的天成文旅，以精緻體驗的天成逸旅，定位截然不同，「打造瑞穗天合對我們來說，是很大的挑戰。」天成飯店集團副董事長暨執行長張東豪解釋，2013年展開計畫時，集團還沒有開發、營運大量體的度假酒店的經驗，加上地點位在農牧區，最大的難題是要在經濟發展與地方生態永續間取得平衡。最終，集團秉持著遵循法規的原則，從生態、經濟和人文等面向三管齊下，「我們現在的做法，是補償生態環境、推動地方經濟發展並落實人文關懷。」

As part of Cosmos Hotels & Resorts, Grand Cosmos Resort Ruisui, Hualien, stands out from Cosmos Hotel Taipei, Taipei Garden Hotel, Cosmos Creation, and Cosmos Oasis. “Creating Grand Cosmos Resort was a big challenge for us,” explained Vice Chairman and CEO Chang Dong-hao. When the project began in 2013, the group had no experience developing and operating large-scale resort hotels. Located in a rural area, the biggest challenge was balancing economic development with local ecological sustainability. The group adhered to regulations and approached the project from three angles: ecology, economy, and culture. “Our current approach is to compensate for the ecological impact, promote local economic development, and practice cultural care,” Chang said.



綠美化、減省資源不遺餘力 獲頒環保旅店

Eco-friendly Initiatives and Awards

在生態補償方面，瑞穗天合占地兩萬坪，規劃時的綠化面積高達 40%，其中有 28% 的喬木與灌木，「落實綠化不遺餘力，是希望在開發酒店的同時，把樹種回來。」張東豪提到，瑞穗天合還投入高額設備成本，全面採用 LED 燈具、設置電動車充電車位，以及引入全自動電腦控制系統，以調節空調溫度。儘管酒店是以「享溫泉·遊莊園」為主軸，但集團始終嚴格控管溫泉資源，避免過度開發、超抽溫泉水。酒店內也設有環保卡，鼓勵旅客續住期間，選擇不更換床單、被套和枕頭套，以減少水資源耗費和水污染。從節能永續出發的全面考量，讓瑞穗天合獲頒 2023 年的花蓮縣「環保旅店」，並兩度在交通部觀光署星級旅館評鑑中，獲得「卓越五星」的殊榮。

其次，在推動地方經濟發展方面，團隊不僅大力提倡「吃當季、食在地」，也廣泛與地方小農合作，團隊與主廚不僅研發健康又美味的料理，在酒店內栽種迷迭香、玉米、文旦柚等作物的「主廚花園」安排旅客親自採摘作物，並體驗現煮櫛瓜、玉米和溫泉蛋，中秋節前夕甚至可以現採文旦柚回家，「我原本以為這樣的體驗活動，只會在樂齡族群間受歡迎，沒想到連小朋友都玩得不亦樂乎！畢竟現在的孩子哪裡有採摘作物、直接烹調的經驗？」張東豪笑道。

自瑞穗天合開幕以來，即歡迎在地小農、文創業者、原住民青年等，聚集於酒店中庭的「瑞穗市集」，將作物、藝品呈現在住客面前，酒店還特別設計「金幣」，提供給住客兌換商品，創造旅行與花蓮的連結。

在人文關懷面向，酒店特別邀請國際知名藝術家優席夫和馬耀·卡照，耗時半年，在酒店外牆進行高達八公尺的巨型馬賽克拼貼創作，展現了既國際又在地的精神。



Occupying 20,000 square meters, Grand Cosmos Resort dedicated 40% of its area to greenery during planning, with 28% consisting of trees and shrubs. “We spared no effort in greening the area, hoping to replant trees while developing the hotel,” Chang said. The hotel also invested heavily in equipment, using LED lighting, installing EV charging stations, and implementing a fully automated computer control system for air conditioning. Despite its focus on hot springs and manor-style enjoyment, the group strictly controls hot spring resource usage to avoid over-extraction. The hotel encourages guests to reuse linens to reduce water consumption and pollution. These comprehensive sustainability efforts earned Grand Cosmos Resort the “Green Hotel” award from Hualien County in 2023 and the “Excellent Five-Star” rating twice from the Tourism Administration.

The team actively promotes “eating seasonal and local foods” and collaborates with local farmers. They developed healthy and delicious dishes and created a “Chef’s Garden” where guests can pick rosemary, corn, pomelos, and other crops. Visitors can cook zucchini, corn, and hot spring eggs on-site, and before the Mid-Autumn Festival, they can pick pomelos to take home. “I thought this would only appeal to older guests, but even kids love it! Where else do children get to pick crops and cook them directly?” Chang laughed.

Since its opening, Grand Cosmos Resort has welcomed local farmers, artists, and indigenous youth to showcase their products at the “Ruisui Market” in the hotel courtyard. Guests can exchange special “gold coins” for items, creating a unique connection between travelers and Hualien.

In cultural care, the hotel invited renowned artists Yosifu and Mayaw Kacaw to create an eight-meter-tall mosaic on the hotel’s exterior, reflecting both international and local spirit.

僱用在地員工 助夥伴收穫工作成就感

Hiring Local Staff and Enhancing Employee Achievement

瑞穗天合的員工有逾 65% 為花蓮在地人，其中更有超過 30% 為原住民族。走進酒店，會看到阿美、太魯閣、布農、撒奇萊雅和噶瑪蘭等不同族群的原住民，提供熱情服務，「員工在這裡工作，受到外界不少肯定，這成為他們成長的動力。」張東豪舉例，像是擁有 30 多年甜點烘焙手藝資歷的點心房副主廚林照富，2021 年以「覆盆子歌劇院蛋糕」參加法國坎城「Cannes Dessert Prize」評選，榮獲創新獎金牌，等於為酒店打造獨特又美味的甜點之外，還收穫滿滿的成就感。

2024 年是天成飯店集團的「SDGs 元年」，張東豪和團隊討論後，洋洋灑灑列了 50 項永續目標，要求極力落實，例如針對一次性小瓶裝備品，全面更改為大瓶裝洗沐備品。更重要的是，瑞穗天合也將「善的觸角」伸向國際，與日本擁有 70 年歷史的長野縣池之平飯店簽署友好交流備忘錄，雙方將於未來進行廚藝交流、員工與管理階層互訪，以提升服務品質和管理水準。

從歐式城堡到原民文化，從環境保護到社會責任，瑞穗天合透過與花蓮在地的共存、共榮，帶動所有人攜手邁向「共好」。

Over 65% of Grand Cosmos Resort's employees are from Hualien, with more than 30% being indigenous people. Guests are greeted warmly by Pangcah, Truku, Bunun, Sakizaya, and Kavalan staff. "Our employees feel motivated by the recognition they receive from the outside world," Chang noted. For example, Deputy Pastry Chef Lin Zhao-fu, with over 30 years of experience, won the gold medal for innovation at the Cannes Dessert Prize in 2021 with his "Raspberry Opera Cake," bringing unique and delicious desserts to the hotel and gaining a sense of accomplishment.

2024 marks the "SDGs Year" for Cosmos Hotels & Resorts. After discussions, Chang and the team listed 50 sustainability goals, such as replacing single-use toiletries with larger, refillable bottles. Grand Cosmos Resort also extended its goodwill internationally, signing a memorandum of understanding with the 70-year-old Ikenotaira Hotel in Nagano, Japan. They plan to exchange culinary expertise and staff to improve service quality and management standards.

From European-style castles to indigenous culture, from environmental protection to social responsibility, Grand Cosmos Resort strives to coexist and prosper with Hualien, leading everyone toward a better future.





瑞穗天合國際觀光酒店 Grand Cosmos Resort Ruisui, Hualien

成立時間：2019 年

Date of establishment: 2019

天成飯店集團旗下，以「享溫泉·遊莊園」為主軸的頂級度假飯店品牌

A premier resort hotel brand under Cosmos Hotels & Resorts, focusing on the theme "A Hot Spring Vacation In Style".

📍 花蓮縣瑞穗鄉溫泉路二段 368 號

No. 368, Sec. 2, Wenquan Rd., Ruisui Township, Hualien County

☎ 03-887-6000

🌐 www.grandcosmos.com.tw



來聽課、玩手作 接收友善大地理念

*Come to Class, Make Things with Your Own Hands,
and Accept the Concept of Being Friendly to the Earth*

台糖花蓮旅館

Taisugar Hualien Hotel



今年，位於花蓮光復鄉觀光糖廠內的台糖花蓮旅館，可說是「喜事連連」。2024年2月，館內順利通過 ISO 9001:2015 櫃台服務品質管理國際認證；3月，該館又繼 2018 年之後，二度取得「銅級環保標章旅館」認證。

This year, the Taisugar Hualien Hotel, located in the Hualien Tourist Sugar Factory (Guangfu Sugar Plant) in Guangfu Township, Hualien, can be said to have experienced “one happy event after another”. In February 2024, the hotel successfully passed ISO 9001:2015 counter service quality management international certification; in March, the hotel obtained “Bronze Level Environmental Label Hotel” certification for the second time after 2018.





台糖公司花東區處張兆民處長
Director Chang Chao-Min, Taiwan Sugar Corporation Hualien-
Taitung Regional Office

台糖東部製糖工廠自 2002 年停工後，便轉型成花蓮觀光糖廠。20 多年來，台糖積極經營園區觀光特色，從導覽解說、體驗活動、日式木屋、風味餐、糖廠冰品到地方特色商品，一應俱全，致力提供遊客住、食、遊、玩的豐富體驗，「我們是從重新發揮對臺灣經濟、社會發展的貢獻，以及重現臺灣人生活裡溫暖記憶的願景出發，運用台糖既有的資源與研發動能，一方面推動循環再利用、邁向永續的經營模式，同時也期望打造有溫度的社會關懷。」

After the Eastern Sugar Factory of Taiwan Sugar Corporation ceased operations in 2002, it was transformed into a Hualien Tourist Sugar Factory. For more than 20 years, Taiwan

Sugar has actively operated the park's tourism features, including guided tours, experiential activities, Japanese-style wooden houses, flavorful meals, sugar factory ice products and local specialty products, and is committed to providing tourists with a memorable accommodation, food, travel and entertainment experience. "We started from the vision of re-contributing to Taiwan's economic and social development and reproducing the warm memories from Taiwanese people's lives. Taiwan Sugar's existing resources and R&D capability are used to promote recycling and reuse, and move towards a sustainable business model. We also hope to create warm social care".

老屋新生 宿舍轉型旅館

New Life in Old Houses, Dormitories Transformed into Hotel

放眼園區，27 棟共 73 間 1936 年建成的日式房舍，是國內保存最完整的日式木構建築群，在 2009 年花蓮縣政府將其公告登錄為「文化景觀」，納入文資法規範。既然被認證為具有歷史、美學、人類學價值的場域，要將屋舍整建為旅館前，台糖也相當慎重，首要目標便是「保留」、「再利用」。結構技師在不動所有格局的前提下，仔細評估什麼物件要留、什麼該拆，只為了真實呈現舊時風韻，「現在大家看到的台糖花蓮旅館，是我們善用資源、賦予新生命，讓原來破舊斑駁的宿舍，再現華麗面貌的成果。」

除了硬體方面「復舊如舊」，台糖在軟體服務也積極朝「環保永續」的目標邁進。2023 年 6 月起，台糖花蓮旅館不再主動提供一次性備品，改採用填充式沐浴清潔備品，也根據續住房客的需求，決定是否更換毛巾、枕頭套與被套，以降低清洗備品消耗的水與電。為了讓遊客一起「愛地球」，館方還發想出各式「環保房折扣專案」；近期也將與自動販賣機業者合作，提供給仍想取得一次性備品的旅客另一種選擇。

來到台糖花蓮旅館，在日式風情體驗、大自然芬多精的汲取外，不能錯過的，還有環境教育課程與手作體驗。2021 年，台糖花蓮觀光糖廠取得環境教育場域認證，逐步推出「小蜂立大功」、「營造蟲蟲小鎮」和「甘蔗的甜蜜之旅」等課程，讓學生、旅客都能認識自然生態、製糖文化與歷史。

Looking at the park, there are 27 buildings with a total of 73 Japanese-style houses built in 1936. It is the most complete group of Japanese-style wooden buildings in Taiwan. In 2009, Hualien County Government registered it as a “cultural landscape”, making it subject to the Cultural Heritage Preservation Act. Since it has been certified as a site with historical, aesthetic, and anthropological value, Taiwan Sugar was also very cautious when it came to renovating the house into a hotel. The primary goal was to “preserve” and “reuse”. Structural technicians carefully evaluated what should be kept and what should be demolished without

changing the layout, to truly present the old charm. “The Taisugar Hualien Hotel that you see now is a result of making good use of resources and giving it new life, restoring the dilapidated dormitories to their former glory”.

In addition to “restoring the old” in terms of hardware, Taiwan Sugar is also actively moving towards the goal of “environmental protection and sustainability” in terms of services. Starting from June 2023, Taisugar Hualien Hotel no longer provides disposable supplies and instead uses refillable bathroom supplies. It will also decide whether to replace towels, pillowcases and quilt covers based on the needs of continuing guests to reduce the consumption of water and electricity. In order to let tourists “love the earth” together, the hotel has also developed various “environmentally friendly room discount programs”; it will also cooperate with vending machine operators in the near future to provide another option for tourists who still want to obtain disposable supplies.

When you come to Taisugar Hualien Hotel, in addition to experiencing Japanese style and absorbing natural phytoncides, the environmental education courses and handmaking experiences should not be missed. In 2021, Taiwan Sugar Hualien Tourist Sugar Factory obtained environmental education field certification and launched courses such as “Little Wasps Make Great a Contribution”, “Creating Bug Town” and “Sweet Journey of Sugar Cane” to allow students and tourists to understand natural ecology, sugar culture and history.



環境教育課程、手作體驗 傳遞永續新知

Environmental Education Courses and Hand-Making Experiences Convey New Knowledge about Sustainability

甘蔗是臺灣製糖的主要原料，甘蔗成長的良窳格外重要，而「螟蟲」正是影響甘蔗成長的病害之一。一般來說，若想快速滅除蟲害，農藥是首要選擇，但若過度使用農藥，又會造成殘留、環境污染和危害生物等問題。台糖長年投入製糖，發現赤眼卵寄生蜂能有效防治螟害，自1971年起，便在大量繁殖寄生蜂後，應用於蔗田、玉米防治，已有良好的成效。台糖透露，將這個防治螟害的故事設計為「小蜂立大功」，讓學生、遊客能以有趣的方式，認識寄生蜂和生物防治工法。

手作體驗「糖業風彩繪置物盒」，則邀請遊客親手將日式木屋旅館、366 蒸汽火車等糖廠內的特色景點，變身木質置物盒，讓遊客不知不覺中，沉浸在「糖業文化」與「環境保護」的體驗中，進一步激發對永續環保、友善大地新知的渴望。

Sugarcane is the main raw material for sugar production in Taiwan. Good conditions for the growth of sugarcane are particularly important, and “borers” are one of the diseases that affect the growth of sugarcane. Generally speaking, if you want to quickly eliminate pests, pesticides are the first choice. However, excessive use of pesticides can cause problems such as residues, environmental pollution, and harm to organisms. Taiwan Sugar has been



engaged in sugar production for many years and found that the *Trichogramma* parasitic wasp can effectively control borer damage. Since 1971, it has bred a large number of parasitic wasps and applied them to sugarcane field and corn pest control, and achieving good results. Taiwan Sugar revealed that it designed this story of stem borer prevention as “Little Wasps Make a Great Contribution” so that students and tourists can learn about parasitic wasps and biological control methods in an interesting way.

The hand-making experience “Sugar Industry Style Painted Storage Box” invites visitors to transform the special attractions in the sugar factory such as the Japanese wooden house hotel and the 366 steam train into wooden storage boxes, allowing visitors to immerse themselves in the “sugar industry” without even realizing. The experience of “industrial culture” and “environmental protection” further stimulates the desire for new knowledge about sustainable environmental protection and being friendly to the earth.



自 2011 年正式營運至今，台糖花蓮旅館廣受大小朋友喜愛，已然是親朋好友出遊的好去處。如今，台糖更將自身能量向外擴散，包括串聯園區內的自行車廠商，讓遊客能租借腳踏車，輕鬆悠遊到大農大富平地森林園區，享受芬多精，完成一趟「低碳」旅遊。每年 3 至 4 月的賞螢季，台糖還會與農業部林業及自然保育署花蓮分署合作，給予遊程折扣，遊客只要持賞螢的票根、電子憑證，就能享有住宿優惠，台糖相信，與不同業者、單位合作，會讓旅客更願意親近大自然，進而學習如何保護環境、了解與生物平和共處的法則，最終，所有人都能與大自然和諧共存。

Since its official opening in 2011, Taisugar Hualien Hotel has been loved by children of all ages and has become a great place for family and friends to visit. Now, Taiwan Sugar has spread its energy outwards, including connecting with a bicycle supplier in the park to allow tourists to rent bicycles to easily travel to Danongdafu Forest Park to enjoy phytoncides and complete a “low-carbon” tour. During the firefly viewing season from March to April every year, Taiwan Sugar also cooperates with the Hualien Branch, Forestry and Nature Conservation Agency, Ministry of Agriculture, to provide discounts on travel. Tourists can enjoy accommodation discounts as long as they hold the ticket stubs and electronic vouchers for watching fireflies. Taiwan Sugar believes that cooperation between different industries and units will make tourists more willing to get closer to nature, and then learn how to protect the environment and understand the rules of peaceful coexistence with living things, so, ultimately, everyone coexists harmoniously with nature.

台糖花蓮旅館 Taisugar Hualien Hotel

成立時間：台糖東部製糖工廠宿舍改建而成，2011 年起營運

Date of establishment: It is the renovated dormitories of Taiwan Sugar Factory in Guangfu Township, Hualien, located in eastern Taiwan.

將糖廠內的日式宿舍整修成風格旅館後，提供旅客住宿

After renovation of the Japanese-style dormitories in the sugar factory, they became a style hotel that provides accommodation for tourists.

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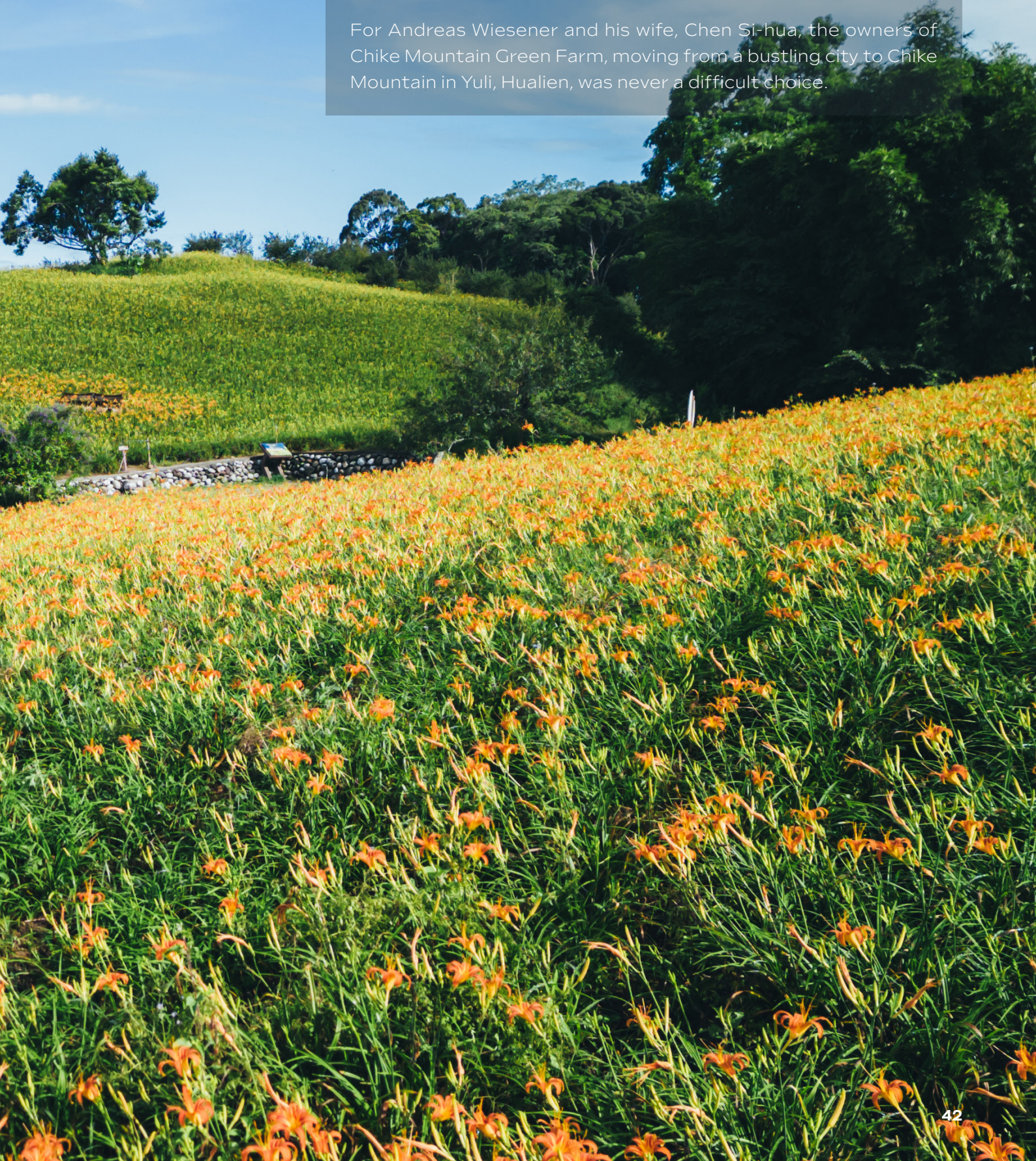
綠點酒莊

The Green Farm



對赤科山綠點酒莊主理人張安德（Andreas Wiesener）、陳思樺夫婦倆來說，從繁華的都市搬到花蓮玉里赤科山，從來不是個困難選擇。

For Andreas Wiesener and his wife, Chen Si-hua, the owners of Chike Mountain Green Farm, moving from a bustling city to Chike Mountain in Yuli, Hualien, was never a difficult choice.





移居花蓮前，來自德國朗根費爾德的張安德在新竹擔任釀酒師，在臺北工作的陳思樺，也經常前往世界各地出差遊玩。即便看過眾多風景，在2019年首度造訪赤科山的兩人，看到當地自然環境和獨特的小木屋後，只花了5分鐘，便決定定居此處，「我們都覺得花蓮是全臺灣最美的地方，天空、海洋、山岳、稻田還有整片土地的氛圍，在在讓人感到安定、放鬆和舒服。」陳思樺說。

張安德曾獲世界啤酒大獎，陳思樺曾是採購企劃人員，陳思樺笑稱，將兩人的技能結合，一個釀酒、一個賣酒，總不至於會「餓死」，於是，他們正式移居赤科山上，花了8個月的時間，親手將已經50幾歲的老屋，改造成能舉辦活動、露營的「綠點酒莊」；2022年起，兩人又耗時兩年，在瑞穗打造一間可以自造釀酒的酒莊，開啟在花蓮的釀酒人生。

Before moving to Hualien, Andreas, originally from Langenfeld, Germany, worked as a brewer in Hsinchu, while Chen Si-hua, who worked in Taipei, frequently traveled around the world for business and pleasure. Despite their experiences of many beautiful landscapes, it took them only five minutes to decide to settle in Chike Mountain after their first visit in 2019. “We both feel that Hualien is the most beautiful place in Taiwan. The sky, the ocean, the mountains, the rice fields, and the whole atmosphere of the land bring a sense of peace, relaxation, and comfort,” said Chen Si-hua.

Andreas, a World Beer Award winner, and Chen Si-hua, a former procurement planner, combined their skills—one brews wine, the other sells it—and joked that they would never “starve.” They officially moved to Chike Mountain and spent eight months transforming a 50-year-old house into what is now “Green Farm,” a place that hosts events and camping. In 2022, they spent another two years building a winery in Ruisui, where they could make their own wine, marking the beginning of their winemaking journey in Hualien.



採用赤科山金針 釀製獨特地酒

Brewing Unique Local Spirits with Chike Mountain Daylilies

初來乍到，夫妻倆積極參與赤科山社區的活動。過程中，他們發現，赤科山雖然盛產金針，每逢 8 至 10 月的花季，總能吸引大批遊客前來欣賞黃澄澄的花海，但鮮為人知的是，種植金針的農民相當辛苦，不僅一年只能收成一次，還不易找到工人採收，有時採收過多，又可能滯銷，農民最終的選擇，往往是放棄收成。對此，張安德和陳思樺心想，作物要是生產過剩，通常會被製成菜脯、酒等釀漬品，「我們也可以選擇在地作物釀成『地酒』，協助解決地方問題。」

因此，張安德發揮釀酒專長，研發出金針根蒸餾酒、金針花啤酒和金針花氣泡飲等一系列酒飲，還用瑞穗的柚子、花蓮產的咖啡豆，釀製出柚子利口酒和咖啡利口酒；每回釀出新品，陳思樺會邀請附近鄰居、農友，前來試酒，確保酒中透出金針、柚子的獨特風味。

藉由這樣的互動往來，夫婦倆漸漸和周邊鄰居、店家結為好友，每當了解遊客特殊需求，都會相互轉介，例如有旅客吃素，陳思樺會推薦山上提供素食的餐廳；由於張安德有木工鐵工的專長，鄰居甚至會直接將怪手開來，請他協助修理。陳思樺指出，過去在臺北搭捷運上班，每天沒有遇到千人也有百人，卻不認識其中任何一人；搬到赤科山後，「我認識山上的每一個人，我們彼此熟絡、互相幫忙，這才是有品質的生活。」

When they first arrived, the couple eagerly participated in community activities on Chike Mountain. During this time, they discovered that although Chike Mountain is rich in daylilies and attracts large numbers of tourists during the blooming season from August to October, few people know about the hardships faced by the farmers. Daylily farmers can only harvest once a year, and it's difficult to find workers for the harvest. Sometimes, when there is an overabundance of harvested flowers, they may go unsold, forcing the farmers to abandon the crop. Andreas Wiesener and Chen Si-hua realized that when there is a surplus of crops, they are often turned into preserved foods, such as pickled vegetables, or fermented into spirits. "We can also choose to use local crops to brew "local spirits," helping to solve community problems," they thought.

Utilizing Andreas's expertise in brewing, they developed a series of beverages, including daylily root distilled spirits, daylily flower beer, and daylily flower sparkling drinks. They also used pomelos from Ruisui and coffee beans from Hualien to make pomelo liqueur and coffee liqueur. Whenever they produced a new beverage, Chen Si-hua would invite neighbors and local farmers to taste it, ensuring that the drinks captured the unique flavors of daylilies and pomelos.

Through these interactions, the couple gradually became friends with their neighbors and local business owners. Whenever they learned of a tourist's special needs, they would refer them to each other. For example, if a visitor was a vegetarian, Chen Si-hua would recommend restaurants on the mountain that offer vegetarian meals. With Andreas's skills in carpentry and metalwork, neighbors would even bring over their machinery, such as excavators, for him to repair. Chen Si-hua reflected on her former life in Taipei, where she rode the MRT to work every day, passing by hundreds of people without knowing a single one. After moving to Chike Mountain, she said, "I know everyone on the mountain. We are familiar with each other, and we help each other. This is what a quality life is all about."



禁止酒駕



飲酒過量，有害健康

集結社區夥伴 推出永續低碳遊程

Partnering with the Community to Launch Sustainable, Low-Carbon Tours

正所謂三個臭皮匠勝過一個諸葛亮，為了吸引遊客在金針花期以外的時節也願意造訪當地，近來，綠點農莊、櫻之谷、林家園及天心茶園和等山上一群店家集思廣益，和花蓮在地的電輔車業者「易踏趣」合作，推出「永續低碳」的電輔車遊程。遊客騎著電輔車遊覽赤科山，在山上體驗製茶、做壽司、品酒，並聆聽專屬在地的故事。陳思樺解釋，赤科山腹地廣大，有許多值得探訪的地方，開車無法實際感受環境之美，走路則因每人體力與腳速不同，能到達的地方有限；騎著電輔車，不僅能輕鬆自在穿梭各個秘境，還能順帶「愛地球」。

酒莊經營至今已屆四年，獲得不少遊客回饋。陳思樺透露，酒莊的位置不容易找，不僅路窄，還得經過兩個髮夾彎，才能抵達。她經常遇到客人來電詢問，酒莊到底在哪裡？累積一肚子火的對方到達酒莊，看到山上的天然環境、聽著蟲鳴鳥叫後，又會瞬間消氣，「酒莊沒有什麼『好玩』的娛樂，最有價值的就是這片環境，只要坐著放空、吹吹風，就能感受到大自然帶來的療癒感。」

用在地食材、釀在地酒，和當地小農、社區店家合作共好，成了張安德、陳思樺現在的生活重心。2024年3月，綠點酒莊在花蓮縣政府的推薦下，前往日本參加東京食品展，進一步將花蓮的在地力量帶到國際，「花蓮有天然的環境和豐潤的農業，還有許多致力為農特產品提升價值的小型創業家。藉由這樣參展的機會，我們可以讓花蓮的美，被世界看見。」

As the saying goes, “Three heads are better than one.” In an effort to attract tourists outside of the daylily blooming season, Green Farm has partnered with local businesses such as Chikesakura, Lin’s Garden, and Tianxin Tea Company, along with Hualien-based e-bike company “e-Touch,” to create sustainable, low-carbon e-bike tours. Visitors can ride e-bikes around Chike Mountain and experience tea-making, sushi crafting, wine tasting, and hear the unique stories of

the area. Chen Si-hua explained that Chike Mountain covers a large area with many places worth exploring. Driving doesn’t allow visitors to fully appreciate the beauty of the surroundings, and walking limits the distance one can cover due to varying levels of physical fitness. Riding an e-bike, however, offers a relaxed way to explore hidden spots while also “loving the Earth.”

The farm has been in operation for four years and has received a lot of positive feedback from visitors. Chen Si-hua shares that the farm’s location is not easy to find; the road is narrow, and visitors have to take two hairpin turns to get there. She often receives calls from frustrated customers asking, “Where is the farm?” However, once they arrive and take in the natural surroundings, listening to the sounds of birds and insects, their frustration quickly dissipates. “The farm doesn’t offer much in the way of ‘entertainment’; its most valuable asset is the environment. Just sitting down, letting your mind wander, and feeling the breeze can provide a healing connection with nature,” she said.

Using local ingredients to brew local wines and collaborating with small farmers and community businesses has become the focus of life for Andreas and Chen Si-hua. In March 2024, Green Farm, recommended by the Hualien County Government, participated in the Tokyo Food Expo, further bringing the local spirit of Hualien to the international stage. “Hualien has a natural environment and rich agriculture, as well as many small entrepreneurs who are dedicated to adding value to local agricultural products. Through opportunities like this Expo, we can show the world the beauty of Hualien,” they said.



綠點酒莊 The Green Farm

成立時間：2020 年

Date of establishment: 2020

販售自釀特色酒品、提供活動和露營場地租借

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環保又節能 石材業顛覆想像

*Pioneering Sustainable and Energy-Efficient Solutions
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棟隆企業

Don Loong Enterprise Co., Ltd.



放眼臺北捷運、高雄捷運、桃園機場捷運等公共工程，以及科技大廠廠房、全臺各大豪宅等私人建設，裡頭的地板、石材，有不少是來自花蓮的棟隆企業。

From the floors of Taipei and Kaohsiung Metros to the Taoyuan Airport MRT, and from tech company factories to luxury residences across Taiwan, many of the stone materials used in these high-profile projects come from Hualien's Don Loong Enterprise Co., Ltd.





棟隆是臺灣主要的石材供應商，自 1987 年創立以來，持續為客戶提供花崗石、大理石等種類豐富的石材。近年，隨著全球興起 ESG 浪潮，各行各業無不致力落實環境保護、社會責任和公司治理等面向，以朝 17 項聯合國永續發展目標（SDGs）邁進。在一般人印象中，石材是碳排量大、高耗能的產業，但對棟隆來說，卻完全不是這麼回事，「石材業其實非常環保。」棟隆企業總經理王淳甫強調。

As one of Taiwan's leading suppliers of assorted stone/building materials, Don Loong has been providing a wide range of materials, including granite and marble, since its establishment in 1987. In recent years, the global push towards ESG (Environmental, Social, and Governance) practices has seen industries align with the United Nations' 17 Sustainable Development Goals (SDGs), focusing on environmental protection, social responsibility, and corporate governance. While many assume that the stone industry is heavily carbon-intensive and energy-consuming, Don Loong is proving otherwise. "The truth is, the stone industry can be highly sustainable," says Wang Chun-fu, General Manager of Don Loong Enterprise.

石材研磨用水、下腳料 百分百回收利用

At Don Loong, 100% of the Water Used in Stone Grinding and Leftover Materials are Fully Recycled

事實上，石材多採露天、物理式開採，與石油產業的化學式開採不同；若以碳排量來看，石材業的碳排量也相對低，根據 2014 年內政部建築研究所的《綠建築標章碳足跡標示制度規劃研究》統計，以外牆、地板鋪貼使用的材料來看，石材加工品每平方的碳排量約為 2.4 公斤，磁磚的碳排量約 7.7 公斤，高出 5 至 6 公斤；若再加計加工和成品運輸的碳排量，由於石材沒有任何包裝，完全採取「裸送」，切割完成即直接送工地，與瓷磚、玻璃需要包裝不同，因此每平方僅排碳 9.3 公斤，磁磚的碳排量為 15.99 公斤，同樣高於石材約 6 至 7 公斤。

同時，石材研磨時的用水、剩餘的原料碎屑，都能百分百回收再利用。比方說，石材業採物理研磨，使用的水相當乾淨，淨化後能循環再利用；石材的下腳料，則能做為鋪埋管線時的土石填方材料；切具切割時衍生的泥，也與亞泥、台泥合作，再製成水泥原料。更重要的是，棟隆並未在臺開採礦石，旗下 99% 的石材均由國外進口，「所以我們真的是低碳排，也沒有產生廢棄物的環保產業，沒有為臺灣環境帶來負擔。」

In fact, stone extraction is generally conducted through open-air, physical methods, which is different from the chemical extraction used in

the oil industry. In terms of carbon emissions, the stone industry also has a relatively lower carbon footprint. According to a 2014 study by the Architecture and Building Research Institute of the Ministry of the Interior, the carbon emissions for processed stone materials used in external walls and flooring are approximately 2.4 kg per square meter, compared to 7.7 kg for tiles—5 to 6 kg higher. When you add in transportation and processing, stone has an even greater advantage, as it is delivered directly to construction sites without packaging. This results in only 9.3 kg of carbon emissions per square meter for stone, whereas tiles produce 15.99 kg, 6 to 7 kg more than stone.

Moreover, the water used in stone grinding and the leftover stone scraps are all fully recyclable. For example, since the stone industry uses physical grinding methods, the water remains clean and can be purified for reuse. The leftover stone scraps can be repurposed as filler materials for pipeline installations, and the slurry produced during cutting is partnered with major cement companies like Asia Cement and Taiwan Cement to create raw cement materials. Importantly, Don Loong does not extract stone from Taiwan; 99% of our stone is imported, making us a low-carbon, zero-waste eco-friendly company that brings no burden to Taiwan's environment.



既然要往永續的目標邁進，除了石材製程力守節能減碳，棟隆堅持廠內採用的設備也必須有所調整。王淳甫特別提到，自 2014 年起，他便斥資臺幣 3000 萬元，成為花蓮首間從義大利引進石材切割機「鑽石套環多索鋸」的業者，並一同汰換周邊的補膠、加熱等系統，讓設備發揮最大效能。切割石材時，鑽石套環多索鋸耗時僅有傳統鋼砂切割機的五分之一，又能節省 30% 的能耗，等於產能高於傳統設備，又能兼顧環保與節能。看準鑽石套環多索鋸的高效，目前整個花蓮地區的石材業者，已添購逾 20 多臺設備，棟隆自己也擴增至兩臺。

王淳甫另外透露，這幾年來，棟隆還積極投入數位轉型，除了重整內部 ERP 系統，過往必須以人工、紙本記錄的鋸臺切鋸速度、停機時間等資料，在逐步更換設備、導入物聯網機制後，如今已慢慢數位化，「蒐集數位資訊，才能夠攤開所有數據，比較今年相較往年，是更節能還是耗能，進一步做出調整。」

As Don Loong strives for sustainability, the company is committed to energy-saving and carbon-reduction efforts in the stone manufacturing process. Since 2014, we have invested NT\$30 million to become the first company in Hualien to introduce the Italian Diamond Bead Multi-Wire Saw,

replacing traditional systems like glue-filling and heating to maximize efficiency. This new machine reduces cutting time to one-fifth that of traditional steel grit cutters and saves 30% on energy consumption, increasing productivity while being environmentally friendly. The effectiveness of this equipment has led to the purchase of over 20 additional machines by stone companies across Hualien, and Don Loong itself has expanded its fleet to two machines.

Wang Chun-Fu further revealed that in recent years, Don Loong has actively pursued digital transformation. In addition to upgrading their internal ERP system, they have gradually digitized previously manual and paper-based processes, such as recording saw speed and downtime. By replacing equipment and incorporating IoT systems, they can now collect digital data to compare energy consumption year-on-year and make data-driven adjustments for greater efficiency.





維繫社區關係、保障員工福利 凝聚企業向心力

Fostering Community Relations and Ensuring Employee Well-Being to Strengthen Corporate Cohesion

做為在花蓮地區屹立近 40 年的石材業者，王淳甫在帶領棟隆轉型之餘，也將這股能量向外擴散。他指出，儘管棟隆多數的客戶都不在花蓮，但石材業與花蓮關係緊密，公司對地方有一定的社會責任，「維繫社區關係是重中之重。」棟隆積極與地方扶輪社、獅子會、宗教團體及里長合作舉辦活動，和里民互動，甚至無償提供公司場域，做為堆高機考照的場所。

王淳甫提到，過去勞工朋友參與堆高機的考試，都必須前往宜蘭，曠日費時，棟隆提供免費場地後，不僅考照更方便，還提升了許多人的報考意願。而隨著科技日新月異，不論是學習語言、建築資訊塑模（BIM）專業人員等各種訓練與考照，棟隆都鼓勵員工積極嘗試。他強調，缺工已是全球企業必須因應的現象，石材又經常被視為「3K（骯髒、困難、危險）產業」，但一直以來，棟隆不斷精進石材研磨、加工的節能空間，並投入在地關係維護、提供優於勞基法的員工福利，一方面能對永續地球貢獻一份心力，還能讓更多年輕戰力願意加入棟隆，凝聚同仁間的向心力，以將更好的切割與研磨品質，呈現給客戶。

As a stone industry leader in Hualien for nearly 40 years, Wang Chun-Fu has not only focused on transforming Don Loong internally but also on extending its positive impact externally. Although the company's main clients are outside of Hualien, the stone industry remains deeply connected to the local area, and Wang emphasizes the company's responsibility to the community, stating, "Maintaining strong ties with the community is a top priority." Don Loong actively collaborates with local Rotary and Lions clubs, religious organizations, and village chiefs to organize events and engage with residents. The company even offers its facilities free of charge as a site for forklift certification exams.

Wang noted that in the past, workers had to travel to Yilan for forklift certification, which was time-consuming and inconvenient. By offering a local venue, Don Loong has made the process more accessible and encouraged more people to obtain their certification. As technology continues to evolve, the company also supports its employees in pursuing various certifications and trainings, such as language courses or Building Information Modeling (BIM) certifications. Wang highlights the global challenge of labor shortages, particularly in industries like stone processing, which is often seen as a "3D" (Dirty, Difficult, Dangerous) sector. However, Don Loong has continually improved the energy efficiency of its stone grinding and processing techniques, while also fostering local relationships and offering employee benefits that surpass legal requirements. By contributing to environmental sustainability and creating a supportive work environment, Don Loong aims to attract younger talent, strengthen team cohesion, and consistently deliver top-quality cutting and grinding services to its clients.

棟隆企業

Don Loong Enterprise Co., Ltd.

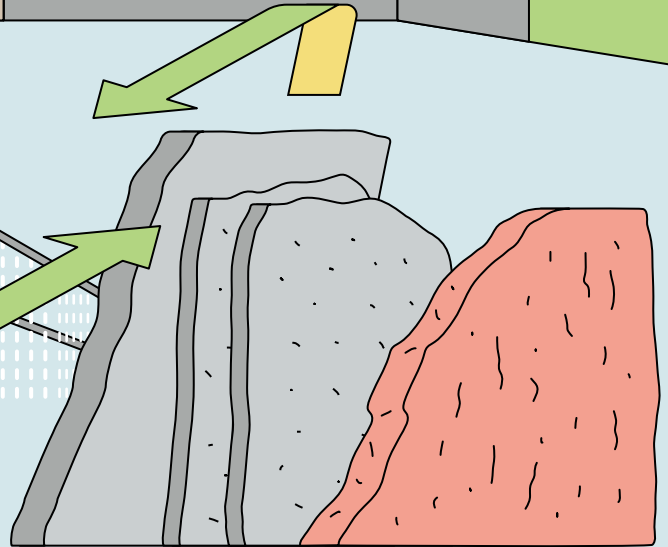
永續實踐指標

Sustainability Initiatives

1

研磨石材用水、剩餘邊角料，百分百回收再利用

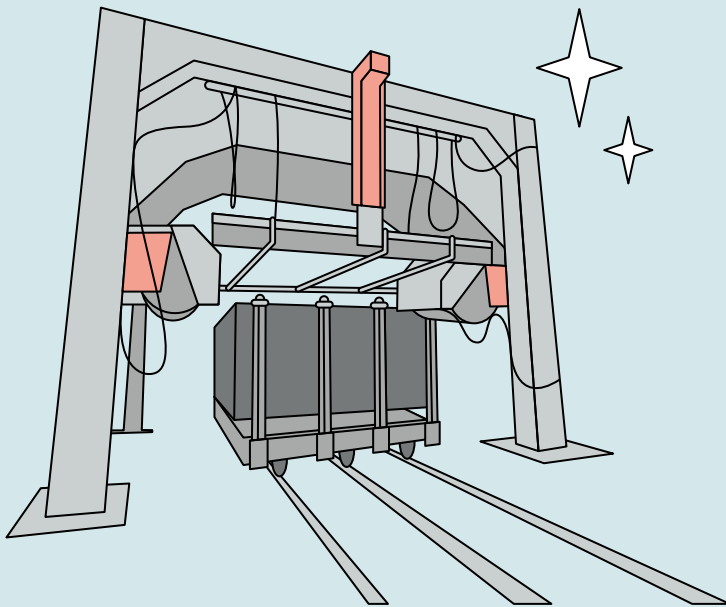
100% recycling of the water used in stone grinding and all leftover materials



2

引進「鑽石套環多索鋸」石材切割機，
較先前減少30%耗能

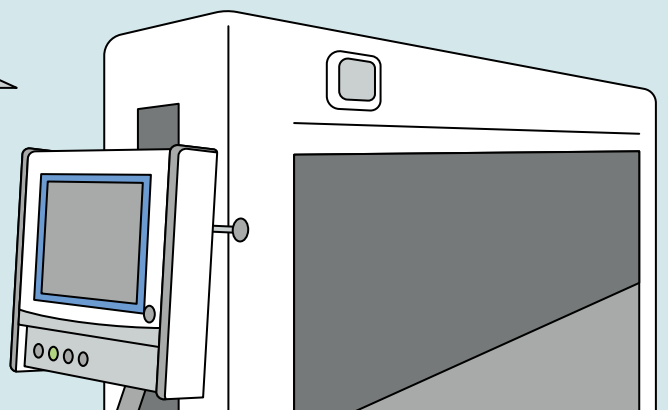
Introduction of the “Diamond Bead Multi-Wire Saw,”
reducing energy consumption by 30% compared to
previous equipment.



3

更換設備、導入物聯網機制，積極投入數位轉型

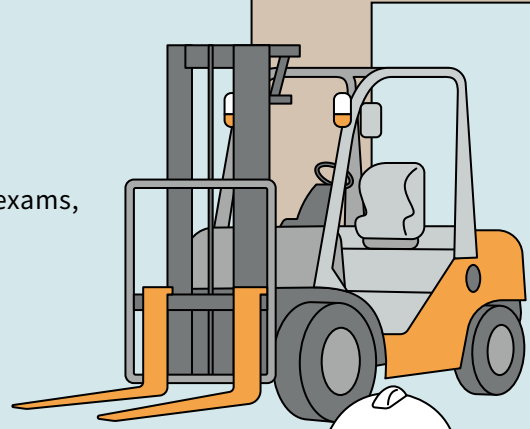
Equipment upgrades and integration of IoT systems
as part of a digital transformation



4

無償提供公司場域做為考照場所，維繫社區關係

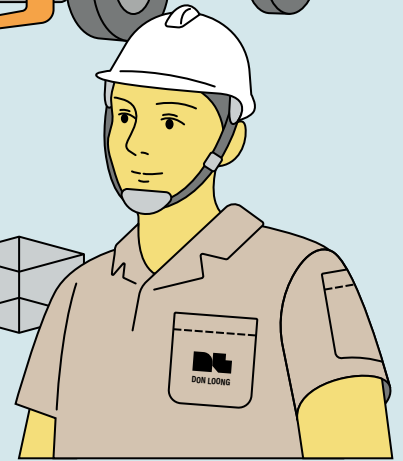
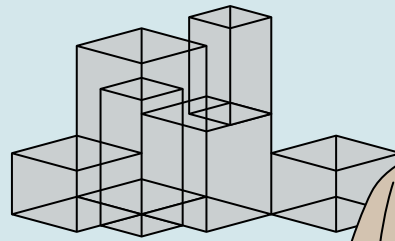
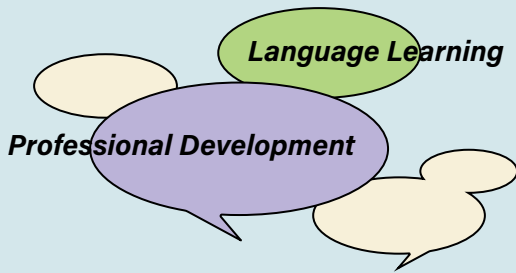
Providing company facilities free of charge for certification exams, strengthening community ties.



5

鼓勵同仁持續學習

Encouraging continuous learning for employees.



棟隆企業股份有限公司 Don Loong Enterprise Co., Ltd.

成立時間：1987 年

Date of establishment: 1987

臺灣主要的石材供應商，提供豐富種類的石材供客戶挑選

One of Taiwan's leading stone suppliers, offering a wide variety of stone materials for customer selection



花蓮市美工路 61 號

No. 61, Meigong Rd., Hualien City



03-822-3559



www.donloong.com



提早引進自動化設備 花蓮在地店家鐵材招牌都找它

*Early Adoption of Automation:
The Go-To Supplier for Steel Signs in Hualien*

泰清鐵材
TIR CHN CO.,Ltd.





總公司位在瑞穗的泰清鐵材，是一間鋼鐵加工廠。三十多年前，泰清從小五金行起家，如今，已成為花蓮最重要的的鋼鐵加工業者之一。能有這樣的成績，無非是他們一路走來，在經營上都提前布局，引領市場。

Headquartered in Ruisui, TIR CHN CO.,Ltd. is a steel processing plant. Over thirty years ago, TIR CHN started as a small hardware store and has since grown into one of the most important steel processing companies in Hualien. Their success can be attributed to their forward-thinking strategies and market leadership throughout their journey.

照片左起為楊博鈞廠務助理、楊傑銘副總特助、曾興亞廠長
From left in the photo: Factory Assistant Yang Po-Chun, Vice President's Assistant Yang Chieh-Ming, Factory Director Tseng Hsing-Ya



在 2000 年代初期，當其他人都還未看見商機，泰清已大膽投資數千萬元，購入最新的雷射切割機、電腦 CNC 鋼板加工機具等。這些設備不僅能提高生產效率、減少對人力的依賴，還能更精準地加工，減少材料浪費。

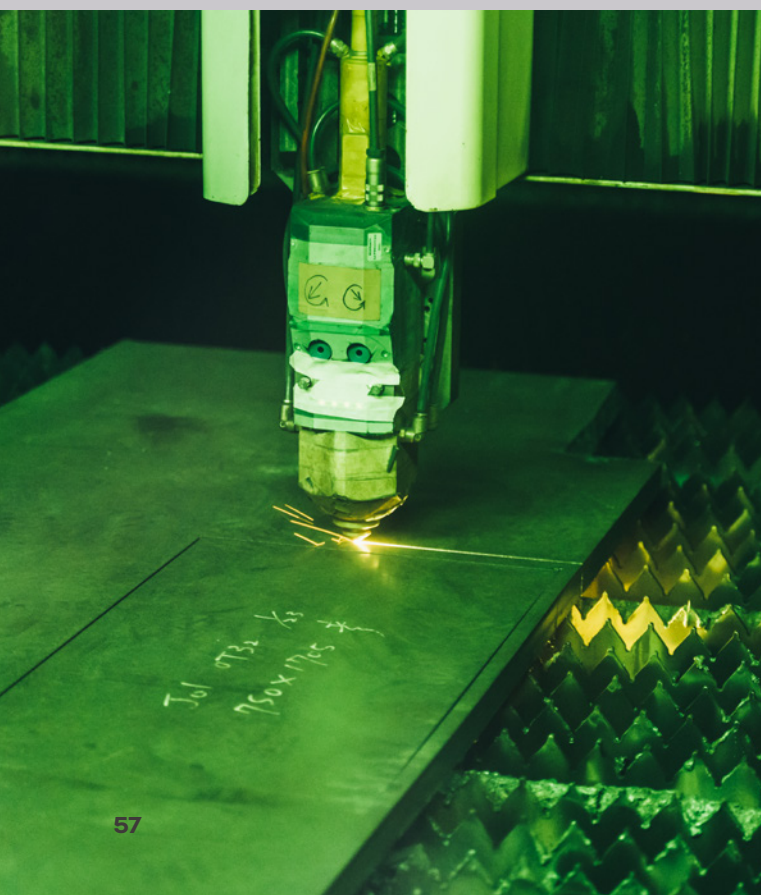
走進工廠裡，便會看見一臺臺的自動化鋼鐵加工機，這些機器能夠依照客戶的需求，將鐵材加工出各種造型，也能雕刻文字成為店家招牌。方便的客製化服務，使在地許多餐廳、民宿等店家與公司行號都成為他們的客戶。

泰清鐵材二代楊傑銘說：「以前若在地店家做鐵材類的招牌或是藝術品，都要由外縣市做，但我們早在 1999 年前就引進了新機器、新技術。」這正是泰清能持續經營，且壯大的原因。

In the early 2000s, while others were still realizing the business opportunities, TIR CHN boldly invested tens of millions of NTD in purchasing the latest laser cutting machines and CNC steel plate processing equipment. These machines not only increased production efficiency and reduced reliance on manpower, but also enabled more precise processing and minimized material waste.

Upon entering the factory, one can see rows of automated steel processing machines. These machines can customize steel into various shapes according to customer requirements and even engrave text for store signs. This convenient, customized service has attracted many local restaurants, guesthouses, and companies to become their clients.

Yang Chieh-Ming, the second-generation leader of TIR CHN, explained: "In the past, local businesses had to rely on external suppliers for steel signs or artworks, but we introduced new machines and technologies before 1999." This early adoption is a key reason for TIR CHN's sustained growth and success.



減少人力缺工問題 解決客戶施工麻煩

Reducing Labor Shortages and Simplifying Customer Construction

目前泰清為客戶做到了一站式服務。從拆解蓋房的鋼構設計圖、幫客戶計算需要的鐵材用料，到處理好前期工序後的生產加工，將客戶所需材料送至工地，讓客戶在工地現場只需進行鋼構組立，大大省去施作時間，讓工程能更快速完工。

為了減少資源浪費，泰清導入 ERP 系統，精確控制每一塊鋼材的使用。他們還開發了一套剩餘材料再利用的方法，將切割後的邊角料編碼入庫且歸檔管理，在未來的訂單中盡可能使用，減少不必要的浪費。

自動化設備除了能讓產品更符合客戶需求，也替泰清減輕人力缺乏的壓力，包含新擴廠的軟、硬體裝置，也會同步引進自動化設備與管理系統，並持續改良工廠環境，讓廠房維持整潔通風，改善員工的休息區，讓整體環境更加舒適。

楊傑銘強調：「我們希望打破人們對鋼鐵廠髒亂的刻板印象，只有為員工創造良好的工作環境，才能吸引更多本地年輕人加入。」

泰清也落實企業社會責任，為花蓮的青年學子們提供在家鄉發揮所學專長的機會，並協助職務相關的專業證件考照培訓，為公司培育專業人才的同時，也能鼓勵花蓮子弟留於本地工作，甚至願意返鄉服務。

Currently, TIR CHN offers one-stop services for their customers. From dismantling the steel structure design drawings for buildings, calculating the required steel materials, to processing and manufacturing after handling the preliminary procedures, they deliver the materials directly to the construction site. This allows customers to only focus on steel structure assembly on-site, significantly saving construction time and enabling faster project completion.

To minimize resource waste, TIR CHN has implemented an ERP system to precisely control the usage of every piece of steel. They have also developed a method to reuse leftover materials by coding and storing the offcuts in inventory, managing them for future orders to reduce unnecessary waste.



Automated equipment not only allows TIR CHN to better meet customer demands, but also alleviates the pressure of labor shortages. The new expansion of the plant will include both software and hardware automation systems and continue to improve the factory environment by maintaining cleanliness, ventilation, and enhancing employee rest areas, making the overall environment more comfortable.

Yang emphasized, "We hope to break the stereotype of steel factories being dirty and messy. Only by creating a good working environment for our employees can we attract more local young talent to join."

TIR CHN also upholds its corporate social responsibility by providing opportunities for young people in Hualien to apply their skills locally. They assist with training for professional certifications related to their jobs, nurturing talent for the company while encouraging local youth to work in Hualien and even return to serve their hometown.

此外，泰清也規劃進一步加大在綠能方面的投資。除了原有廠房的太陽能發電外，他們預計在新的廠房擴大太陽能板鋪設面積，以降低原來工廠用電，並實踐環保、永續、愛地球的理念。

談到父執輩的創業過程，楊傑銘回憶，當時還是五金行時，因為店面位在瑞穗，父親經常要開著貨車，花一個多小時的時間到花蓮市區送貨。這段路程不僅耗時，更是體力和意志力的考驗。直至2002年，他們才在位於花蓮市區附近的光華樂活創意園區設立辦公室，「那時需要一個一個查詢地圖上鐵工的聯絡電話，再逐一拜訪，很多人還以為我們是詐騙集團。」楊傑銘笑說。

從開小貨車創業、成立辦公室、蓋設廠房，甚至引進自動化設備，泰清秉持著公司經營宗旨「熱忱、服務、創新、永續」，聆聽客戶的需求，解決他們的問題，提供最好的協助，在泰清的經營理念堅持之下，可見的是他們無可取代的競爭力。

Furthermore, TIR CHN plans to further increase investment in green energy. In addition to the existing solar power generation in the factory, they intend to expand the solar panel installation area in the new plant to reduce electricity consumption and implement the principles of environmental protection, sustainability, and love for the Earth.

Reflecting on his father's entrepreneurial journey, Yang recalled how, when the company was still a hardware store in Ruisui, his father often had to drive a truck for over an hour to deliver goods to Hualien City. This journey was not only time-consuming but also a test of endurance and willpower. It wasn't until 2002 that they established an office in the Guanghua LOHAS Creative Park near Hualien City. "At that time, we had to search for the contact numbers of ironworkers on maps and visit them one by one. Many people even thought we were a scam," Yang laughed.

From driving a small truck to start the business, establishing an office, building a factory, and introducing automated equipment, TIR CHN has adhered to its business philosophy of "Passion, Service, Innovation, and Sustainability." By listening to customers' needs, solving their problems, and providing the best assistance, TIR CHN has established irreplaceable competitiveness.





泰清鐵材股份有限公司 TIR CHN CO.,Ltd.

成立時間：1991年

Date of establishment: 1991

鋼鐵材加工與販售

Steel processing and sales



吉安廠 Jian Plant

花蓮縣吉安鄉華工五路 26 號 No. 26, Huagong 5th Rd.,
Jian Township, Hualien County

03-842-3055

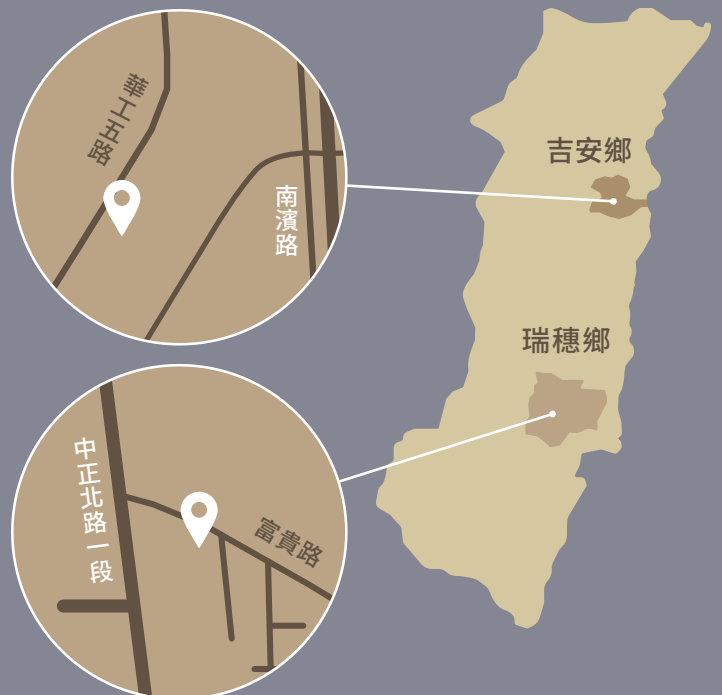
瑞穗廠 Ruisui Plant

花蓮縣瑞穗鄉富貴路 303 號 No. 303, Fugui Rd.,
Ruisui Township, Hualien County

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從傳統石材廠跨足生技業 成為花蓮傳產永續轉型典範

*From a Traditional Stone Factory to the Biotechnology Industry,
Becoming a Model of Sustainable Transformation of Hualien's
Traditional Stone Industry*

嘉太企業

CHIA THAI MARBLE CO., LTD



「如果我不轉型，嘉太很可能就已經不在了。」說話的人，是在花蓮經營超過五十年的石材老廠，嘉太企業董事長王徙。自1973年成立的嘉太，至今早已不是一間單純的石材廠，更是一間生技醫材公司。除了製造大理石板之外，他們還做超音波手術刀、外科手術口罩，甚至新舊合擊，以大理石板研發全臺首座石板無塵室。

“If I didn’t transform, Chia Thai would probably be gone”. The speaker was A-Lee Wang, chairman of Chia Thai Marble Co., Ltd., an old stone factory that has been operating in Hualien for more than 50 years. Founded in 1973, it is no longer a simple stone factory, but also a biotechnology and medical materials company. In addition to manufacturing marble slabs, it also makes ultrasonic scalpels, surgical masks, and even combined new and old one to develop Taiwan’s first slate clean room using marble slabs.



一間石材廠，跨足生技產業，全都是玩真的。「燒了好幾億，才把手術刀做出來。」王徙笑說。雖然花錢，經過三年的時間，一步步從動物實驗到醫材認證，至今手術刀已經打進全臺多達四十餘家的醫院，就連口罩也成為全臺唯二，通過歐盟 SGS 認證生產廠商。

在經營五十年的過程之中，至少經歷了三次的轉型，而這些變革，無非是讓他們能夠永續經營的關鍵。談到永續，嘉太去年因為通膨的因素，全廠員工更是加薪 15%，然而，能夠加薪的背後，還是得仰賴嘉太將產品的附加價值不斷提高，才能夠有的底氣。

轉型對於王徙而言，為什麼如此重要？一切得要從 1997 年開始說起。當時，嘉太原本是一間傳統的大理石家具商，因為大理石家具太耐用，一用就是數十年，以至於市場很快就飽和。

As a stone factory branching into the biotechnology industry, Chia Thai's approach was serious. "We burned hundreds of millions of NT\$ to make the scalpel". A-Lee Wang said with a smile. Although it cost a lot of money, after three years, step by step from animal experiments to medical material certification, scalpels have been sold to more than 40 hospitals in Taiwan, and for their masks they have become one of only two companies in Taiwan to pass the EU SGS manufacturer certification.

In the course of 50 years of operation, they have experienced at least three transformations, and these changes have been the key to their sustainable operation. Speaking of sustainability, Chia Thai increased the salary of all employees in the factory by 15% last year due to inflation. However, to support the salary increase, Chia Thai has to continuously increase the added value of its products.

Why is transformation so important to A-Lee Wang? Everything starts from 1997. At that time, Chia Thai was originally a traditional marble furniture dealer. Because marble furniture was so durable and could be used for decades, the market quickly became saturated.



一個轉型決定救了嘉太 深信轉型才能永續經營

A Transformation Decision Saved Chia Thai Firm Belief that Transformation would Lead to Sustainable Operation

除了市場飽和問題，當年更發生亞洲金融風暴，1999 年更發生撼動全臺的 921 大地震，連年的衝擊，讓嘉太的生意一落千丈。

所幸一個轉型決定，讓他們得以度過困境，921 大地震是危機，也是轉機，當時王徙恰好接觸到一種德國的玻璃纖維材料，稱作「蜂巢背襯材」，他利用該材料，外頭包覆一層大理石薄片，成功研發出「超輕複合石材」，大幅減少 50% 石材的利用，重量更只有原來的 28%，強度比原本的石材來得高，這種輕薄化的產品，不僅耐震、耐候，更能防火、防水、防潮，很適合超高層建築、電梯門框、電梯車廂、廚房衛浴設備、牆面飾板等，對環境更友善。

當時曾為一間遊艇公司，試做了一個極具質感的小洗手台，重量極輕，十分耐用，讓王徙打進需要輕量化材料的遊艇市場，這次的成功讓嘉太體悟到產業轉型之於永續經營的必要。

In addition to the problem of market saturation, there was also the Asian financial crisis that year, and the September 21 earthquake that shook Taiwan in 1999. The successive years of impact caused Chia Thai's business to plummet.

Fortunately, a transformation decision allowed it to overcome its predicament. The earthquake was both a crisis and a turning point. At that time, A-Lee Wang happened to come into contact with a German fiberglass material called "honeycomb backing material". By coating the material with a layer of marble flakes, it successfully developed "ultra-light composite stone", which significantly reduces the use of stone by 50%, weighs only 28% of the original, and is stronger than the original stone. This lightweight and thin product is not only earthquake-resistant, weather-resistant, more fireproof, waterproof, and moisture-proof, it is very suitable for super high-rise buildings, elevator door frames, elevator carriages, kitchen and bathroom equipment, wall decorations, etc., and is more environmentally friendly.

At that time, he tried to make a high-quality small washbasin for a yacht company. It was extremely light and very durable, allowing A-Lee Wang to enter the yacht market that requires lightweight materials. This success made Chia Thai realize the industry transformation was necessary for sustainable operations.



跨足生技業 也不忘讓石材業更環保

Entering the Biotechnology Industry, but also not Forgetting to Make the Stone Industry more Environmentally Friendly

每一次的轉型，都讓嘉太的生產更加永續。比如，因為生技帶來的靈感，他們想出，善用石材的降溫功能，將其運用在需要維持低溫的「無塵室」牆面，冷氣就不用開太強，進而達到節能的效果。

2018年，嘉太進一步優化石材製程，把石材的邊角料與廢泥漿，回收再利用，做成「新型氣泡狀輕質建築材料」——輕質隔熱磚，運用於房間的隔間牆，等同做到了循環經濟，讓廢料不再是廢料，而是能夠發揮最大價值的新建材。

由於新舊事業一起創新求變，走進嘉太會看見工廠還是維持傳統石材廠的老樣子，而一旁就是生技新事業的新穎辦公室。即便石材產業面臨多次挑戰，但因嘉太不停求新求變創造價值，才能在事業低潮時也不裁員，許多員工跟著嘉太十數年，有的老師傅更高齡七十歲以上，他們跟著一群投入生技業的年輕博士一起工作，形成有趣的對比。這都是因為王徙願意承擔改變的風險，從未知裡不停的踩出路來才有的結果。

「即使現在，我仍每天都在想有什麼新的東西可以做？我們現在也正在規劃休閒農場。」因為王徙這樣集冒險與負責任於一身的性格，嘉太才能屹立不搖的永續經營超過半個世紀。

Every transformation makes Chia Thai's production more sustainable. For example, inspired by biotechnology, they came up with the idea of making good use of the cooling function of stone and applying it to the walls of "clean rooms" that need to maintain low temperatures. The air conditioner does not need to be turned on too high, thus achieving energy saving effects.

In 2018, Chia Thai further optimized the stone manufacturing process, recycling stone scraps and waste slurry to make "new bubble-shaped lightweight building materials" - lightweight insulating bricks, which are used in the partition walls of rooms; equivalent to achieving circular economy, waste materials are no longer waste materials, but new materials that can maximize their value.

As the old and new businesses innovate and change together, when you walk into Chia Thai, you will see that the factory still maintains the appearance of a traditional stone factory, and next to it is the modern office of the new biotechnology business. Even though the stone industry faces many challenges, because Chia Thai is constantly pursuing innovation and change to create value it is able to avoid layoffs even when the business is at a low point. Many employees have been with Chia Thai for more than 10 years, and some of the masters are over seventy years old. They work alongside a group of young Ph.D. holders devoted to the biotechnology industry, creating an interesting contrast. This is all because A-Lee Wang is willing to take the risk of change and constantly find his way out of the unknown.

"Even now, I am still thinking about what new things can be done every day? We are also planning a leisure farm now". Because of Wang's adventurous and responsible character, Chia Thai has remained unshakable, operating sustainably for over half a century.





嘉太企業有限公司 Chia Thai Marble Co. Ltd

成立時間：1973 年

Date of establishment: 1973

大理石加工廠、生技醫材製造商

Marble processing factory, biotech medical materials manufacturer



花蓮縣吉安鄉南海一街 207 號

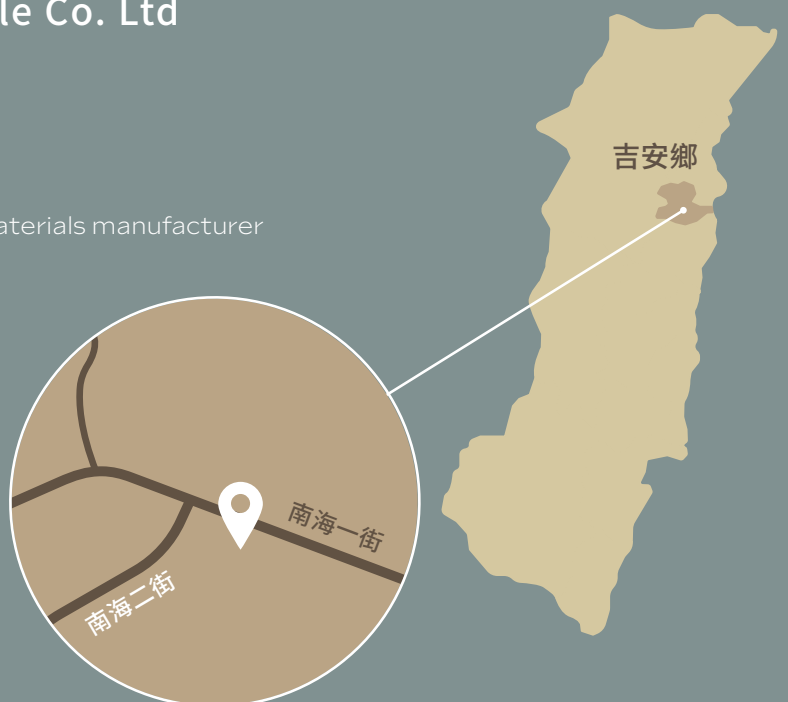
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東昌定置漁場

Dong Chang Fishing Ground of Set Net





早上十點，是上班族剛開始工作的時間，東昌定置漁場第三代老闆黃建衛，早已連續工作了將近五個小時，這就是海人的作息。清晨五點，天剛亮但太陽還沒升起，海上的漁船就快完成收整漁獲的工作。旭日緩升，曙光透出海平線與雲隙間，載運漁獲的膠筏在漁人齊力破浪出海，接著載著各式漁獲乘浪上岸，早上的工作就在理魚、秤魚等後續工作忙碌了起來。

At 10 a.m., when most office workers are just starting their day, Huang Jian-wei, the third-generation owner of Dong Chang Fishing Ground of Set Net, has already been on the job for nearly five hours. This is the typical routine for those who make their living from the sea. At 5 a.m., with the first light of dawn but before the sun has risen, the fishing boats are nearly done collecting their catch. As the sun gradually rises, its rays break through the horizon and clouds, while rafts carrying the fresh catch head back to shore, cutting through the waves. The morning work then picks up pace as fishermen begin sorting, weighing, and preparing the fish for market.



「回家接班，除了日常漁場會發生的各種疑難雜症需要解決，在面對逐漸改變的社會飲食習慣、勞力技術人口老化、環境政策議題及漁場的永續性，便成了更困難的挑戰。」黃建衛說。除了捕魚賣魚，從鄰近國小開始至花蓮各國小推廣食魚教育，與小學生介紹在地漁業及魚種的重要性，希望能在教育的環境下播下種子，讓「漁場永續」的難題，在未來能得到萌芽的機會。而這些困難的課題，還得要從定置漁場的漁獲方式說起。

“Taking over the family business, I not only have to deal with the various day-to-day challenges that arise at the fishing ground, but I also face even greater challenges such as changing dietary habits in society, an aging labor force, environmental policy issues, and the sustainability of the fishing ground,” said Huang Jian-wei. In addition to catching and selling fish, he has been promoting fish-food education, starting with nearby elementary schools and expanding to schools across Hualien. By introducing local fisheries and the importance of various fish species to young students, he hopes to plant the seeds of sustainability in their minds, giving the challenging issue of “fishing ground sustainability” a chance to take root in the future. But these difficult topics must first be addressed by looking at the methods used at the Fishing Ground of Set Net.



定置漁場是永續捕魚法 卻也是漁價下滑主因

Set-Net Fishing: A Sustainable Method, Yet a Key Factor in Declining Fish Prices

一般沿近海漁業捕魚方式為主動出擊、去尋找目標魚群；而定置網漁業是採守株待兔的型式，等待魚群自己游進網內的開口。這種漁法相對友善，一來游進箱網的魚，大部份可以再用人力篩選目標魚種與非目標生物。二來，游進網內的魚，多半是順著瞬息萬變的洋流進入，漁獲可能豐收也可能空手而歸，而網具的誘捕功能，大約僅捕捉魚群的 20%。

近幾年，沿近海的環境受破壞，能孕育的漁獲資源減少，從其它漁法的漁船漁獲上，可以感受到漁獲量下滑，所以定置漁網的漁獲，就會更加挑戰。

「我們整體漁獲可能沒有明顯感受下降，但是一些沿近海的魚種，例如刺尾鯛這類在沿岸吃海藻的魚，現在數量就減少了；而洄游性魚類的不穩定性越來越明顯，可能今年是鯉魚很多，明年就會數量減少，換成別的魚種捕獲數量暴增。」

「魚金魚土」是用來形容漁獲很少時魚價昂貴，而漁獲很多時，魚價低廉，他要做的，是怎麼讓這些魚可都賣到好價錢，並且讓更多人認識以及嘗試不同的季節性魚種，使魚貨創造更好的價值，才有足夠的底氣去談漁場的永續經營。

In coastal and nearshore fishing, the typical approach is to actively pursue and target specific schools of fish. However, set-net fishing operates differently; it's a passive method where the nets are placed, and the fish swim into the openings on their own. This fishing method is relatively eco-friendly. First, the fish that enter the nets can mostly be manually sorted, separating target species from non-targeted marine life. Second, the fish that swim into the nets are often guided by ever-changing ocean currents, leading to catches that can vary greatly—sometimes abundant, other times yielding little. The nets typically capture only about 20% of the passing fish.

In recent years, coastal environments have deteriorated, reducing the available fish resources. This decline is evident in the reduced catches of other fishing methods as well, making set-net fishing even more challenging. “Overall, we may not notice a significant decrease in our total catch, but some coastal species, like the acanthurus that feeds on seaweed, have definitely declined in numbers. Moreover, the instability of migrating species is becoming more pronounced—one year we might have an abundance of skipjack tuna, while the next year their numbers drop, and another species sees a sudden increase.”

The phrase “golden fish, earthen fish” describes the situation where fish prices soar when catches are low and plummet when catches are high. What we need to do is find a way to ensure these fish fetch good prices and introduce more people to trying different seasonal species. By enhancing the value of our catches, we can better position ourselves to discuss the sustainability of the fishing ground.



開餐廳、做食魚教育 鼓勵臺灣民眾多吃在地魚種

Opening Restaurants and Promoting Fish-Food Education: Encouraging Taiwanese to Eat More Local Fish

臺灣雖然是漁業大國，但在蛋白質的選擇上，海鮮的消費量仍不及豬、牛、雞肉，並且隨著進口魚類（如鮭魚）品質的穩定提升、需求量也不斷增加，這種趨勢不僅影響了本地水產的生存空間，還可能導致更大的碳足跡。所以在國小合作除了認識在地產業環境，不只是教小朋友認識魚類，還要推廣什麼季節會有哪些漁獲，吃魚就要吃當季。

四年前，黃建衛與姊夫合作，在花蓮市區開了一家「定置漁場三代目」，是專賣鬼頭刀拉麵、湯飯、炸魚的餐廳，實現從漁場到餐桌的理念。走進餐廳，木質裝潢，簡潔灰漆，營造質樸的餐廳風格，香醇白湯黃麵和新鮮魚料，不僅消費者因吃得在地，將飲食的碳足跡降到最低，讓漁獲的價值得到最好的利用。

從初級產業到三級服務業的困難不少，比如，他得要把捕上岸的魚，先去鱗去內臟，處理成符合餐廳的規格，再包裝運送，「以前只是賣魚，現在多了這些程序，就要再多找人手來幫忙處理。」得從頭摸索餐廳端的各種需求。

因為有了「定置漁場三代目」的良好供銷經驗，希望還能增加更多類似的機會，成功讓整體魚價獲得提升。如此也能帶動員工福利，提供更好的工作環境。未來黃建衛還會積極地與各大學漁業相關科系進行產學合作，期待更多年輕人加入海人的行列。



Although Taiwan is a major fishing nation, seafood consumption still lags behind pork, beef, and chicken as sources of protein. With the quality of imported fish, such as salmon, steadily improving and demand increasing, this trend not only squeezes the space for local fisheries but also potentially leads to a larger carbon footprint. That’s why the collaboration with elementary schools goes beyond teaching kids about fish species—it also promotes the importance of eating local, seasonal catches.

Four years ago, Huang Jian-wei, in partnership with his brother-in-law, opened a restaurant in Hualien City called “The Fishery,” specializing in dolphinfish ramen, fish soup rice, and fried fish dishes. This restaurant embodies the concept of “from fishing ground to table.” The wooden décor, simple gray paint, and rustic atmosphere, combined with rich white broth noodles and fresh fish, offer customers a truly local dining experience, minimizing the carbon footprint of their meals while maximizing the value of the catch.

Transitioning from primary industries to tertiary services has been challenging. For example, after landing the fish, they must be scaled, gutted, and processed to meet restaurant standards before being packaged and delivered. “We used to only sell fish, but now we have added these extra steps, so we need more hands to help with the process,” Huang explained, describing the need to understand the various demands of the restaurant industry from scratch.

With the success of “The Fishery,” Huang hopes to create more similar opportunities to raise overall fish prices, which would also improve employee benefits and provide a better working environment. Looking ahead, Huang plans to actively engage in industry-academia collaborations with fisheries departments at various universities, hoping to attract more young people to join the ranks of those who live by the sea.

東昌定置漁場 Dong Chang Fishing Ground of Set Net

成立時間：1999 年

Date of establishment: 1999

近海捕魚業、拉麵餐廳業者

Coastal fishing industry, Ramen restaurant

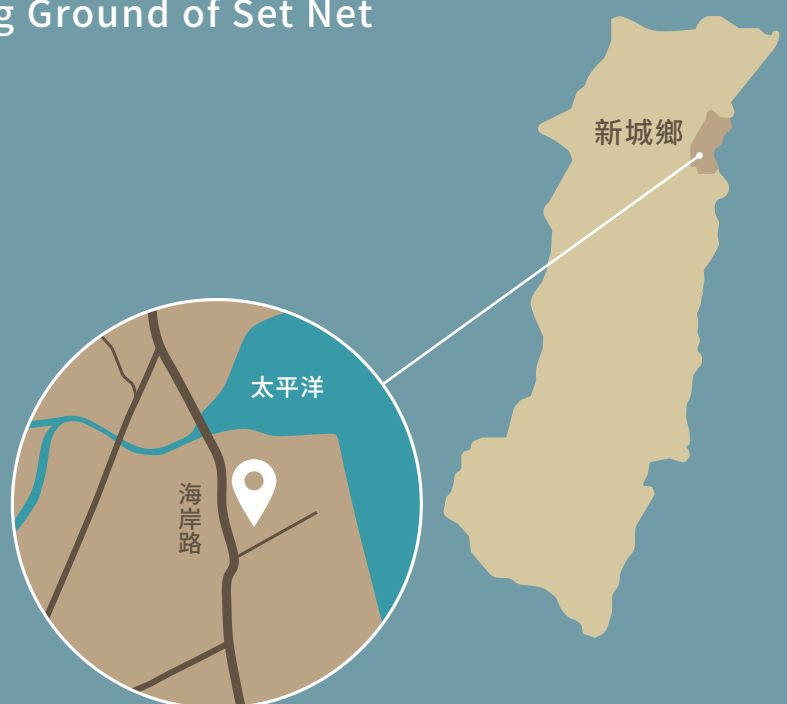


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吉蒸牧場

J. J. Farm

時間一到，吉蒸牧場的乳牛緩緩走到大型擠乳盤前就定位，開始擠乳，牛隻在安靜舒適的空間裡，悠哉地完成程序，同時機器自動偵測乳量，只要到達需求量，擠乳器便會自動脫落，避免過度擠乳。

吉蒸牧場位於全臺知名的鮮奶產地—花蓮瑞穗，他們所生產的單一乳源鮮奶品牌「阿秀鮮乳」、「透明鮮乳」分別在全聯與家樂福上架。一個中小型牧場，能以自有品牌進大型通路，除了產地優質、自有乳品加工技術，產銷履歷保證，還有「動物福利標章」肯定。

When the time comes, the cows in J. J. Farm slowly walk to the large milking carousel, and milking starts. The cows complete the procedure leisurely in a quiet and comfortable space. The machine automatically detects the amount of milk; once the required amount is reached, the udder pump will automatically fall off to avoid over-milking.

J. J. Farm is located in Ruisui, Hualien, a well-known fresh milk-producing area in Taiwan. Their single-source fresh milk brands “A-Sure Fresh Milk” and “Transparent Fresh Milk” are on the shelves of PX Mart and Carrefour, respectively. A small and medium-sized dairy farm can enter large-scale channels with its own brand because of its high-quality production areas, its own dairy processing technology, guaranteed production and sales history, plus the affirmation of the “Animal Welfare Label”.







「會申請動物福利的契機，源自夥伴家樂福正推動食物轉型計畫，鼓勵我們也朝改變前進，因此催生友善乳牛的透明鮮乳。」吉蒸牧場行銷副理劉紓禎說明，例如：友善乳牛的大型擠乳轉盤，就耗資一千餘萬。「吉蒸目前有近 1500 頭乳牛，其中泌乳牛約 600 頭，乳牛一生病就會造成損失，所以我們在預防上也做了許多努力」，走進牛舍，能見到每頭乳牛都戴著項圈，項圈能偵測牛隻的進食時間、步數、躺臥等資料，若這些數據有異常，會立即透過電腦發出警示，並以數據交叉比對，快速找出生病原因。

“The opportunity to apply for animal welfare came from the food transformation plan being promoted by our partner Carrefour, which encouraged us to move towards change, thus giving rise to Transparent Milk that is

friendly to dairy cows.” Liu Shu-chen, assistant marketing manager of J. J. Farm, explained; for example: the dairy cow-friendly large milking carousel cost more than NT\$10 million. “There are currently nearly 1,500 dairy cows in J. J., including about 600 lactating cows. If the dairy cows get sick, we suffer losses, so we make a lot of effort in sickness prevention.” Walking into the cowshed, you can see that every cow is wearing a collar, the collar can detect the cow’s eating time, count its steps, and record when it’s lying down and other data. If there is any abnormality in this data, a warning will be issued immediately through the computer, and the data will be cross-compared to quickly find out the cause of the illness.

戴智慧項圈也睡高級水床 大幅減少牛隻感染問題

Wearing a Smart Collar and Sleeping on a High-End Waterbed Significantly Reduces Cattle Infection

吉蒸的乳牛不只戴智慧項圈，也睡得很「高級」。乳牛一日中大多躺臥休息，正在泌乳的牛隻，乳房會有滲乳的狀況，若是在過於溼熱的環境裡休息，很容易因孳生細菌，導致乳房感染發炎。為了解決此問題，牛舍裡密集設置大型電扇與水床，牛隻躺在上頭不只能夠降溫，當變換姿勢時，水床會搖晃而增加透氣度，牛隻的滲乳也會順著弧度排出，維持乾爽。

不僅如此，吉蒸也購入自動刮糞機，設置在牛隻的欄舍中，每小時會自動刮除地板上的排泄物，讓牛舍維持乾淨，未來預計再增闢新的牛舍，擴大牛隻的活動空間，甚至也會提供動物福利的牛背玩具刷，進一步紓緩放鬆牛隻的心情，「大家一般都認為紐西蘭的乳源比較好，可是透過我們精緻化的經營，品質早已不輸國外。」劉紓禎強調。

J. J.'s cows not only wear a smart collar, they also sleep on "high quality" beds. Dairy cows lie down and rest most of the day. The udders of lactating cows may leak milk. If they rest in an environment that is too hot and humid, it is easy for bacteria to breed, causing udder infection and inflammation. In order to solve this problem, large electric fans and water beds are densely installed in the cow shed. The cows lying on them not only cool down, but also when changing positions, the waterbed shakes to increase the air permeability, and the leaked milk is also be discharged along the arc to keep the cows dry.

Not only that, J. J. has also purchased an automatic manure scraper, which is installed in the cattle pens. It automatically scrapes the dung on the floor every hour to keep the cow pens clean. New cow sheds are planned in future, the cow's activity space will be expanded and animal welfare cow back toy brushes even provided to further relax the cows. "Everyone generally thinks that New Zealand's milk is better, but through our refined management, our milk quality has long been comparable to that of foreign countries," Liu emphasized.



吉蒸用拚第一的心態做鮮乳 成精品鮮乳代表

J. J. Farm Has Mentality of Striving to be No.1 to Produce Fresh Milk and Has Become a Symbol of High-Quality Fresh Milk

吉蒸對牛隻友善，精緻化的管理讓乳牛保持健康，無非是希望有效提高產乳品質，而吉蒸不只是第一個獲頒動福標章的牧場，他們更是引進日本 65 °C 低溫牛乳殺菌設備的第一間牧場。

雖然機器設備提高成本，然而比起高溫殺菌，更能保留較多營養與乳鐵蛋白，「65 °C 秀姑巒鮮乳」已然成為鮮乳界的精品，也養出了一批死忠粉絲。當越多人愛喝本土單一牧場的鮮乳，有形無形間就減少了食物旅程，進一步達到減碳的目的。

而談到減碳，這間什麼都拿第一的牧場，也已鋪設太陽能光電設備與規劃沼氣發電設備中，他們將收集的沼液沼渣用以發電，除減碳，也響應回田再利用的正循環。做了這麼多友善乳牛的行動，吉蒸也讓各大通路看見他們在永續上的努力，全聯除了上架吉蒸的阿秀鮮乳，也用他們的乳源，作為「READ BREAD」、「We Sweet」麵包甜點品牌的乳品來源之一。

「引進這些設備，也幫助我們解決人力上的問題，讓經營能夠更長遠。」劉紓禎舉例，大型擠乳盤，就讓擠乳的效率多了近五倍。未來，吉蒸也將持續精進設備，再提升鮮乳風味，讓消費者能更愛喝本土產的鮮乳。

J. J. is friendly to cows, and its refined management keeps the cows healthy, the aim to effectively improve the quality of milk production. J. J. is not only the first farm to be awarded the Animal Welfare Label, they were also the first dairy farm in Taiwan to introduce Japan's 65 °C low-temperature milk sterilization equipment.

Although the machinery and equipment have increased costs, the process retains more nutrients and lactoferrin than high-temperature sterilization. "65 °C Xiugulan Milk" is regarded as a high-quality product in fresh milk circles and has also developed a group of loyal fans. When more people love to drink fresh milk from local single pastures, the food journey will be reduced further, achieving the goal of reducing carbon emissions.

When it comes to carbon reduction, this ranch, which ranks first in everything, has also installed solar photovoltaic equipment and is planning methane power generation equipment. They will use the collected slurry and residue to generate electricity. In addition to reducing carbon emissions, they also implement the "return to the field and reuse" positive cycle of reuse. With so many dairy cow-friendly actions, J. J. has also let major retail outlets see their efforts in sustainability. In addition to selling J. J.'s A-Sure Fresh Milk, PX Mart also uses their milk sources as one of the dairy sources of the "READ BREAD" and "We Sweet" bakery and dessert brands.

"The introduction of this equipment also helps us solve the manpower problem and will allow us to operate in the longer term." Liu Shu-chen gave an example: the large milking carousel has increased milking efficiency by nearly five-fold. In the future, J. J. will continue to improve its equipment fresh milk, so that consumers love to drink locally produced fresh milk.





吉蒸牧場 J. J. FARM

成立時間：1987 年

Date of establishment: 1987

乳牛畜養與鮮乳製造商

Dairy cattle husbandry and fresh milk manufacturer



花蓮縣瑞穗鄉中山路三段 230 號

No. 230, Sec. 3, Zhongshan Rd., Ruisui Township, Hualien County



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實踐超過一甲子的永續承諾 成為對環境最友善的水泥業者

*A Commitment to Sustainability Spanning Over Six Decades +
Becoming the Most Environmentally Friendly Cement Producer*

亞洲水泥花蓮廠

Asia Cement Corporation Hualien Plant



談到亞泥花蓮廠的永續轉型，首席副廠長陳志賢說，水泥業可說是全球公認減碳最困難的產業。他解釋，全球水泥業佔全球整體碳排放量的7%。在臺灣，雖僅有五家運轉旋轉窯的水泥公司，卻也佔全臺碳排放量高達4%。

In discussing the sustainable transformation of Asia Cement's Hualien Plant, Chen Chih-shien, deputy plant manager, noted that the cement industry is globally recognized as one of the most challenging sectors for carbon reduction. He explained that the global cement industry is responsible for 7% of the world's total carbon emissions. In Taiwan, although there are only five cement companies operating rotary kilns, they still account for as much as 4% of the country's total carbon emissions.



這是因為水泥的主要組成—熟料，其生產必須經過高溫鍛燒製程。即窯爐的煤炭燃燒及石灰石原料受熱分解，都會產生二氧化碳排放，後者石灰石原料分解碳排約占總排放高達六成，此正是水泥業碳排量居高不下的主因。

即使困難重重，亞泥花蓮廠卻早在 2009 年，當大家對永續發展目標尚未有大量關注時，便開始自願性減碳，更研發全國首款低碳墁砌水泥。至今，亞泥累積總體減碳量，迄今已高達 40 萬公噸。「正因為水泥產業碳排量高，我們深知總有一天，政府法令一定會要求，亞泥又極為重視 ESG，所以我們提早布局。」陳志賢說。

This is because the main component of cement—clinker—requires a high-temperature calcination process. Burning coal in kilns and the heating and decomposition of limestone generate carbon dioxide emissions. The decomposition of limestone alone accounts

for up to 60% of total emissions, making it the primary reason for the high carbon footprint of the cement industry.

Despite the challenges, Asia Cement's Hualien Plant voluntarily began reducing carbon emissions in 2009, well before the Sustainable Development Goals gained widespread attention. They also developed the country's first low-carbon masonry cement. To date, Asia Cement has cumulatively reduced carbon emissions by 400,000 metric tons. "Because the cement industry has such a large carbon footprint, we knew that one day government regulations would mandate reductions. Given Asia Cement's strong emphasis on ESG, we decided to take proactive steps early on," said Chen Chih-shien.

提早面對高碳排議題 亞泥兩步驟減碳

Proactive Carbon Reduction Efforts by Asia Cement – A Two-Step Approach

亞泥減碳從兩個大方向著手，第一步，就是以替代原燃料取代天然的石灰石及煤炭，將產業不要的廢棄物「轉廢為寶」。陳志賢說，亞泥團隊遍尋各種廢棄物，目前所使用的煉鋼脫硫渣、轉爐石、焚化爐燃燒垃圾後的灰渣等，因其富含大量氧化鈣，可部分取代原料石灰石使用，降低石灰石高溫製程產生的二氧化碳，並同時降低天然石灰石礦開採。亞泥也持續使用花蓮縣境內造紙業者的漿紙汙泥、汙水下水道汙泥等取代煤炭，上述廢棄物富含生物質，屬於零排放燃料，減碳又減廢，可說是最佳的循環經濟協同處理互利案例。

Asia Cement's carbon reduction efforts are focused on two major strategies. The first step is to replace natural limestone and coal with alternative raw materials and fuels, effectively turning industrial waste into valuable resources. Chen Chih-shien mentioned that the Asia Cement team has been looking for various waste materials, such as desulfurized slag from steel production, converter slag, and incinerator ash, all of which contain significant amounts of calcium oxide. These materials can partially replace limestone in the production process, reducing carbon dioxide emissions generated by the high-temperature calcination of limestone and lowering the need for natural limestone extraction. In addition, Asia Cement continues to use paper sludge from the Hualien paper industry and sewage sludge as a substitute for coal. These waste materials are rich in biomass, making them zero-emission fuels, which not only reduce carbon emissions but also waste, representing a successful example of circular economy co-processing.



近期，亞泥更把腦筋動到風力發電的廢棄物上，臺灣正經歷一波的風機汰換潮，當各界擔心風機葉片因無法回收處理時，亞泥已早先一步完成了「水泥窯協同處理廢風機葉片技術」開發。

透過窯爐超過 1,500 度的高溫，風機葉片中的有機可燃樹脂、無機氧化鈣、二氧化矽以及氧化鋁，正可取代煤炭、石灰石及黏土。一來，可幫助外界處理棘手風機葉片廢棄問題，二來，也能減少天然資源的使用，目前已成功處理達 21 公噸的陸域風機廢棄物。

第二步，就是推出低碳水泥。既然石灰石鍛燒變成熟料的過程為產生二氧化碳主要階段，因此低碳水泥的概念，就是把水泥中熟料的使用比例降低，但是同時利用生產技術，讓水泥依然能保留其原來特性。亞泥研發的洋房牌墻砌水泥，以天然塑性材料取代部分熟料，相較於傳統水泥，每公噸約可減少礦物材料 82 公斤（6%）、煤炭減少 23 公斤（19%）及減少溫室氣體排放 128 公斤（16%），同時增強水泥抗龜裂能力，改善了牆面易裂問題。近年卜特蘭石灰石水泥因其優異的減碳量及可適用於結構、體積安定性佳，備受國際營建工程界關注，亞泥亦為國內首間生產石灰石水泥業者，早於 2022 年即生產銷售逾二十多萬噸。

Recently, Asia Cement has also turned its attention to wind turbine waste. As Taiwan undergoes a wave of wind turbine replacements, concerns have arisen regarding the disposal of wind turbine blades. Asia Cement has proactively developed a technology for co-processing waste wind turbine blades in cement kilns.

Through kilns operating at over 1,500 degrees Celsius, the organic combustible resins, inorganic calcium oxide, silicon dioxide, and aluminum oxide in the wind turbine blades can replace coal, limestone, and clay. This not only helps address the challenging issue of wind turbine blade disposal but also reduces the consumption of natural resources. To date, they have successfully processed 21 metric tons of onshore wind turbine waste.

The second step is the introduction of low-carbon cement. Since the calcination of limestone into clinker is the primary stage where carbon dioxide is produced, the concept of low-carbon cement involves reducing the proportion of clinker used in cement while utilizing production techniques that retain the original properties of the cement. The masonry cement developed by Asia Cement, marketed under the “Yangfang” brand, uses natural plastic materials to replace a portion of the clinker. Compared to traditional cement, this reduces the use of mineral materials by 82 kg per metric ton (6%), coal by 23 kg (19%), and greenhouse gas emissions by 128 kg (16%), while also enhancing the crack resistance of the cement, addressing the issue of wall cracking. In recent years, Portland limestone cement, known for its excellent carbon reduction and suitability for structural applications, has garnered attention in the international construction industry. Asia Cement was the first in Taiwan to produce limestone cement, producing and selling over 200,000 metric tons by 2022.





不只減碳 亞泥也關注生物多樣性

Beyond Carbon Reduction – Asia Cement Also Focuses on Biodiversity

除了積極減碳，亞泥也把心力放在生態的復育上。

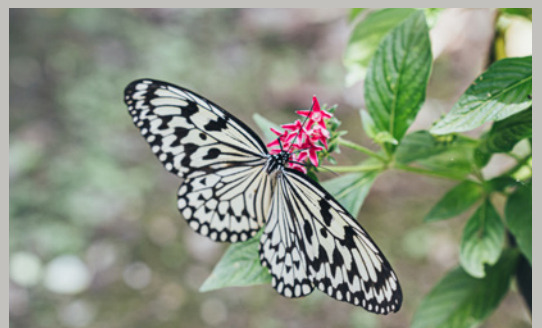
走至花蓮廠，一旁是佔地數公頃，於 2004 年成立的亞泥生態園區，這是全臺最大的蝴蝶、竹節蟲復育園區，開放免費參觀，已成立近 20 年，可見亞泥對環境保育的用心與積極。

這 20 年來，亞泥累積了許多蝴蝶的復育技術，園區周遭更有國家三級保育類黃裳鳳蝶，「生態園區僅有數公頃，也不算大，我們常常思考怎麼讓臺灣能再現蝴蝶王國的美名？」陳志賢說。

In addition to actively reducing carbon emissions, Asia Cement is also dedicated to ecological restoration.

Adjacent to the Hualien Plant is a multi-hectare ecological park established in 2004 by Asia Cement. It is the largest butterfly and stick insect restoration park in Taiwan, open to the public for free, and has been in operation for nearly 20 years, reflecting Asia Cement's commitment and proactive approach to environmental conservation.

Over the past 20 years, Asia Cement has accumulated a wealth of experience in butterfly restoration, with the park also being home to the nationally protected Golden Birdwing Butterfly. "The ecological park is only a few hectares in size, not very large. We often contemplate how we can help restore Taiwan's reputation as the 'Kingdom of Butterflies'," said Chen Chih-shien.





於是，亞泥努力擴大在生物多樣性的影響力，積極與全臺有志一同的單位合作推廣全臺蝴蝶棲地營造，比如，臺東關山鎮親水公園、臺灣歷史博物館、高雄文賢國小、新竹寶山國小、花蓮中原國小等，目前已與全臺 35 個單位合作，進行蝴蝶復育技術的移轉，期待打造串連起全臺的蝴蝶廊道。

從減碳到環境保育，亞泥都是率先行動；實踐永續發展，則可以追溯到 1979 年，時任廠長的張才雄，他決定將礦山開採每完成一個階段後，立即進行復育，以仿自然造林法，推動礦場植生綠化，時至今日，這些復育的礦場已恢復原本的生態與林相。

礦場復育的作法，亞泥則堪稱全球領先，「在歐洲或是日本水泥的礦場，大都是光禿禿一片，植生復育做得並不多，他們反而把這些礦場殘壁視為正常。」陳志賢強調，亞泥復育礦場是創舉且努力有成，因此榮獲 2023 年第 19 屆《遠見》ESG 企業永續獎。

亞泥在永續上的決心，是超過一甲子對環境的承諾，愛護土地早已成為他們的 DNA，未來，他們將持續在四大核心永續領域：原料來源、低碳產品、生態友善、事業目的上持續努力，讓亞泥生產的每一噸水泥，都能在永續經營與環境之間，取得最好的平衡。

To this end, Asia Cement has worked to expand its influence on biodiversity by collaborating with like-minded organizations across Taiwan to promote the creation of butterfly habitats. For example, the Guanshan Water Park in Taitung, the National Museum of Taiwan History, Wenxian Elementary School in Kaohsiung, Baoshan Elementary School in Hsinchu, Chungyuan Elementary School in Hualien, and many others. Asia Cement has partnered with 35 organizations across Taiwan to transfer butterfly restoration technology, aiming to create a butterfly corridor that connects the entire island.

From carbon reduction to environmental conservation, Asia Cement has been a pioneer, with its commitment to sustainable development tracing back to 1979. At that time, then Plant Manager Chang Tsai-hsiung decided to immediately begin restoration after each phase of mining, using natural afforestation methods to promote the greening of the quarry. Today, these restored quarries have regained their original ecology and forest structure.



Asia Cement’s approach to quarry restoration is globally recognized as a pioneering effort. “In Europe or Japan, cement quarries are often barren, with little effort put into vegetation restoration. They view the barren quarry walls as normal,” emphasized Chen Chih-shien. Asia Cement’s achievements in quarry restoration have been so significant that the company was awarded the 2023 19th Annual Global Views ESG Corporate Sustainability Award.

Asia Cement’s commitment to sustainability represents a promise to the environment that spans over six decades. Caring for the land has become ingrained in their DNA. In the future, they will continue to focus on four core areas of sustainability: raw material sourcing, low-carbon products, eco-friendliness, and corporate purpose, striving to balance sustainable operations with environmental stewardship in every ton of cement they produce.

亞洲水泥股份有限公司花蓮製造廠 Asia Cement Corporation Hualien Manufacturing Plant

亞泥生態園區 Asia Cement Ecological Park

成立時間：1973 年

Date of establishment: 1973

水泥製造與販售

Cement manufacturing and sales



花蓮縣新城鄉新興路 125 號

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璞石閣畜牧生質能源中心

Poshike Biomass Energy Center

舊名「璞石閣」的花蓮縣玉里鎮，自 2021 年 6 月起，多了個「璞石閣畜牧生質能源中心」。在此優雅名稱背後，處理的是令人掩鼻的畜牧糞尿。

璞石閣畜牧生質能源中心主任楊煌松解釋，傳統養豬的方式，是以大量的水沖洗豬舍，做到清潔、降溫，但由於豬農通常無法以符合放流的標準，有效處理廢水，這導致 20 多年前，許多在地人對花蓮河川的印象，都是畜牧廢水的排放處，尤其三民位於秀姑巒溪上游，下游是瑞穗，當地除了文旦聞名全國，最有名戶外休閒活動就是泛舟，「上游排放畜牧廢水、下游泛舟，會是什麼場景？一定很不舒服啊。」

Yuli Town in Hualien County, formerly known as “Poshike,” has had a new addition since June 2021: the “Poshike Biomass Energy Center.” Despite its elegant name, the center deals with livestock slurry that can make one hold their nose.

Yang Huang-song, Director of the Poshike Biomass Energy Center, explained that traditional pig farming involves using large amounts of water to clean pigsties and cool them down. However, pig farmers often fail to treat the wastewater to meet discharge standards, which has led to a common perception over the past 20 years that Hualien’s rivers were primarily wastewater outlets for livestock. Sanmin, located upstream on the Xiuguluan River, flows downstream to Ruisui, a region renowned for its pomelos and river rafting. “Imagine the scene: livestock wastewater being discharged upstream while people are rafting downstream—it would be extremely unpleasant.”





公私部門攜手 齊心改造畜牧業

Public and Private Sectors Join Forces to Transform Animal Husbandry

有鑑於此，2020年，一群有心升級養豬產業、友善環境的在地二代豬農，主動聯絡「業興環境科技股份有限公司」，期望能解決問題。於是，在中央補助經費、花蓮縣政府（環保局和農業處）指導、公司出技術，以及養豬業者陳春仲與陳春田兄弟捐地，四方共同合作、齊心努力下，全臺首座集中處理畜牧糞尿的沼氣發電設施，就此誕生。

中心成立後，每天會蒐集三民、瑞穗、光復地區共12家畜牧業者、約300噸的畜牧糞尿，接著以密閉式專管或槽車運送，並運用「厭氧消化技術」，將這些「黃金變綠金」，產出能被用來燃燒發電的沼氣，以及做為有機肥料回灌農田的沼渣沼液，過程中都不與空氣接觸，也不會有異味。事實上，所謂的厭氧消化技術，是將畜牧糞尿蒐集到總容積為6,000立方公尺的全密閉式RC結構槽體中，經過20天的循環泵攪拌厭氧消化處理，最後變成沼渣沼液、沼氣。

眼見中心已經順利運轉，但當初要成立中心，可是「不容易」的大事，原因是中心從設置、興建到營運，涉及環保、農業、建管、工商、電力等各個單位，需要多方協調、拜訪。比方說，地方居民最大的疑慮，是沼氣儲存在當地，會不會有爆炸的可能？團隊便舉辦說明會，讓大家了解，設立中心能升級產業、友善環境；而產生的沼渣沼液，則會無償提供農民灌溉農田；同時邀請民眾參觀沼氣發電廠，清楚中心設有完善的控制系統和偵測器，用手機便可遠端監控情形，每半年也會進行消防、緊急應變演練，從方方面面消除民眾疑慮。

In 2020, a group of local second-generation pig farmers, eager to upgrade the pig farming industry and promote environmental sustainability, took the initiative to contact Sinotech Environmental Technology Co., Ltd. with the hope of finding a solution. With financial support from the central government, guidance from the Hualien County Government (Environmental Protection Bureau and Department of Agriculture), the technology provided by the company, and land donated



by the pig-farming brothers Chen Chun-chung and Chen Chun-tian, the collaborative efforts of these four parties led to the creation of Taiwan's first biogas power generation facility dedicated to centrally processing livestock slurry.

After the center was established, it began collecting about 300 tons of livestock slurry daily from 12 livestock farms in the Sanmin, Ruisui, and Guangfu areas. The slurry is transported to the center using closed specialized pipelines or tankers. Once there, the slurry is processed in a 6,000-cubic-meter fully enclosed RC structure tank through a 20-day anaerobic digestion process with continuous stirring by circulating pumps. This process produces biogas, which can be used for power generation, as well as anaerobic digestion residues that serve as organic fertilizers to replenish farmland. The entire treatment process is air-sealed, ensuring no odor is released. The center effectively transforms livestock slurry into 'green gold,' making it safer for the land and rivers. Additionally, the center is equipped with a comprehensive control system for remote monitoring, and fire and emergency response drills are conducted every six months.



While the center is now operating smoothly, its establishment was no small feat. The process, from planning and construction to operation, was complex and involved coordination across various sectors, including environmental protection, agriculture, building management, industry, and power authorities. One of the main concerns among local residents was the potential risk of explosion from storing biogas in the area. To address these fears, the team organized informational meetings to explain how the center would not only upgrade the industry but also benefit the environment. They assured residents that the resulting anaerobic digestion residues would be provided to farmers free of charge for irrigating their fields. Additionally, residents were invited to tour the biogas power plant, where they learned about the advanced control systems and detectors in place, allowing for remote monitoring via smartphone. The team also emphasized that fire and emergency response drills are conducted every six months, taking comprehensive measures to alleviate public concerns.



沼氣發電、沼渣沼液做有機肥 實踐綠色循環經濟

Biogas Power Generation and Organic Fertilizer from Anaerobic Digestion Residues: Implementing a Green Circular Economy

如今，中心為地方帶來的首要改變，即是改善了河川水質和異味問題，進而提升觀光形象，也為地方帶來不少就業機會。其次，那些提供給農民回灌農田的沼渣沼液，都是最好的有機肥。相較於會酸化土壤的化學肥料，沼渣沼液有更好的氮磷鉀，酸鹼值為 7 到 8 之間，能中和酸化的土壤，讓土壤更健康。有位遵循自然耕法的農民，自中心推廣沼渣沼液起，便開始採用，由於沼渣沼液的肥分高，左鄰右舍笑他雜草都長得比稻米還高，但農民最終收成時，一甲地一樣能收穫 1 萬台斤的稻米。現今中心一年能提供約 3 萬 4,500 公斤的有機肥料，若以 20 公斤包裝的台肥 5 號計算，相當於節省了 1 萬 2,000 多包的化肥。

更重要的是，中心也持續實踐「綠色循環經濟」。沼氣發電等於是一種綠色再生能源，能降低溫室氣體排放，每年可減少近 8 萬公噸的廢水排入河川，預估年沼氣發電量約可達 80 萬度電，目前中心亦已向環境部氣候變遷署申請自願減碳專案。

2022 年起，中心陸續榮獲國家卓越建設獎最佳環境文化類的金質獎、臺灣循環經濟獎「創新服務獎」的傑出企業獎和環境部的淨水永續獎；加上 ESG、永續發展已成為全球最重要的議題，許多政府機關、工商團體紛紛前來參訪，期望在自己的縣市也打造一座畜牧生質能源中心，強化綠色循環經濟的發展，邁向淨零碳排。

Today, the most significant change the center has brought to the local area is the improvement of river water quality and the reduction of odor issues, which has in turn enhanced the area's image as a tourist destination and created numerous job opportunities for the community. Additionally, the anaerobic digestion residues provided to farmers for irrigating their fields are among the best organic fertilizers available. Compared to chemical fertilizers that can acidify the soil, these residues are richer in nitrogen, phosphorus, and potassium, with

a pH value between 7 and 8, which helps neutralize acidic soils and promotes healthier soil conditions. A farmer who follows natural farming practices began using these residues as soon as the center started promoting them. Due to the high nutrient content of the residues, his neighbors joked that the weeds in his fields were growing taller than his rice, yet he still managed to harvest 10,000 jin of rice per hectare. Currently, the center produces approximately 34,500 kilograms of organic fertilizer annually, equivalent to saving over 12,000 bags of Taiwan Fertilizer No. 5.

More importantly, the center is also committed to continuously implementing the “green circular economy.” Biogas power generation is a form of green renewable energy that not only reduces greenhouse gas emissions but also prevents nearly 80,000 metric tons of wastewater from being discharged into rivers each year. The annual biogas power generation is estimated to reach around 800,000 kilowatt-hours of electricity. The center has also applied for a voluntary carbon reduction project with the Climate Change Administration of the Ministry of Environment.

Since 2022, the center has received several prestigious awards, including the Gold Award for Best Environmental Culture in the FIABCI-Taiwan Real Estate Excellence Awards, the Outstanding Enterprise Award in the “Innovative Service Award” category of the Taiwan Circular Economy Awards, and the Sustainable Water Award from the Ministry of Environment. With ESG and sustainable development becoming globally critical issues, numerous government agencies and industrial organizations have visited the center, hoping to replicate this model of a livestock biomass energy center in their own regions to strengthen the development of the green circular economy and move towards net-zero carbon emissions.



璞石閣畜牧生質能源中心 Poshike Biomass Energy Center

成立時間：2021 年

Date of establishment: 2021

以厭氧消化技術集中處理畜牧糞尿，進而能發電的沼氣和有機肥料沼渣沼液

Utilizing anaerobic digestion technology to centrally process livestock slurry, resulting in biogas for power generation and anaerobic digestion residues for organic fertilizer.



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ISSUE 12

深層海水

深海藍金 引領產業六級化

DEEP SEA WATER

Deep Ocean Water

The Blue Gold Driving Sixth Industrialization



你喝過深層海水嗎？

目前，全世界只有美國、日本、韓國和臺灣，發展深層海水產業。在臺灣，花蓮是深層海水產業重鎮，包括東潤水資源生技股份有限公司、光隆海洋生技和台肥集團旗下的台海生技，都是箇中翹楚，引領整個產業前行。

Have you ever tried deep ocean water?

Currently, only four countries—the United States, Japan, South Korea, and Taiwan—are developing a deep ocean water industry. In Taiwan, Hualien is a major hub for this industry, home to leading companies such as East Life Biotech Corp., Kung-Long Ocean Biotech, and Taihai Biotech, a subsidiary of Taiwan Fertilizer Co., Ltd. These companies are at the forefront of advancing the industry, leading it forward.





專業技術人員操作氣相層析質譜儀，將檢測分析樣品上機。
A professional technician operates a gas chromatography-mass spectrometer (GC-MS) to analyze samples for testing.
照片提供 Photo Source / 石資中心 SRDC

長期投入東部深層海水技術、產品加工製程開發的財團法人石材暨資源產業研究發展中心總經理林志善進一步解釋，所謂「深層海水」，指的是海平面 200 公尺以下的水，由於陽光照射不到，不易滋生細菌、遭受污染，具有低溫、純淨、分子小和富營養鹽與礦物質等特性，可廣泛應用在水產養殖、飲品、酒類、食品、醫藥、美容化妝和觀光休閒等產業。他特別提到，儘管平坦的沿岸也能汲取深層海水，但管線必須布得更長，容易受到地震、颱風等環境因素影響，在此情形下，臺灣東海岸得天獨厚，管線不需要拉太長，即能迅速取到深層海水，因此成就產業的蓬勃，讓東潤、光隆和台肥能分別沿著七星潭沿岸，打造出三大深層海水園區。

Lin Chi-Shan, General Manager of the Stone and Resource Industry R&D Center, which has long been involved in deep ocean water technology and product development, explained that “deep ocean water” refers to water found more than 200 meters below the surface. Because this water is beyond the reach of sunlight, it is free from bacterial growth and pollution. Its unique qualities—low temperature, purity, small molecular structure, and richness in nutrients and minerals—make it ideal for various

applications, including aquaculture, beverages, food, medicine, cosmetics, and tourism. Lin highlighted that while deep ocean water can be drawn from flat coastal areas, doing so requires longer pipelines, which are vulnerable to environmental factors like earthquakes and typhoons. Taiwan’s east coast is uniquely positioned to access deep ocean water more easily, with shorter pipelines, fostering the industry’s growth. This natural advantage has allowed East Life, Kung-Long, and Taiwan Fertilizer to establish three major deep ocean water zones along Qixingtan Beach.



深層海水週邊產品

Deep Ocean Water Peripherals

東潤、光隆、台海生技 發展多元深層海水產品

East Life, Kung-Long, and Taihai Biotech: Diverse Product Development

事實上，花蓮發展深層海水產業至今，已在各方面取得卓越成果。以一級產業來說，深層海水汲取上來後，最直接的應用就是「水產養殖」。位於花蓮光隆園區的「探索水產科技股份有限公司」即採用深層海水馴化技術，養出深層海水鱈龍魚和活體貝類等水產，行銷至全聯、好市多、多家米其林餐廳和星級飯店。

二級產業則針對深層海水，進行多面向的加工，比方說推出富含鎂、鈣等礦物質的機能水、化妝品、保健品。像是光隆、台海生技看準現今永續意識抬頭，更進一步發展出深層海水礦物質濃縮液。而東潤除了機能水，以深層海水為基底、搭配傳統工法進行固態發酵，最終精釀出的高粱酒，也相當受歡迎。

至於在三級產業，台肥打造的「台肥花蓮海洋深層水園區 - 台灣海礦館」，更是亞洲最大、全臺唯一以深層海水為主題的觀光休閒園區，已成為花蓮重要的觀光景點，遊客來到這裡，可以了解產業知識、選購加工商品，還能踩踏溫度僅 9~11°C 的冰涼足浴步道，直接與深層海水「親密接觸」，感受對人體的益處。

值得一提的是，隨著花蓮開展深層海水產業，亦帶動其他產業的創新與轉型。石資中心總經理林志善指出，汲取深層海水後，必須經過「膜過濾」、「分離純化」等程序，以淡化海水、去污殺菌和調配礦物質比例。過去臺灣廠商多採用日本的「電透析膜」進行分水，問題是電透析膜動輒百萬，且每隔一段時間就必須更換，對此，石資中心著手研發「奈過濾膜」，讓廠商能以較低的成本，完成分水作業。如今，奈過濾膜順利技轉量產，企業均已採用。

Hualien's deep ocean water industry has already made significant strides across various sectors. In the primary sector, the water is primarily used for aquaculture. For example, at Kung-Long's park in Hualien, Tamsuo Aquaculture Technology employs deep ocean water for the cultivation of sturgeon and live shellfish, which are then supplied to outlets like

PX Mart, Costco, and several Michelin-starred restaurants and luxury hotels.

In the secondary sector, companies are processing deep ocean water into products such as functional beverages enriched with magnesium and calcium, as well as cosmetics and health supplements. Kung-Long and Taihai Biotech have also developed concentrated mineral solutions, capitalizing on the growing trend toward sustainability. East Life, in addition to producing functional water, has created a popular sorghum liquor brewed with deep ocean water and traditional fermentation techniques.

As for the tertiary industry, Taiwan Fertilizer has established the "D Park - Taiwan Ocean Mineral Museum," which is the largest deep ocean water-themed tourist and leisure park in Asia and the only one of its kind in Taiwan. It has become a major tourist attraction in Hualien. Visitors can learn about the industry, purchase processed products, and also walk on a cool footbath path with temperatures of only 9-11°C, allowing them to have intimate contact with deep ocean water and experience its benefits to the human body.

It is worth mentioning that, as Hualien develops its deep ocean water industry, it has also driven innovation and transformation in other industries. Lin pointed out that after extracting deep ocean water, it must undergo processes such as "membrane filtration" and "separation and purification" to desalinate the seawater, remove impurities, sterilize, and adjust the mineral ratios. In the past, Taiwanese companies mostly used Japanese electro dialysis membranes for water separation; however, these membranes often cost millions of NTD and had to be replaced periodically. In response, the Stone and Resource Industry R&D Center began developing nanofiltration membranes, allowing companies to complete water separation operations at a lower cost. Now, these nanofiltration membranes have been successfully transferred for mass production and are being widely adopted by enterprises.

過去佈管技術與設備由國外支援，但光隆四處取經後，發揮創新精神，研發在布下的一根大管線中，設置五根不同長度小管線的汲水模式。林志善解釋，汲取深層海水時，原先都希望愈深愈好，但各個長度取到的水，其實有不同功用，加上五根管線能起到「買保險」作用，要是遇上地震、風災，哪根管線損壞，其他管線都能立刻補上、替換，彈性更大，「在地企業發揮強大韌性，才能有這種創新。」

許多人可能不知道，入住花蓮住宿的遊客，都有飲用、購買到在地深層海水的機會。三大深層海水企業為了廣為推廣，特別和住宿業者合作，在飯店、民宿內擺放，供旅客取用。近來，響應永續、環保風潮，廠家再將瓶裝水改為可重複充填的大型桶裝水，讓遊客用自行準備的容器裝取，期望在推廣深層海水的同時，也能一起愛地球。

In terms of pipeline technology, Kung-Long has made notable advancements by developing a system that uses one main pipeline with five smaller pipelines of varying lengths. Lin pointed out that while deeper water is generally preferred, different depths offer distinct benefits. The multiple pipeline system also provides flexibility—if one is damaged during an earthquake or typhoon, the others can compensate, ensuring continued operations. This innovative approach showcases the resilience and ingenuity of local businesses.

Visitors to Hualien's hotels may not realize they've had the chance to drink or purchase locally sourced deep ocean water. To promote the product, the three major deep ocean water companies have partnered with hotels and guesthouses, offering water to guests. Recently, in response to sustainability trends, companies have replaced bottled water with refillable large water containers, encouraging guests to use their reusable bottles. This initiative helps promote deep ocean water while supporting environmental conservation.

溫差發電 新興可再生能源

Thermal Energy Generation: The Next Frontier

接下來，花蓮的深層海水產業，預計再朝「溫差發電」邁進。林志善指出，由於深層海水溫度較低，適合利用表層海水與深層海水的溫度不同，進行發電，美國夏威夷設有海水溫差發電廠，「海水溫差電力做為一種可再生能源，在永續浪潮下，是值得發展的能源。」

更重要的是，有鑑於花蓮七星潭的三大深層海水產業園區已經成形，之後若有住宿搭配深層海水SPA、芳療，將完善六級產業化的發展，「從汲取深層海水、水產養殖的進化、加工品的開發，到注入觀光元素，深層海水將引領花蓮產業的升級與蓬勃。」

Looking ahead, Hualien's deep ocean water industry plans to explore the potential of thermal energy generation. Lin explained that due to the lower temperature of deep ocean water, it's possible to generate energy by utilizing the temperature difference between surface and deep water, as seen in Hawaii. "As the world moves toward sustainability, seawater thermal energy is a promising renewable energy source," he said.

With Hualien's Qixingtian area already home to three thriving deep ocean water parks, the integration of deep ocean water with tourism elements, such as spas and aromatherapy, could further enhance the industry. From aquaculture to product development and tourism, deep ocean water is poised to lead Hualien's industries into a new era of growth and innovation.

深層海水 Deep Ocean Water

投入企業：東潤水資源生技、光隆海洋生技、台灣肥料股份有限公司、台海生技

Invested Companies: East Life Biotech Corp., Kung-Long Ocean Biotech, Taiwan Fertilizer Co., Ltd. and Taihai Biotech

特色：低溫、純淨、水分子小，含豐富的礦物質及微量元素，不受地表污染物污染

Key Features: Low temperature, purity, small water molecules, rich in minerals and trace elements, free from surface pollutants.

財團法人石材暨資源產業研究發展中心 Stone and Resource Industry R&D Center (SRDC)

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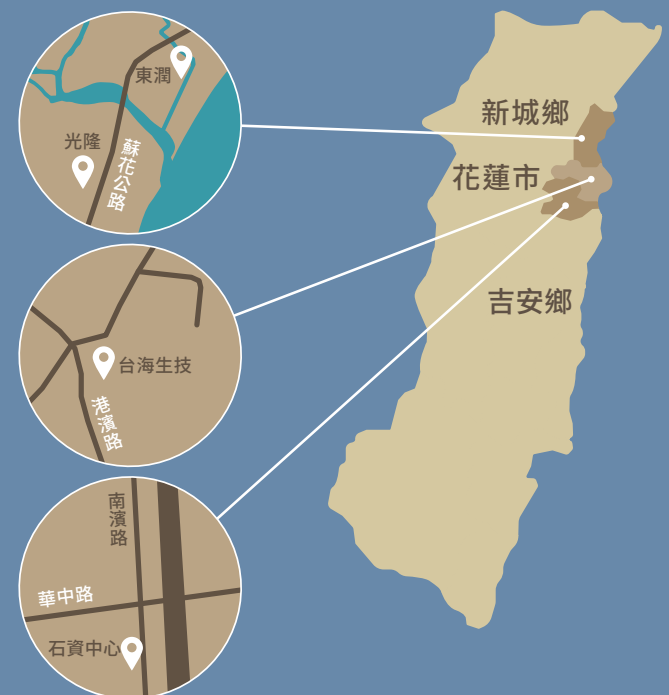


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堅持文化傳承 打造自然永續遊程

*Upholding Cultural Heritage and
Creating Sustainable Nature Tours*

高山森林基地

Gao Shan Forest Tribal Ranch





高山森林基地於 2017 年創立，經過近 7 年的努力，如今已成為花蓮地區很具特色的永續部落旅遊基地之一。每年有百名遊客造訪，深入體驗原住民文化，感受與自然共處的生活方式。

Founded in 2017, Gao Shan Forest Tribal Ranch has become as one of the most distinctive sustainable tribal tourism bases in the Hualien region after nearly seven years of dedicated efforts. Every year, hundreds of visitors come to immerse themselves in the indigenous culture and experience a lifestyle in harmony with nature.



「剛開始創業時，我們常常接待團客。但後來發現，這樣人數多、體驗時間短的模式，很難傳達我們想要分享的文化內涵。」高山森林基地共同創辦人馬中原回憶。

馬中原進一步解釋，傳統的大眾旅遊常常停留在表面的文化展演，無法讓遊客真正體會原住民與自然共處的智慧，「我們想給的，不是這樣的快餐式體驗。」

這種矛盾讓團隊決定改變策略，轉而專注於接待自由行和小團體，希望提供一種生活感的體驗，讓遊客能真正感受到部落文化的魅力。

“When we first started, we often hosted large tour groups. However, we soon realized that this model, with its large numbers and short experiences, made it difficult to convey the cultural essence we wanted to share,” recalled Ma Zhong-yuan, co-founder of Gao Shan Forest Tribal Ranch.

Ma Zhong-yuan further explained that traditional mass tourism often remains at the surface level of cultural performances, preventing tourists from truly understanding the wisdom of indigenous peoples in living with nature. “What we want to offer is not a fast-food-style experience,” he said.

This dilemma led the team to change their strategy, shifting their focus to hosting individual travelers and small groups. Their goal is to provide a more intimate experience, allowing visitors to appreciate the charm of tribal culture truly.

深入部落做田野調查 設計獨特的文化體驗活動

In-Depth Fieldwork to Design Unique Cultural Experiences

為了將海岸布農族文化特色設計成跨族群的部落體驗，高山森林基地團隊做了許多的田野調查，不同族群的夥伴各自用不同的專業定期內部訓練，期望團隊能在傳遞部落文化、尋找內在認同感的同時，又超越族群，共同在這塊土地長出謙融分享的生活樣貌；這些調查不僅幫助團隊深入了解部落歷史，也為遊程設計提供了豐富素材，做出市場區隔，讓部落體驗不再是複製貼上。例如「找獵人」活動，就是基於對第一代布農族遷徙者的生命歷程研究而設計，引導員會帶領旅人走在百年前族人走過的古道上，「我們現在走的路，就是一百年前老人家走的。」馬中原說，整段路途中，以真實的歷史故事和現在的情景交錯介紹，成為一個穿越時空與歷史的旅程。

在古道上，高山森林基地的夥伴會一邊帶路，一邊將生命故事融入體驗，讓旅人感受部落祖先如何與自然相處、適應新環境。像是半穴居屋的主要功能是作為隱蔽和保護族人的場所，在日治時期，它們提供了安全的庇護，使布農族人能夠躲避日軍等外來威脅。這種建築形式充分利用了自然地形、結構與美學，既能融入環境不易被發現，又能為居住者提供必要的生存空間。用大自然的智慧扣合心靈成長、更甚連結教育，讓旅人認識海岸布農族的歷史與生存的韌性智慧。

「基地一直以來不是走主流的系統，而是以回到在地觀點的論述設計體驗，將自身的文化故事及生態智慧轉化為推動旅遊的養分，我們要先找回那些已經存在幾千年的智慧，對接當代，再轉譯成真實的遊程，分享給旅人，永續自然發生。」他強調，基地願做為居中的橋梁，搭起人與自然的關係，透過親身體驗，連結人與自然，從外在走向內在，從快速中慢緩，從自然中找到自己。

To design cross-cultural tribal experiences that highlight the unique features of the Coastal Bunun Tribe, the Gao Shan Forest Tribal Ranch team has conducted extensive fieldwork. Team members from different ethnic groups contribute their expertise and take part in regular internal training sessions. The aim is to share the tribe's culture and help individuals find a deeper sense of identity, as

well as foster a way of life that embraces humility and sharing across ethnic boundaries. These efforts have not only deepened the team's understanding of tribal history but also provided rich material for creating distinct tour experiences that stand out in the market, avoiding the trap of generic replication. For example, the "Finding the Hunter" activity is based on research into the life journeys of the first-generation Bunun settlers. Guides lead visitors along ancient paths that their ancestors walked over a hundred years ago. "The path we walk today is the same one our elders walked a hundred years ago," said Ma Zhong-yuan. Along the way, the journey interweaves real historical stories with the present, offering visitors an immersive experience that transcends time and history.

On these ancient trails, the Gao Shan Forest Tribal Ranch team integrates life stories into the experience, allowing visitors to understand how the tribal ancestors coexisted with nature and adapted to new environments. For example, the semi-subterranean houses, primarily used for concealment and protection, provided safe refuge for the Bunun people during the Japanese colonial period, helping them evade external threats. These structures, which blend seamlessly with the natural landscape, hold architectural significance and embody the tribe's resilience and wisdom. Through these immersive experiences, visitors gain a deeper understanding of the history and the enduring wisdom that has allowed the Coastal Bunun tribe to survive and thrive.

"Our approach has never followed the mainstream system," Ma emphasized. "Instead, we focus on designing experiences rooted in local perspectives, turning our cultural stories and ecological wisdom into the driving force for tourism. Our priority is to rediscover the ancient knowledge that has existed for millennia, then adapt it to modern times, and finally transform it into genuine experiences to share with visitors, allowing sustainability to occur naturally." The ranch is committed to being the bridge that reconnects people with nature, encouraging them to move from external experiences to inner reflection, from a fast pace to a slower rhythm, and ultimately to find themselves through nature.



基地喜歡以「找」，像是「找尋、找回」，做為設計遊程體驗的發想點，讓旅人得以觸動感官與心靈；除了「找獵人」，「找老鷹」則是另一項深受歡迎的體驗活動，讓旅人與大自然建立更緊密的連結。

「找老鷹」是帶領旅人攀上基地的百年老樹「雀榕」，先聆聽部落故事，認識從這片土地長出來的人與大樹，接著學習攀樹技巧，爬上樹梢，再勇敢垂降回到地面。這體驗著重人與樹的親近及互動，艱辛抵達樹梢，從高處俯視太平洋，有滿滿的感動；勇敢垂降而下，則有戰勝怯弱的成就感。

基地還貼心設計「一人成行」的散客體驗，另有分齡、分眾的體驗（兒童、青少年、成年、企業團體客製化），希望透過傳遞以文化、冒險和生態精神為核心的旅遊模式，陪伴旅人透過親近土地與自然，進而傾聽自己。

高山森林基地的成功，不僅為遊客帶來新體驗，更為部落創造了就業機會。未來，馬中原希望能與更多部落合作，擴大永續旅遊的影響力，包含目前正在推動「雙濱共好平台」，聯合花蓮縣豐濱鄉和臺東縣

長濱鄉，聯盟目前有近 70 間店家參與，共同關注永續行動，結合人、文、地、景、產，透過各店家的吃、住、玩、買，形成一個跨區域共好的在地支持系統，讓店家從環境保育、人文特色保存與部落社區共好著眼，重新找到自己的定位，也同時以「綠色旅行」行動，呼籲所有旅人一起愛護雙濱，分享旅遊帶來的近鄰經濟圈，讓永續成為日常。

Gao Shan Forest Tribal Ranch favors the theme of “finding,” such as “searching” or “rediscovering,” as inspiration for designing experiential tours that engage both the senses and the heart. In addition to the popular “Finding the Hunter” activity, the “Finding the Eagle” experience is another favorite, allowing visitors to build a closer connection with nature.

The “Finding the Eagle” experience takes visitors up the century-old “Large-leaved Banyan” at the ranch. It begins with listening to tribal stories and learning about the deep connection between the people and the trees of this land. Participants then learn tree-climbing techniques, ascending to the top of the tree before bravely rappelling back down to the ground. This experience emphasizes the closeness and interaction between people and nature. The challenging climb to the treetop offers a rewarding view of

the vast Pacific Ocean, while the descent brings a sense of accomplishment in overcoming fear.

In addition to thoughtfully designed “solo traveler” experiences, the ranch offers age-specific and audience-tailored activities, including options for children, teenagers, adults, and customized corporate group experiences. By promoting a tourism model centered on culture, adventure, and ecology, the Gao Shan Forest Tribal Ranch aims to help visitors connect with the land and nature, and ultimately, listen to their inner selves.

The success of Gao Shan Forest Tribal Ranch has provided tourists with unique experiences while creating employment opportunities for the tribe. Looking ahead, Ma Zhong-yuan hopes to work with more tribes to expand the influence of sustainable tourism. This includes the ongoing development of the “BINBIN Ecotourism Alliance,” which currently involves nearly 70 businesses from Fengbin Township in Hualien County and Changbin Township in Taitung County. This alliance focuses on sustainable actions, integrating people, culture, land, scenery, and products. Through the combined



efforts of these businesses in offering food, accommodation, entertainment, and shopping, they form a cross-regional support system that emphasizes environmental conservation, cultural preservation, and community well-being. This initiative helps businesses rediscover their identity while promoting “green travel,” encouraging all visitors to help protect Fengbin and Changbin, as well as share in the economic benefits that tourism brings to the local communities. In this way, sustainability becomes a part of everyday life.

高山森林基地 Gao Shan Forest Tribal Ranch

成立時間：2017 年

Date of establishment: 2017

永續部落旅遊體驗

Sustainable Tribal Tourism Experiences



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*Sharing the Simplicity of Life:
Thousands Experience Indigenous Culture Each Year*

吉籟獵人學校
Cidal Hunter School



8 DECENT WORK AND ECONOMIC GROWTH



10 REDUCED INEQUALITIES



15 LIFE ON LAND

「我跟著先生要成立學校時，很多人都反對，我原本是美容師，結果跟著他溯溪、跳水，都要曬太陽，我常常偷哭……」花蓮水璉部落吉籟獵人學校的陳繪惠理事長回憶。

吉籟獵人學校創立於2008年，近17年過去，她與先生陳居霖，在花蓮打造出具有豐富原住民文化、野外求生體驗的學校。一年有將近萬人來到學校，從生火、採集、狩獵、捕撈、野炊等生活技能，到認識動植物的生態教育，身歷其境瞭解大自然的可貴，以及永續生活的重要性。

“When my husband and I decided to start the school, many people opposed it. I was a beautician, but then I started river tracing and diving with him, always under the sun, and I often cried secretly...” recalls Chen Hui-hui, the chairperson of Cidal Hunter School in Hualien’s Ciwidian community.

Founded in 2008, over the past 17 years, the Cidal Hunter School has become a place where people can deeply experience indigenous culture and wilderness survival skills. Each year, nearly 10,000 visitors come to learn essential skills such as fire-building, gathering, hunting, fishing, and outdoor cooking. They also gain ecological education about plants and animals, understanding the preciousness of nature, and the importance of sustainable living.



水璉是花東四大阿美族部落之一，隨著人口老化，部落青年大量外移，水璉曾面臨凋零且文化傳承無以為繼的困境。夫妻倆的努力，使學校在旅遊旺季時，能雇用多達 60 個員工，提供就業機會，讓青年願意返鄉，部落耆老也在傳承文化中找到生活重心。

Ciwidian is one of the four major Pangcah communities in Hualien-Taitung. With the aging population and many young people moving away, the community once faced the crisis of cultural extinction. Through the couple's efforts, the school now employs up to 60 people during peak tourist seasons, providing job opportunities and encouraging the youth to return. The elders also find a renewed sense of purpose in preserving and passing down their culture.



創業初衷 竟是因為一場救難行動

The Founding Inspiration: A Rescue Mission

夫妻會創業，起初是陳居霖的想法。他曾是消防隊員，也是山難救助隊員，受過完整訓練，參與山難救助行動時，發現族人身上幾乎只有輕裝備，竟能輕盈穿梭山林救援；反觀自己，全身繩索、防護等重裝備齊全，卻不如阿美族人代代相傳的傳統野外求生技能。這讓他大為震撼，也成為創立學校的初衷，試圖找回逐漸被淡忘的原住民以山海為生的文化。

知道丈夫想創業，陳繪惠因此提議，把獵人學校設在水璉部落，「最好的地點是在鯉魚潭，那裡遊客最多，但我卻堅持要設在水璉，因為我是部落族人，這裡就是我長大的地方，要傳承，就在這裡做起！」

這個決定，讓這條路更難了。水璉部落相對不知名，要怎麼把遊客帶到部落體驗？成了創業的最大考驗。

The idea for the school came from Chen Ju-lin. He was a former firefighter and mountain rescue team member. During rescue missions, he noticed that indigenous people, equipped with minimal gear, moved effortlessly through the mountains. In contrast, he, with his heavy equipment, lacked their traditional survival skills. This realization inspired him to start a school. He aimed to revive the gradually forgotten indigenous culture of living in harmony with nature.

Chen Hui-hui suggested setting the school in her hometown of Ciwidian rather than the more tourist-frequented Liyu Lake. “The best location would have been Liyu Lake, but I insisted on Ciwidian because this is where I grew up. If we want to preserve our culture, it should start here!”

This decision made their journey more challenging. Ciwidian was relatively unknown, posing a significant challenge. They had to attract tourists to the community.

堅持把團隊訓練到好才接團客 挑戰讓他們更願傾聽客人需求

Commitment to Training and Customer Listening

由於陳居霖曾在花蓮海洋公園當訓練師，他堅持把有制度的服務體驗，帶進吉籟獵人學校，為此，他們訓練了將近三年的時間，才正式與旅行社合作，服務大型團客。

因為充分傾聽客人的聲音，而打造出更為貼近遊客需求的文化體驗。比如，他們教野外求生，無論是快速生火、野炊，最終的成果，就是一道道從山林取得的嫩野菜、烤魚，用美食，由淺入深了解原住民文化。他們也帶親子團、夏令營，在考量安全下，設計最適合小孩體驗的項目，如做弓箭、用植物吹泡泡等，在玩樂中培養小孩對大自然的敬畏與謙卑。

在體驗的過程，原住民族與環境共好的理念，也漸漸潛移默化。「原住民族取之山林，都是抱持感恩的心態，所以，我們不濫殺濫捕濫採，夠用就好，能重複使用更好。」陳繪惠解釋，像是姑婆芋的葉子，就教他們拿來做帽子、包食材、當蚊蟲叮咬的良藥等，獵人學校試圖透過原住民族在山林之間獲得的經驗，告訴前來體驗的客人「少即是多」的永續道理。

然而，一路走來，好幾次想放棄，讓陳繪惠堅持下去、支持的信念是什麼呢？她說，小時候都在山林裡玩，山林就是遊樂場，她甚至聽得到山林說話的聲音，但離鄉到台北當美容師的那段時間，卻失去聽見山林說話的能力。

「創業後，我回到部落，回去我以前常去的溪谷，突然間一陣風吹來，大樹都在搖晃，溪水潺潺，我聽見山林歡欣鼓舞地跟我說，妳終於回來了。」她大哭一場，並且決定，再怎麼辛苦都要撐下去。因為她想要把山林間帶給她的祝福，傳遞給更多的人。

Based on Chen Ju-lin's experience as a trainer at Hualien Ocean Park, he insisted on introducing a structured service experience at Cidal Hunter School. They spent nearly three years training before officially partnering with travel agencies to serve large groups.

By listening carefully to their customers, they created cultural experiences that better met the needs of tourists. For example, in their wilderness survival courses, they taught quick fire-building and outdoor cooking, culminating in delicious dishes made from wild vegetables and roasted fish, subtly introducing visitors to indigenous culture through food. They also designed family-friendly activities like archery and plant-based bubble-blowing for children, fostering respect and humility toward nature through play.

Through these experiences, the idea of living in harmony with nature, a core belief of indigenous people, subtly influences visitors. "Indigenous people take from the forest with gratitude, never over-harvesting. We use just enough and reuse whenever possible," Chen Hui-hui explained. For example, they teach how *Alocasia Odora* leaves can be used to make hats, wrap food, and treat mosquito bites. The school aims to teach the sustainable principle of "less is more" through these indigenous experiences.

Despite many moments of wanting to give up, what kept Chen Hui-hui going? She explained that growing up, the forest was her playground, and she could hear it speak. However, during her time in Taipei as a beautician, she lost that ability.

"After starting the school, I returned to the tribe and visited my favorite valley. Suddenly, a gust of wind came, the trees swayed, and the stream flowed. I heard the forest joyfully tell me, 'You are back at last.'" She cried and decided to persevere, no matter how difficult, to share the blessings of the forest with others.





吉籟獵人學校 Cidal Hunter School

成立時間：2008 年

Date of establishment: 2008

原住民文化體驗旅遊

Indigenous cultural experience tourism



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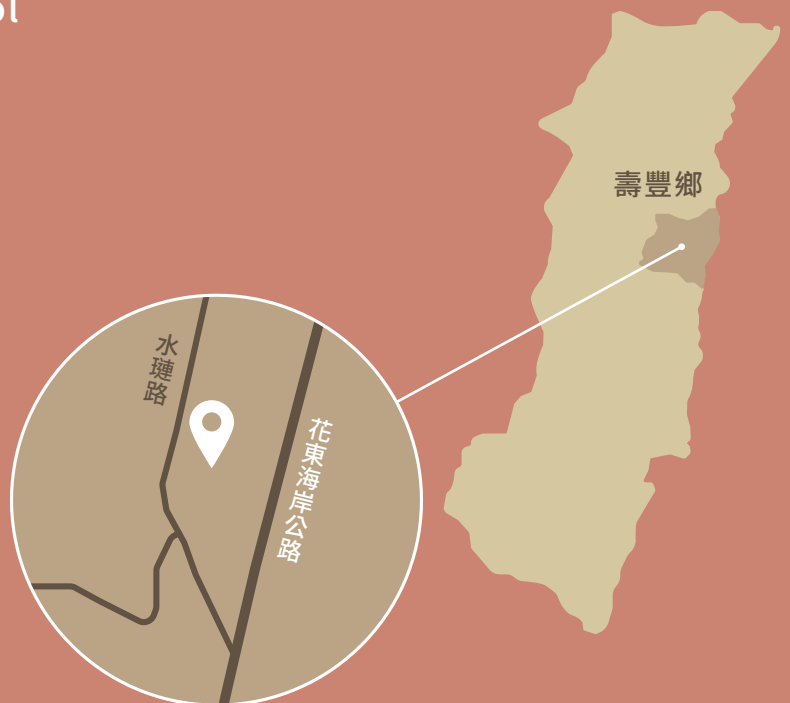
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立川漁場
Li Chuan Aquafarm



「我記得小時候想買一台電腦很久都沒辦法買，後來才知道那時家裡正很辛苦的處理債務。」立川漁場第三代，董事長特助蔡政群，在採訪時回憶童年。

立川漁場位在花蓮壽豐鄉，為全臺灣最大的蜆精原料供應商，市面上各大品牌蜆精所需的原料都是來自於他們。然而要打下這樣的一片天，一路走來對立川而言，都是極為可貴，且必須珍惜的成果。

“I remember wanting to buy a computer when I was a kid but couldn't for a long time. I later learned that my family was having a hard time dealing with debt.” Tsai Cheng-chun, the third generation of Li Chuan Aquafarm and special assistant to the chairman, recalled his childhood in the interview.

Li Chuan Aquafarm is located in Shoufeng Township, Hualien. It is the largest raw material supplier of clam essence in Taiwan. The raw materials required for all major brands of clam essence on the market come from them. However, to build such a business scale, every step along the way was a result that was extremely valuable for Li Chuan and is cherished.





「聽長輩說，我們是在票據所退換票紀錄保持的公司。」蔡政群分享父執輩創業的辛苦。為了研發蜆精，立川不僅投資了數千萬購買設備，一瓶僅 60 公克的蜆精，需要用上 200 顆生蜆熬製，在研發過程，每次的失敗，就是大量的成本耗費。當時，立川甚至發不出薪水，對比當時的處境，立川能擁有今日的成績，可說是得來不易。也因此，當談到永續時，他們幾乎是用盡全力的在落實。

從養殖的溪水說起，立川就下盡功夫。比如當你走到立川引進湧泉依溪而蓋的養殖場，見到四周長滿了茂密的雜草，就是因為立川堅持不灑除草劑的「後果」。

為維護水質，他們甚至自願幫周圍從事農業的業者除草；上游若有汙染，在下游養蜆就會受到影響，立川也會對周邊農民養殖畜牧的業者柔性勸導，希望能夠一起維護河川的乾淨。

“I heard from my elders that we are a company that holds the record for bounced checks at the clearing house.” Tsai Cheng-chun shared the hard work of his father’s generation in starting a business. To develop clam essence, Liu Chuan not only invested tens of millions of

NT\$ in purchasing equipment, but also required 200 raw clams to make a bottle of only 60 grams of clam essence. Every failure during the research and development process resulted in a large amount of cost. At that time, Li Chuan could not even pay employee salaries. It can be said that Li Chuan’s achievements today are hard-won. For this reason, when it comes to sustainability, they go to great lengths to implement it.

Starting from the breeding stream water, Li Chuan worked hard. For example, when you walk to the aquafarm where Li Chuan introduces spring water, you will see dense weeds growing all around. This is the “consequence” of Li Chuan’s insistence on not spraying herbicides.

To maintain water quality, they even voluntarily help to weed the land of the surrounding agricultural operators; if there is pollution upstream, clam farming downstream will be affected. Li Chuan also gently persuades the surrounding farmers and livestock operators to avoid pollution, hoping to work with them to maintain the cleanliness of the river.

立川採階梯式養蜆 不汙染環境，蜆更肥美

Li Chuan Raises Clams in a Stepped Manner without Polluting the Environment, and Making the Clams More Plump

立川不僅養蜆，也養臺灣鯛與貴妃魚。為了提高泉水的利用率、降低養殖對水質的汙染，他們採階梯式的循環養殖法。

首先，從製作蜆精開始，透過高溫蒸熟後，再經過其獨家的萃取技術，蜆肉水解後幾乎全部利用，生蜆生產完畢只剩蜆殼。惟蜆殼內有一些無法剝離的組織，再將蜆殼放到生物分解池來進行生物分解，蜆殼經過微生物分解發酵產生營養素後，再排入魚池裡；魚池有了營養素的滋養，會促進微藻繁殖，成為魚的養分來源之一，能減少魚飼料投放；最後，養在較高地勢的魚池，水會再流入下方蜆池，混和魚糞與富含藻類的水，就成了蜆的食物來源。蜆是濾食性生物，以藻類為食，經由蜆的過濾，最後排出養殖場的，是清澈的水。

這三個步驟，一來可減少廢棄物產生，二來能把水的汙染降到最低，最後，養出來的魚與蜆，都無比肥美，不僅自用，還能供應給許多五星級飯店。

Li Chuan not only raises clams, but also Taiwanese sea bream and silver perch. To improve the utilization rate of spring water and reduce the pollution of water caused by aquafarming, they adopted a stepped recirculating aquaculture system.

First of all, it starts with making clam essence, steaming the clams at high temperature, and then using its exclusive extraction technology. After the clam meat is hydrolyzed, almost all of it is used, and only the shell remains after the production of raw clams. There are only some tissues in the clam shell that cannot be peeled off. The clamshell is then placed in a biodegradation tank for biodegradation. After the clamshell is decomposed and fermented by microorganisms to produce nutrients, it is then discharged into the fish pond. The fish pond is nourished by nutrients that promote the reproduction of microalgae, one of the sources of nutrients for fish, which reduces the amount of fish feed required. Finally, the fish pond is located on higher ground, therefore the water flows into the clam pond below, and the fish feces and algae-rich water mixed with it are a food source for clams. As clams are filter-feeding organisms that feed on algae, after being filtered by clams, the final water discharged from the farm is clear water.

These three steps, firstly, reduce waste generation, secondly, minimize water pollution, and finally, the fish and clams raised are extremely plump; they are not only for personal use, they are also supplied to many five-star hotels.



零廢棄物循環經濟 蜆殼加工成清潔用品，環保又減碳

Zero-Waste Circular Economy: Shells are Processed into Cleaning Products, Which is Environmentally Friendly and Reduces Carbon Emissions

熬蜆精的蜆殼，由於富含碳酸鈣，經鍛燒加工，會產生天然鹼性成份，能夠殺菌、除臭、去污，立川於是與生技廠合作，每年有 14 萬噸的蜆殼會製成「貝殼鈣循環洗衣精」，還獲得法國 ECOCERT 天然有機認證，更因此減去達 3 萬 5,840 噸的碳。

立川想把永續的理念傳遞給更多人，休閒漁場已申請到荷蘭所發布的 GTS 綠色旅行標章 (Green Travel Seal)，讓旅客能在體驗摸蜆後，馬上吃到烤魚、各式蜆料理等，同時也能理解「當環境友善，飲食才會安全健康」的道理。

「我們的蜆飽滿金黃，都是花蓮這個美好環境給我們的。」蔡政群認為，除了自己努力，立川更感念天地，數十年來都能養出好蜆，成為臺灣最大蜆精供應商，讓立川持續永續經營。

The clam shells boiled to make clam essence are rich in calcium carbonate. After calcining, they produce natural alkaline components, which can sterilize, deodorize and decontaminate. Li Chuan cooperates with a biotechnology factory to dispose of 140,000

tons of clam shells every year. The “Shell Calcium Circular Laundry Detergent” has also obtained the French ECOCERT natural and organic certification, thus saving 35,840 tons of carbon.

Li Chuan wants to convey the concept of sustainability to more people. The recreational fishery has applied for the Green Travel Seal (GTS) issued by the Netherlands, allowing tourists to eat grilled fish and various kinds of clam dishes immediately after experiencing clamming, and at the same time, also understand the principle of “when the environment is friendly, food will be safe and healthy.”

“Our clams are plump and golden, and they are all given to us by the beautiful environment of Hualien.” Tsai Cheng-Chun believes that in addition to his own efforts, Li Chuan should also be grateful to the earth for allowing him to raise good clams for decades, become the largest clam essence supplier in Taiwan, and continue to operate sustainably.





立川漁場 Li Chuan Aquafarm

成立時間：1963 年

Date of establishment: 1963

全球黃金蜆唯一製造原廠

The only original manufacturer of golden clams (*Corbicula fluminea Formosa*) in the world



花蓮縣壽豐鄉魚池 45 號

No. 45, Yuchi, Shoufeng Township,
Hualien County



0800-007-111 / 03-865-1333



www.lichuan.tw





促進魚池藻類繁殖，吃了藻類與綠色飼料的魚肥美肉質好，販售至飯店及餐廳

Encourage the growth of algae in the fish pond. Fish that eat algae and green feed become plump, have good meat quality and are sold to hotels and restaurants.



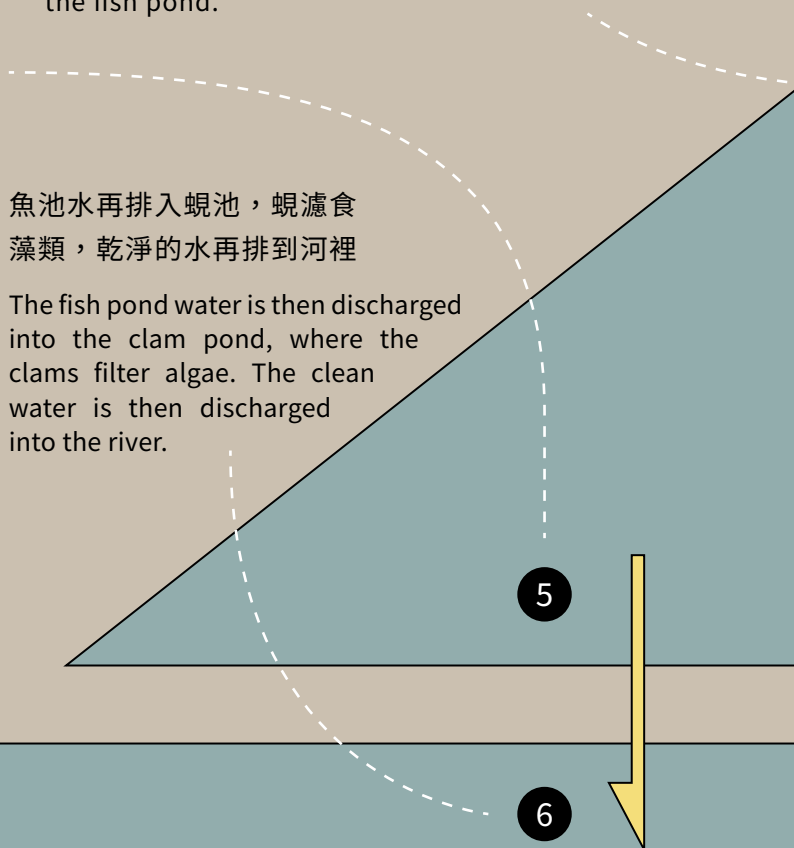
蜆肉經分解排入魚池

The clam meat is decomposed and discharged into the fish pond.



魚池水再排入蜆池，蜆濾食藻類，乾淨的水再排到河裡

The fish pond water is then discharged into the clam pond, where the clams filter algae. The clean water is then discharged into the river.

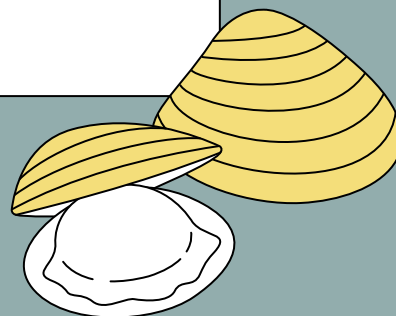


立川漁場

Li Chuan Aquafarm

循環養殖法

Recirculating Aquaculture System





2

投入生物分解池後，再放置4個月

After putting it into the biodegradation tank, leave it for another 4 months.



1

先將製造蜆精後的廢料放置4個月

First, place the waste materials after producing clam essence for 4 months.



7



7

蜆殼經回收做成清潔劑，
年減碳3萬5,840噸

Clamshells are recycled into detergent,
reducing carbon emissions by 35,840 tons
per year.

明亮、寬敞、潔淨 更像商店街的夜市

*Bright, Spacious, and Clean –
A Night Market More Like a Shopping Street*

東大門國際觀光夜市

Dongdamen International Tourist Night Market



花蓮做為全臺得天獨厚的旅遊勝地，有浩瀚海洋、景色秀麗的縱谷和多樣的人文面貌，好玩、好看的選擇何其多。所有遊客來到花蓮，一定不會錯過的地方，非「東大門國際觀光夜市」莫屬，因為這裡不僅有各國美食小吃，讓人大飽口福，還堪稱是「全臺最舒服的夜市」。

位於花蓮市六期重劃區的東大門夜市，範圍橫跨自強夜市、福町夜市、各省一條街和原住民一條街等四大區域，約有 400 個攤位，自 2015 年起，以美食小吃、遊戲與表演陣容，打響名氣，每年吸引逾 200 萬人次遊客造訪。而東大門會變身為「環保夜市」，主要是 2020 年全球遭遇新冠肺炎疫情衝擊，花蓮縣政府為迎接疫後的觀光人潮，特地將東大門夜市結合環境保護議題，致力提供觀光客低碳環保、潔淨優質的夜市體驗。

Hualien, a uniquely blessed travel destination in Taiwan, boasts vast oceans, picturesque valleys, and a rich cultural tapestry, offering countless attractions and activities. Among all the must-visit places in Hualien, the “Dongdamen International Tourist Night Market” stands out as one that no visitor should miss. It not only offers a wide variety of international delicacies to satisfy every palate, but is also known as “the most comfortable night market in Taiwan.”

Located in the Phase 6 Redevelopment Area of Hualien City, Dongdamen Night Market covers four major sections: Zhiqiang Night Market, Futing Night Market, Mainland China Cuisine, and Taiwanese Indigenous Cuisine, with approximately 400 stalls. Since its establishment in 2015, the market has become famous for its diverse offerings of food, games, and performances, attracting more than 2 million visitors annually. Dongdamen has also been transformed into an “eco-friendly night market,” primarily due to the global impact of the COVID-19 pandemic in 2020. To welcome the post-pandemic surge in tourism, the Hualien County Government integrated environmental protection into the Dongdamen Night Market, striving to provide tourists with a low-carbon, environmentally friendly, clean, and high-quality night market experience.



攤商配合、遊客接受 逐步邁向環保夜市

Vendors Cooperate, Tourists Adapt: Stepping Toward an Eco-Friendly Night Market

「減量一次性商品政策」，已是行之有年的基本政策，走近各個攤位，會發現貼有「不提供免費塑膠袋」、「不使用一次性餐具」等標語。遊客若自備餐盒、飲料杯，有的攤商會給予折扣，也有「加量不加價」的選擇；東大門夜市與非營利組織合作，讓有需要塑膠袋的遊客將費用放到愛心捐款箱，為公益盡一份心。各省一條街管理委員會主委沈英基觀察，目前實行下來，真的會購買塑膠袋的，大約有三成，其他民眾則會自帶杯子、塑膠袋，「遊客其實頗配合，大家都愈來愈習慣。」

東大門國際觀光夜市暨原住民產業技能發展協會理事長陳福松另外提到，東大門夜市還設有「環保餐具租借服務」，並設置餐具公共洗滌區，每年約可減少約 70 萬個免洗餐具；2025 年環保餐具清洗中心啟用後，餐具會經過更專業、嚴格的標準清洗流程，徹底洗淨殺菌，讓遊客吃、用都更開心與安心。

攤商也嚴格自我要求，除了確實做好垃圾分類、資源回收，更為了避免空氣和水污染，所有飲食攤位都裝設了靜電排油煙機和油水分離器，下水道還設有接油槽，每月固定委外清理。

The “Reduction of Single-Use Products Policy” has been a basic practice for years. As you walk by each stall, you’ll notice signs such as “No Free Plastic Bags” and “No Disposable Utensils Provided.” Tourists who bring their own containers or drinking cups may receive discounts or “more for the same price” offers from some vendors. In addition, the Dongdamen Night Market has partnered with nonprofit organizations to allow tourists who need plastic bags to contribute the cost to a charity donation box, supporting a good cause. According to Shen Ying-ji, the chairman of the Mainland China Cuisine Management Committee,

about 30% of customers still purchase plastic bags, while the rest bring their own cups and bags. “Tourists are actually quite cooperative, and everyone is getting more accustomed to it,” he observed.

Chen Fu-song, the chairman of the Dongdamen International Tourist Night Market and Indigenous Industry Skills Development Association, also mentioned that the night market offers an “Eco-Friendly Utensil Rental Service” and has established a public utensil washing area, reducing the number of disposable utensils by about 700,000 per year. When the Eco-Friendly Utensil Washing Center opens in 2025, the utensils will go through a more professional and rigorous cleaning process, ensuring thorough disinfection and giving tourists greater peace of mind.

Vendors also hold themselves to high standards, not only in the proper sorting of waste and recycling, but also in the prevention of air and water pollution. All food stalls are equipped with electrostatic oil fume extractors and grease traps, and there are grease traps in the sewers, which are cleaned monthly by external services.



福町夜市與自強夜市更進一步參與經濟部「市集綠色低碳輔導計畫」，至 2024 年 4 月，共安裝 60W 太陽能燈具 226 組，經過白天 10 多個小時的陽光照射，所儲蓄的能量點亮了夜晚的市集，不需耗費額外的電力及費用，根據經濟部統計，每組燈具每年可節省 131.4 度電，226 組共省下 2 萬 9,696.4 度電，約可減少 1 萬 4,400 公斤 CO₂e 排放。

但所謂萬事起頭難，從未試過這些環保舉措的攤商，究竟是如何認同理念、進而一起投入？

「當然要從主委開始帶頭做！」自強夜市管理委員會主委呂佩芹笑稱，像是推動裝設太陽能燈具時，她自己就率先示範，讓其他攤商看到成效，大家就紛紛開始動起來。

原住民一條街管理委員會主委楊秋農也發現，完善硬體與環境後，要攤商不要用靜電排油煙機和油水分離器，「他們還會不習慣，左鄰右舍也會抗議。」

考量到夜市經常有攜家帶眷的家庭客，不僅無障礙廁所、哺（集）乳室是標準配備，夜市旁還設有共融公園，裡頭的綠蔭草皮、親子遊樂區，是小孩的最佳放電處。呂佩芹強調，如果女性臨時遇到生理期，自強夜市管委會還會貼心提供衛生棉，讓有需要的民眾前往攤位免費領取。

Moreover, Futing and Ziqiang Night Markets have participated in the Ministry of Economic Affairs' "Green and Low-Carbon Market Guidance Program." By April 2024, they will

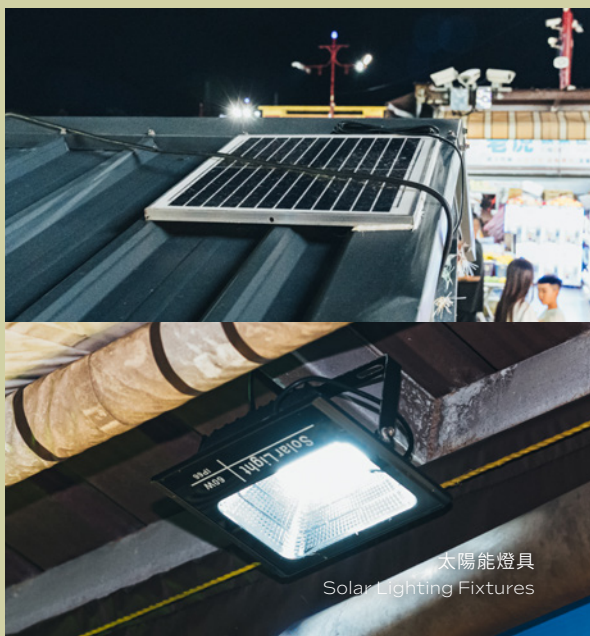
have installed 226 sets of 60W solar lights. After charging for over 10 hours in the sun during the day, the stored energy lights up the night market without consuming additional electricity or incurring costs. According to the Ministry of Economic Affairs, each light set saves 131.4 kWh per year, and the 226 sets together save 29,696.4 kWh, reducing CO₂e emissions by approximately 14,400 kilograms.

However, as the saying goes, "the first step is the hardest." How did the vendors, who had never tried these environmental measures, come to embrace the concept and actively participate?

"It definitely starts with the chairperson leading by example!" joked Lu Pei-chin, the chairwoman of the Ziqiang Night Market Management Committee. For instance, when promoting the installation of solar lights, she was the first to demonstrate, showing the other vendors the benefits, and soon everyone got involved.

Yang Qiu-nong, chairman of the Taiwanese Indigenous Cuisine Management Committee, also noted that after improving the infrastructure and environment, vendors would find it difficult to do without the electrostatic oil fume extractors and grease traps. "They've gotten used to it! Even their neighbors would protest if they didn't use them," he said.

Considering that families with children often visit the night market, not only are accessible toilets and nursing rooms standard facilities, but there is also an inclusive park next to the night market. The park, with its shaded lawns and playgrounds, is the perfect place for children to burn off energy. Lu Pei-chin emphasized that if a woman unexpectedly needs sanitary pads during her visit, the Ziqiang Night Market Management Committee thoughtfully provides them for free at the stalls.



太陽能燈具
Solar Lighting Fixtures

有開放、在地的夜市感 也有寬敞、舒適的商店街氛圍

An Open, Local Night Market Feel with the Spacious, Comfortable Atmosphere of a Shopping Street

東大門夜市隨時都處於最乾淨、最環保、一切都準備好的狀態，迎接觀光人潮。原任原住民一條街主委的陳福松，今年接下新成立的東大門國際觀光夜市暨原住民產業技能發展協會理事長一職，就是期望開設手工藝、美食等多元課程，強化攤商技能、提升產品創意，「讓他們以後能推出更豐富、更受歡迎的產品。」

福町夜市管理委員會主委曾黃家明認為，東大門夜市寬敞、舒適，逛起來舒服、不擁擠，「我們其實已經不太像夜市了，反而更像商店街，和百貨商場相較，我們更開放、更在地。」他透露，儘管東大門夜市榮獲優良市集的殊榮，幾位主委仍會固定組團去外縣市參訪，學習他人長處、持續精進；同時，也有許多其他縣市的夜市會組團前來拜訪，期盼全台夜市都能落實節能減碳，共同推動永續發展。

Dongdamen Night Market is always in its cleanest, most eco-friendly, and fully prepared state, ready to welcome waves of tourists. Chen Fu-song, the former chairman of Taiwanese

Indigenous Cuisine, has taken on the new role of president of the Dongdamen International Tourist Night Market and Indigenous Industry Skills Development Association. He aims to introduce a variety of courses in handicrafts, culinary arts, and more to enhance the skills of vendors and boost product creativity. “This will enable them to offer even richer and more popular products in the future,” he said.

Zeng Huang Jia-ming, the chairman of the Futing Night Market Management Committee, believes that Dongdamen Night Market is spacious and comfortable, making it enjoyable to walk around without feeling crowded. “Actually, we don’t resemble a typical night market anymore; we’re more like a shopping street. Compared to department stores, we’re more open and local,” he explained. Although Dongdamen Night Market has been recognized as an outstanding market, several committee leaders regularly organize visits to other counties and cities to learn from others and continue to improve. Meanwhile, many night markets from other regions also visit Dongdamen, hoping that night markets across Taiwan can implement energy-saving and carbon-reducing practices, collectively promoting sustainable development.



照片左起為呂佩芹主委、沈英基主委、楊秋農主委、曾黃家明主委、陳福松理事長

From left in the photo: Chairperson Lu Pei-Chin, Chairperson Shen Ying-Chi, Chairperson Yang Chiu-Nung, Chairperson Tseng Huang Chia-Ming, Chairman Chen Fu-Sung



東大門國際觀光夜市 Dongdamen International Tourist Night Market

成立時間：2015 年

Date of establishment: 2015

由自強夜市、福町夜市、各省一條街和原住民一條街組成的逾 400 個美食、購物攤位

Comprising over 400 food and shopping stalls, including Ziqiang Night Market, Futing Night Market, Mainland China Cuisine, and Taiwanese Indigenous Cuisine.

花蓮市重慶路 572 號

No. 572, Chongqing Rd., Hualien City

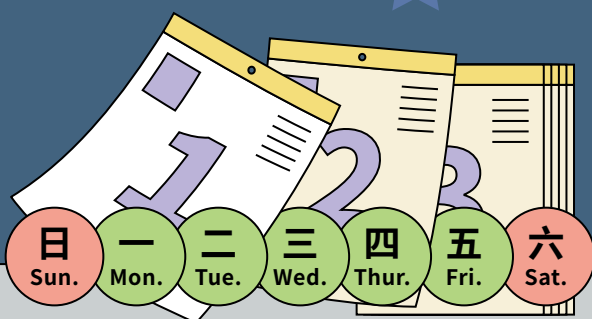


花蓮東大門國際觀光夜市

Hualien Dongdamen International Tourist Night Market

一分鐘帶你認識
Get to Know in One Minute

營業時間 Business Hours



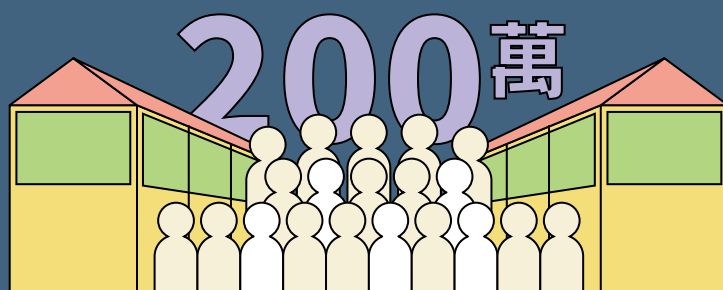
週一至週日每天皆有營業

The Dongdaemun Night Market operates daily, Monday through Sunday.

週一至週四 Mon.—Thu. 17:30—22:30

週五至週日 Fri.—Sun. 17:00—23:00

遊客人數 Tourist Numbers



近三年平均年遊客人次破200萬人次

In the past three years, the average annual number of tourist has exceeded 2 million.

經濟部優良市集星等評比 Ministry of Economic Affairs Excellent Market Star Rating

2018 2019 2020 2022 2023

2018-2020年度 3星優良市集

2018-2020: 3-star Excellent Market

2022年度 4星優良市集

2022: 4-star Excellent Market

2023年度 5星優良市集

2023: 5-star Excellent Market

社會福利 Social Welfare

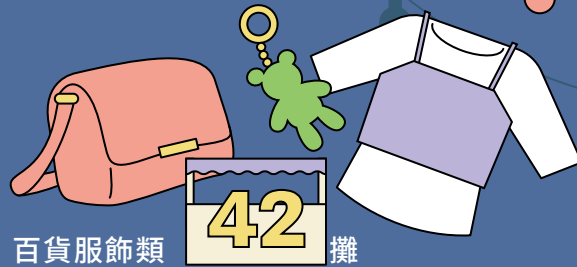
配合縣府教育政策，攤商自發性提供考試滿分之學童可於夜市兌換點心以資鼓勵。

In support of the county government's education policy, vendors voluntarily offer snacks at the night market to encourage students who score full marks on their exams.

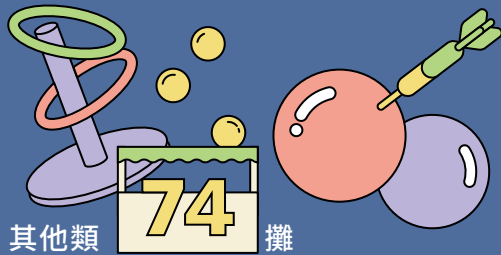
攤位概況 Stall Overview



餐飲類 268 攤
Food and Beverage: 268 stalls



百貨服飾類 42 攤
Department Store and Apparel: 42 stalls



其他類 74 攤
(如：遊戲類、勞務類的攤位)
Others (e.g., games, services): 74 stalls



公攤 5 攤 (為縣府及各區管委會的服務攤位)

Public (county government and district management committee service stalls): 5 stalls

資料來源：花蓮縣政府觀光處 113年8月

Source: Hualien County Government Tourism Department, August 2024

節能減碳措施

Energy Conservation and Carbon Reduction Measures

✓ 節能 Energy Conservation

全區路燈照明將更換為**LED燈**、設置**大眾運輸**站點
All street lights are being replaced with LED lights, and public transportation stops are being set up.



✓ 節水 Water Conservation

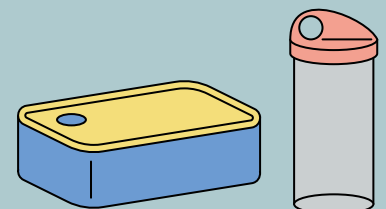
全區廁所使用**兩段式**沖水馬桶
Dual-flush toilets are installed in all restrooms.

✓ 設置環保餐具租借中心

An eco-friendly tableware rental center

提供有需求之民眾租借，每年約可**減少70萬**個免洗餐具

The center offers rentals to those in need, reducing the use of disposable tableware by approximately 700,000 pieces annually.



✓ 減廢 Waste Reduction

鼓勵民眾**自備容器**、輔導攤商提供非一次性餐具
The public is encouraged to bring their own containers, and vendors are guided to offer non-disposable tableware.



✓ 減塑 Plastic Reduction

攤商不得免費提供塑膠袋、輔導攤商提供**非一次性**餐具
Vendors are prohibited from providing free plastic bags and are guided to offer non-disposable tableware.

咬一口杜倫 嚐出原民歷史與文化

A Bite of Duren: Savoring Indigenous History and Culture

阿美麻糬

Amis Mochi



1970年，出生宜蘭的余宗柏，由於對傳統美食和原住民文化的熱愛，舉家移居花蓮，創立「阿美麻糬」，投入麻糬的製作，成為花東首家使用小米材料的名特產品牌，如今擁有多家門市、主題館和文化館，「創辦人對於傳統美食有著深厚情感，堅信麻糬做為臺灣的傳統點心，蘊含了豐富歷史與文化意涵。我們製作與販售麻糬，正是希望傳承與發揚傳統點心，讓更多人能品嚐具有歷史與文化價值的美食。」阿美麻糬副總經理陳立華強調，花蓮與麻糬的淵源密切，阿美族人稱「麻糬」為「杜侖」，通常是只有慶典、節日時才吃得到的名貴點心，而阿美麻糬為了傳承杜侖，不僅努力讓產品變得更精緻，也不斷運用在地食材，發展多元口味與產品，包括麻糬、麻卡龍石頭餅、地瓜頭目，到仿照傳統「包袱巾」手法製成的小雞醬蛋捲，都別有用心。

In 1970, Yu Zhong-bo, born in Yilan, moved his family to Hualien out of his love for traditional food and indigenous culture. He founded “Amis Mochi,” becoming the first brand in the Hualien-Taitung area to use millet as a key ingredient. Today, the brand has multiple stores, theme pavilions, and cultural centers. “Our founder’s deep affection for traditional food and his belief that mochi, as a traditional Taiwanese snack, carries rich historical and cultural significance, drives our mission. By making and selling mochi, we hope to preserve and promote traditional snacks, allowing more people to taste this historically and culturally valuable delicacy,” said Chen Li-hua, Deputy General Manager of Amis Mochi. Mochi, called “Duren” by the Pangcah people, is a prestigious treat usually enjoyed only during celebrations and festivals. Amis Mochi strives to refine this delicacy and develop various flavors and products using local ingredients, including Mochi, Makeloh Stone Cake, Sweet Potato “Toumu,” and delicate Phoenix Egg Roll traditionally wrapped like “furoshiki.”



運用在地食材 研發特色產品

Using Local Ingredients to Create Unique Products

花蓮做為臺灣的農業大縣，有生產製作麻糬所需要的紅粟米（紅糯米）、小米，還有洛神、金針、地瓜等優良的農特產品，「秉持與在地農民共好的願景，我們將花蓮的農特產品都投入研發。」陳立華舉例，像是運用傳統古法、結合花蓮在地生產的台農 57 號、66 號、68 號和花蓮 1 號等四種地瓜製成的地瓜頭目，就有「地瓜甜點的 LV」之稱；麻卡龍石頭餅則源自於花蓮「石頭多」的特色，花蓮有豐田玉、玫瑰石，如何讓在地石頭和食材結合？師傅想到，褐紅的玫瑰石色近洛神，不如加入洛神，並運用擻揉技法，讓糕點呈現石頭的紋路，行銷團隊發想名稱時，恰巧發現阿美族語的「石頭」為「麻卡龍（Makeloh）」，麻卡龍石頭餅就這麼誕生了，「許多遊客看到麻卡龍石頭餅，第一反應都是『能吃嗎』？結果嚐過後就停不下來了。」

Hualien, a major agricultural county in Taiwan, produces red glutinous rice, millet, and other excellent agricultural products such as roselle, daylily, and sweet potato. “With a vision of mutual benefit with local farmers, we incorporate Hualien’s agricultural products into our research and development,” Chen said. For example, their sweet potato “Toumu,” which is made using traditional methods and four local sweet potato varieties (Tainong 57, 66, 68, and Hualien No. 1), is dubbed the “LV of sweet potato desserts.” The Makeloh Stone Cake, inspired by Hualien’s abundant stones like rose stone and Fengtian jade, is made with roselle to mimic the texture and color of the stone. The name “Makeloh” was discovered to mean “stone” in the Pangcah language, giving birth to the product. “Many tourists initially wonder if the Makeloh stone cakes are edible, but once they taste them, they can’t stop,” Chen added.





為了做好產品，也為了保護和推廣阿美族文化，阿美麻糬團隊不僅持續支持文化活動，還親自走進部落，參與成年祭、豐年祭等慶典。在慶典中藉著與部落交流，瞭解原住民早期吃的食物，是如何變成現今的特色美食；聆聽、欣賞阿美族的傳統樂舞後，再回頭將之融入產品研發、包裝與賣場的氛圍營造，進而讓更多人有機會欣賞到阿美族的文化。

陳立華提到，阿美族的服飾、織品，都喜歡以紅色為底，搭配象徵祖靈護佑、祈福的圖騰紋路，於是團隊將部落的圖騰紋路設計到包裝上，「這其實是提升品牌價值的一個企業識別。消費者都是先用眼睛看，當目光受到吸引時，他們才會想要進一步了解產品、食材和文化。」



To create quality products and promote the Pangcah culture, the Amis Mochi team actively supports cultural events and participates in celebrations such as adulthood and harvest festivals. Through these events, they learn how traditional indigenous foods evolved into today's specialties. By experiencing Pangcah traditional music and dance, they integrate these elements into product development, packaging, and store ambiance, allowing more people to appreciate Pangcah culture.

Chen Li-hua mentioned that Pangcah clothing and textiles often feature red backgrounds with totem patterns symbolizing ancestral protection and blessings. The team incorporated these totem designs into their packaging. "This enhances our brand value as a corporate identity. Consumers use their eyes first; when something catches their attention, they're more likely to want to learn about the product, ingredients, and culture."

DIY 親手做杜侖 讓大眾認識原民文化

Promoting Indigenous Culture through DIY Experiences

在阿美小米文化館內，還有 DIY 體驗活動，讓民眾運用縮小版的木杵、木臼，親自將「米」捶打成杜侖接著加入紅豆、花生等餡料，變成自己喜歡的口味，等於有玩又有吃。陳立華透露，不只提供遊客參與體驗活動，阿美麻糬平常也和在地國中、國小合作，將文化體驗納入校外教學的一環，讓學生們親身感受阿美族的文化。如今，阿美麻糬團隊甚至會帶著一鍋蒸好的米飯和器材，直接前進校園，指導學生製作杜侖，「我們提供環境與器材，讓孩子從小就認識杜侖，理解不同的文化，藉此學會彼此尊重、包容。」

平常若有外賓參訪，負責迎賓、介紹杜侖與花蓮在地食材的「靈魂人物」，就是阿美麻糬的員工了，陳立華微笑說，「我們的同仁有一半都是在地原住民喔！我們就像一家人，在阿美麻糬這個舞台裡，彼此學習、共同進步。」

此外，阿美麻糬也格外照顧鄉親與學子，只要在地人購買產品，都能享有優惠；團隊甚至將這份愛擴及酷兒同志，與花蓮彩虹酷兒友善聯盟合作，消費者出示《彩虹酷兒同志友善店家》手冊的優惠內頁，同樣可以獲得折扣優惠。近來，阿美麻糬正在積極研議「節能減碳」議題，之後預計展開碳盤查，從生產、包裝等環節，尋找減碳的方式，「我們更關注的，並非單指產品本身獲得的價值，而是文化的傳承與社會責任的實踐。」

The Amis Millet Culture Museum offers DIY activities where visitors use mini wooden pestles and mortars to pound rice into Duren, then fill it with red beans, peanuts, or other ingredients. This hands-on experience is both fun and tasty. Chen Li-hua revealed that Amis Mochi collaborates with local schools, integrating



cultural experiences into field trips, allowing students to experience Pangcah culture firsthand. The team even brings steamed rice and equipment to schools, guiding students in making Duren, fostering cultural understanding and respect from a young age.

When hosting international guests, Amis Mochi's employees, many of whom are local indigenous people, take pride in introducing Duren and local ingredients. "Our team is like a family, learning and growing together at Amis Mochi," Chen smiled.

Additionally, Amis Mochi extends special care to locals and students, offering discounts on products. They also support the LGBTQ+ community by partnering with the Hualien Rainbow Queer-Friendly Alliance, providing discounts to customers presenting the "Rainbow Queer-Friendly Stores" handbook. The team is actively exploring energy-saving and carbon

reduction initiatives, planning carbon audits to find ways to reduce emissions throughout production and packaging processes. "Our focus is not just on the value of the product itself, but on cultural preservation and fulfilling social responsibility," Chen concluded.



阿美麻糬 Amis Mochi

成立時間：1970 年

Date of establishment: 1970

花東首家使用小米材料的名特產品牌，著名產品包括麻糬、麻卡龍石頭餅、地瓜頭目等

The first brand in Hualien-Taitung to use millet in specialty products. Famous products include Mochi, Makeloh Stone Cake, and Sweet Potato "Toumu."

小米文化館 Millet Culture Pavilion

花蓮縣吉安鄉南濱路一段 258 號 No. 258, Sec. 1, Nanbin Rd., Ji'an Township, Hualien County

中華店 Zhong Hua Store

花蓮市中華路 123 號 No. 123, Zhonghua Rd., Hualien City

站前概念店 Station Front Concept Store

花蓮市國聯三路 2 號 No. 2, Guolian 3rd Rd., Hualien City

站中門市 Zhan Zhong Store

花蓮市國聯一路 100 號 No. 100, Guolian 1st Rd., Hualien City

光復糖廠小米主題館 Hualien Sugar Factory Millet Theme Pavilion

花蓮縣光復鄉大進村糖廠街 19-6 號 No. 19-6, Tangchang St., Dajin Village, Guangfu Township, Hualien County

0800-420-033

www.amis-mochi.com.tw



高標準把關食安 成就百年品牌

Upholding High Standards in Food Safety to Build a Century-Old Brand

德利

德利豆乾

Derli Food

「做人要像豆腐一樣，心要柔軟。做事要像滷豆乾，滷到徹底，才會入味。」德利豆乾劉經理拿起自家產品，簡單卻深入人心的兩句話，直指這個自 1925 年起成立的品牌，至今不變的信念。

當年，德利豆腐店的創辦人廖金火，從臺北新店移居花蓮，每日清晨即起，跟著遠房親戚在蒸氣和高溫下學做豆腐，接著再挑著豆腐沿街叫賣。之後，豆腐店一路交棒至第二代廖樹根、第三代廖文雄，不同世代的傳人，依據消費趨勢變化、飲食習慣改變，逐步將販售品項擴增至豆乾、白梅和剝皮辣椒等。如今，品牌由第四代的廖堯宇接手，持續傳承「德可潤身，利足健民」的「德利」精神。

“One should be as soft-hearted as tofu and as thorough in their work as braised dried tofu to achieve true flavor.” Liu, the manager of Derli Food, succinctly captures the enduring belief of the brand, which has remained unchanged since its founding in 1925.

Back then, the founder of Derli Food, Liao Jin-huo, moved from Xindian, Taipei, to Hualien. Every day at dawn, he would rise early to learn the art of making tofu under the steam and heat alongside a distant relative, and then peddle the tofu on the streets. The tofu shop was later passed down to the second generation, Liao Shu-gen, and then to the third generation, Liao Wen-shiung. With each new generation, the product offerings expanded to include dried tofu products, preserved plums, and peeled chili peppers, in response to changing consumer trends and dietary habits. Today, the brand is managed by the fourth generation, Liao Yao-yu, who continues to uphold the “Derli” spirit—“Virtue (德, Der) nurtures the body, profit (利, Li) benefits the people.”



豆乾



【花蓮·八十年老店】

DER-LI 80th





廖堯宇的太太、德利豆乾經理劉佩吟進一步解釋，開山祖師廖金火最早僅販售豆腐，是到了第三代掌門人廖文雄，在前往臺南學習肉類加工與調味手法後，才調製出由純中藥煉成的「陳年秘方滷湯」。豆乾會在滷湯中浸泡一夜、調製加工，最終成就老少皆宜的小零嘴，「不論商品如何演進，不變的，永遠是我們對『食安』的要求與堅持。」她強調。

Liu Pei-yin, the wife of Liao Yao-yu and manager of Derli Food, further explained that the founder, Liao Jin-huo, initially only sold tofu. It was not until the third generation, when Liao Wen-shiung traveled to Tainan to learn meat processing and seasoning techniques, that the “aged secret recipe braising sauce” made from pure Chinese medicinal herbs was developed. The tofu is soaked in the braising sauce overnight and then processed to become a snack that is beloved by all ages. “No matter how our products evolve, our unwavering commitment to Food Safety remains constant,” she emphasized.

攜手供應鏈廠商 嚴格把關食品安全

Partnering with Suppliers to Strictly Ensure Food Safety

過去德利豆乾的工廠隱身在傳統市場內，近20多年來，隨著衛生法規日益調整，廖堯宇認為，要是再不遷廠、不增添自動化設備，恐怕會跟不上法規對食安的要求，因此團隊決定將工廠搬往工業區，並設置半自動化設備，建立高標準的食安品管流程，以及符合衛生規範的生產線。

劉佩吟提到，儘管添購了半自動化設備，由於黃豆是季節性食材，被壓製成粗胚時，還是會根據天氣、濕度、溫度，呈現不同狀態，因此品管仍然相當重要，要是品質看來與先前有異，產線的溫度、時程則必須據此調整，「等於我們的內場團隊要發揮經驗，時時留意食材狀態。」

製程上，上游廠商會協助將非基改的黃豆磨製成漿、壓成豆皮，再交由德利豆乾團隊裁切，進行滷製調味。光是這小小一塊豆皮，就有嚴格的要求，尺寸必須固定，不能添加食用色素、染色，也不能過於濕軟，要是不合規定，一律退回；廠商洗滌器具時，禁止使用鋼刷，以免鋼屑不慎掉入豆皮裡，引發食安疑慮，「可以說我們很『龜毛』，但歸根究柢，是因為我們對品質有百分百的要求。」劉佩吟笑稱，起初廠商多有反彈，但經過不斷溝通，加上出爐的豆乾實在美味，廠商多能認同德利豆乾的堅持。更重要的是，在與德利豆乾磨合、試煉後，如今廠商出去做其他生意，都變得格外容易，「其實就是彼此一起進步、邁向『共好』。」

在要求品質、傳承手藝之外，每一代經營團隊都深知，品牌要能與時俱進，才不至於被大環境淘汰。因此，為了滿足消費者求新求變的心態，同時秉持協助推廣在地產品的理念，德利豆乾會將花蓮在地的農特產加入豆乾，研製各種新品。像是向瑞穗小農訂購有原住民胡椒之稱、具有特殊香氣的「馬告」，研發馬告口味的豆乾；近幾年，因瑞穗文旦柚產量豐盛，也研發了清爽的柚香豆乾，頗受消費者歡迎，「花蓮在地的農特產品，我們都會拿來試試，要是覺得口味不錯，就會變成新品。」

In the past, Derli Food’s factory was hidden within a traditional market. Over the past 20 years, as health regulations have increasingly tightened, Liao Yao-yu realized that if they did not relocate the factory and introduce automated equipment, they would likely fall short of the food safety standards. Therefore, the team decided to move the factory to an industrial zone, install semi-automated equipment, and establish high-standard food safety quality control processes, along with a production line that meets hygiene regulations.

Liu Pei-yin mentioned that despite the introduction of semi-automated equipment, quality control remains crucial because soybeans, as a seasonal ingredient, exhibit different conditions depending on the weather, humidity, and temperature during the pressing process. If the quality appears different from before, the temperature and timing of the production line must be adjusted accordingly. “Our internal team must use their experience to constantly monitor the state of the ingredients,” she noted.

During production, upstream suppliers assist in grinding non-GMO soybeans into soy milk and pressing them into tofu skins, which are then cut and braised by the Derli Food team. Even a small piece of tofu skin must meet strict requirements: it must have a consistent size, cannot contain artificial colors, and must not be too wet or soft. If the product does not meet these standards, it is returned. Additionally, suppliers are prohibited from using steel brushes when cleaning utensils to prevent steel filings from accidentally falling into the tofu skin and causing food safety concerns. “We may be picky, but it’s because we have a 100% commitment to quality,” Liu Peiyin laughed, adding that while suppliers initially resisted, continuous communication and the deliciousness of the final dried tofu product eventually won them over. More importantly, after working with Derli

Food and going through these trials, suppliers found that doing business with others became much easier. “It’s really about mutual progress and striving for a win-win situation.”

In addition to ensuring quality and preserving craftsmanship, each generation of the management team understands the importance of keeping the brand current to avoid being left behind by the evolving market. To meet consumers’ desire for new and innovative products while also promoting local goods, Derli Food incorporates Hualien’s local agricultural products into their dried tofu and develops various new flavors. For instance, they source “maqaw,” a pepper with a distinctive aroma known as the indigenous pepper, from small farmers in Ruisui and have created a maqaw-flavored dried tofu. In recent years, due to the abundant production of pomelos in Ruisui, they have also developed a refreshing pomelo-flavored dried tofu, which has been well received by consumers. “We try all the local agricultural products from Hualien, and if we think the flavor is good, it becomes a new product.”





重視多元平等 團隊有一半在地同仁

Emphasizing Diversity and Equality – Half the Team are Local Employees

走進德利豆乾門市，會發現工作夥伴中，有一半在地原住民，其中還不乏二度就業的婦女。劉佩吟強調，德利豆乾相當重視員工福利和多元平等議題，「只要個性外向、適合服務業的工作，我們一律歡迎。」團隊還經常參與公益團體舉辦的活動，也與花蓮彩虹酷兒友善聯盟合作，消費者若出示《彩虹酷兒同志友善店家》手冊的優惠內頁，便能獲得優惠。

近年，全球因應氣候暖化議題，政府、企業紛紛吹起「永續風」，德利豆乾同樣積極響應，一方面不主動提供消費者一次性塑膠袋，團隊還開始將尺寸不符但風味一樣的豆乾，另外包裝為特價品，大幅減少食材浪費，而那些最入味又物超所值的豆乾，還特別受到消費者喜愛。

劉佩吟透露，最近團隊甚至上起碳盤查課程，計畫在了解更多淨零碳排的知識後，再實際落實到德利豆乾，「我們期望盡一份心力，與花蓮、與這片土地，一起共創永續的生活環境。」

Upon entering a Derli Food store, you'll notice that half of the employees are local indigenous people, including many women returning to the workforce. Liu Pei-yin emphasized that Derli Food places great importance on employee welfare and issues of diversity and equality. "As long as someone has an outgoing personality suited to the service industry, we welcome them." The team frequently participates in activities organized by charitable organizations and collaborates with the Hualien Rainbow LGBT-Friendly Alliance. Customers who present the "Rainbow LGBT-Friendly Stores" manual can enjoy special discounts.

In recent years, as governments and companies around the world respond to climate change by promoting sustainability, Derli Food has also actively responded. For instance, they no longer offer single-

use plastic bags to consumers, and they've started repackaging dried tofu that doesn't meet size specifications but retains the same flavor as discounted items, significantly reducing food waste. These especially flavorful and cost-effective dried tofu products have become particularly popular with consumers.

Liu Pei-yin revealed that the team has even started taking carbon inventory courses recently, planning to implement what they learn about net-zero carbon emissions into Derli Food's operations. "We hope to contribute our part in creating a sustainable living environment together with Hualien and this land."



德利豆乾 Derli Food

成立時間：1925 年

Date of establishment: 1925

豆乾、梅子、剝皮辣椒等零嘴、點心和醬料

Dried tofu, preserved plums, peeled chili peppers, as well as other snacks, delicacies, and sauces



總店 Main Store

花蓮市大禹街 6 號 No. 6, Dayu St., Hualien City

站前店 Station Front Store

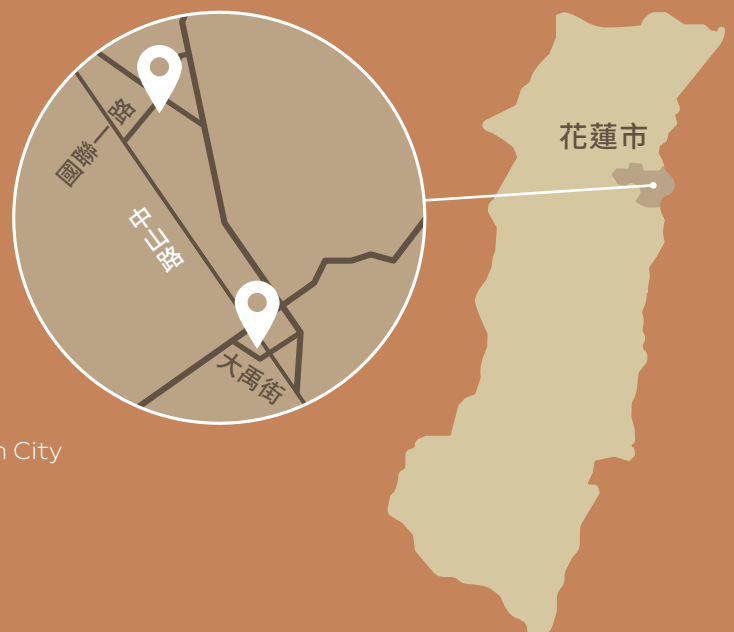
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臺灣基督門諾會 門諾醫
醫療財團法人
Mennonite Christian Hosp



全臺首支「門諾巡迴醫療隊」在1948年成立時，儘管當時還沒有聯合國永續發展目標（SDGs）、ESG（環境保護、社會責任、公司治理）等詞彙，但對門諾醫院而言，當初外籍宣教士帶著愛心捐款、醫療專業來到臺灣，就是為了將「愛」與「善」散播在這塊土地上，「如今，外籍宣教士、醫護人員陸續退休或離開臺灣，但門諾踏踏實實做事的精神始終未變。」門諾醫院總執行長張文信說。

In 1948, when Taiwan's first "Mennonite Mobile Medical Team" was established, terms like the United Nations' Sustainable Development Goals (SDGs) and ESG (Environmental, Social, and Corporate Governance) were not yet in existence. However, for Mennonite Christian Hospital (MCH), the foreign missionaries who came to Taiwan with their love, donations, and medical expertise did so to spread "love" and "goodness" across this land. "Even though the foreign missionaries and medical staff have gradually retired or left Taiwan, the spirit of MCH, which is committed to solid, reliable work, remains unchanged," said Mr. Chang Wen-Hsin, CEO of Mennonite Christian Hospital.

院

Hospital



循著在地需要 調整服務內容、邁向共好共榮

Adjusting Services to Local Needs, Striving for Mutual Prosperity

早期全臺各地物資匱乏，孩子未必能獲得足夠的營養，門諾即廣泛設立「牛奶站」，讓小朋友在上學前能先喝一杯牛奶，補足所需的營養。隨著臺灣經濟起飛、人們生活品質逐步提升，門諾轉而將資源集中在有需要的家戶，例如針對就醫時申請貧困救助的家庭，除了醫療照護，門諾也會關注他們有否民生用品的需求，並提供進一步的協助，「我們是持續循著花蓮、東部地區的需要，隨時調整服務內容。」

In the early days, when resources were scarce across Taiwan, and children might not have access to sufficient nutrition, Mennonite Christian Hospital established “milk stations” throughout the country, providing children with a cup of milk before school to meet their nutritional needs. As Taiwan’s economy took off and living standards improved, MCH began focusing its resources on households in need. For example, when families apply for financial assistance for medical care, MCH not only provides medical care but also considers whether they need daily necessities, offering further support. “We continuously adjust our services based on the needs of Hualien and eastern Taiwan,” Mr. Chang explained.

門諾也很早就設立「募款機制」，補助花蓮在地考上護理專校的學生，就學期間的學費與生活費，待畢業後，直接進入門諾工作，等於讓學生生活無虞，也確保就業機會。有父母因為這件事特別來感謝門諾，讓孩子能返鄉工作，常伴爸媽左右，「其實這是『共好』，醫護人力短缺是現今醫界的普遍現象，門諾卻因此擁有充足、穩定的護理人力。」張文信說。

隨著臺灣將於 2025 年邁入超高齡化社會，每五個人中就有一位長者，老年人口佔比高達 20%，門諾看到了「長照」的需求。張文信解釋，東部向來缺乏醫療資源，門諾又是臺灣巡迴醫療隊的「始祖」，一直以來，積極投入偏鄉部落的居家早療、居家安寧、社區癌症篩檢等服務，如今，眼見人口老化情形日益嚴峻，門諾正著手與東華大學、理想大地渡假飯店和奇萊美地有機農場攜手合作，在壽豐打造「老人安養之家工程計畫」。完工後的社區，將提供長者身心靈的全面照顧，甚至進一步注入「地方創生」理念，吸納年輕人返鄉，在陪伴長者的同時，更將在地生態與農產特色向外擴散，與地方「共榮」，「我們希望，未來社區能成為臺灣最多長輩想要來此養老、尋找新生活模式的美地，也藉此讓花蓮邁向永續城鄉。」

有趣的是，其他企業耕耘 ESG 時，都更關注「環境保護」面向，門諾卻是自創立起，即持續耕耘「社會責任」。因此張文信上任後，特別致力在「環境保護」急起直追。

Mennonite Christian Hospital also established an “endowment mechanism” early on to subsidize local Hualien students who were admitted to nursing schools. This program covers their tuition and living expenses during their studies, ensuring a secure livelihood and guaranteed employment at MCH after graduation. Parents have even expressed their gratitude to MCH, as this allows their children to return home for work, staying close to their families. “This is truly a win-win situation. While a shortage of healthcare personnel is a common issue in the medical field today, MCH benefit from stable and sufficient nursing staff,” said Mr. Chang.

As Taiwan approaches 2025, when it will enter an super aged society where one in five people will be elderly, and the elderly population will constitute 20% of the population, MCH has recognized the need for “long-term care.” Mr. Chang explained that the eastern region has long lacked medical resources, and as the “pioneer” of Taiwan’s mobile medical teams, MCH has always been actively involved in services such as early intervention in remote communities, home hospice care, and community cancer screening. Now, seeing the increasingly severe aging population, MCH is working with National Dong Hwa University, Promised Land Resort & Lagoon, and Chi-Lai Green Land to launch a “Senior Care Home Project” in Shoufeng. Once completed, the community will offer comprehensive physical, mental, and spiritual care for the elderly and even further integrate the concept of “Regional Revitalization” to attract young people to return home. While accompanying the elderly, they will also promote the local ecology and agricultural characteristics, fostering “co-prosperity” with the community. “We hope that this future community will become a beautiful place in Taiwan where most elderly people want to retire and seek a new lifestyle model, helping Hualien move toward becoming a sustainable city and community,” said Mr. Chang.

Interestingly, while other enterprises focus more on “environmental protection” when working on ESG, MCH has consistently focused on “social responsibility” since its establishment. Therefore, after taking office, Mr. Chang has made special efforts to catch up in the area of “environmental protection.”

屋頂裝太陽能板 設立東部首座公民電廠

Installing Solar Panels on Rooftops: Establishing the First Citizen Power Plant in Eastern Taiwan

例如目前發展再生能源，已成為淨零碳排的共識，門諾醫院與「綠主張綠電合作社」合作，在院內恩慈樓和平安樓裝設太陽能板，打造東部首座「天空 15 號公民電廠」。電廠的容量為 225.6 千瓦，一年約可產生 24 萬度綠電，每年能為地球減碳約 122 公噸。另外，門諾還設置了雨水回收系統，以有效循環再利用水資源。

放眼門諾的病房，如今都大量導入智能與自動化設備，成為不折不扣的「智慧病房」。像是醫護人員使用的「無線傳輸型生理監視器」，能在記錄患者的生命徵象後，將數據直接上傳資料庫，醫護人員只要登入系統，便能即時檢視病患的電子病歷，做出醫療處置，不僅大幅簡化了醫護的工作流程、減少工作負荷、做到有利環境的無紙化，還能提升資訊正確性，「醫療業的永續經營，是隨著人的生命與健康需要而做調整、變化，現今科技快速進步，智慧醫療、病歷資料數位化、視覺化已是必然。」新建的工程，也將逐步導入智慧建築的科技運用，期許在能源的使用上，有效提升節能的效益。

張文信透露，未來兩年，門諾會更全面地實踐 ESG 藍圖與 SDGs 目標，並從國家政策與趨勢、醫療相關準則切入，先盤查自家的 ESG 執行現況，再從中檢視可以從哪些面向，做出與同業的區別，最重要的是，要讓所有門諾人，從董事會到基層員

工，都理解未來 ESG 的行徑，以進行系統性的調整與革新，「我們做的一切，都秉持『不只是醫療，更承載著希望』的初衷，期望提供病患安全與舒適的醫療環境，守護人們的健康與福祉。」

For example, as developing renewable energy has become a common goal in achieving net-zero carbon emissions, Mennonite Christian Hospital, in collaboration with the Green Advocates, has installed solar panels on the roofs of its Enci Building and Pingan Building, creating the first “Sky 15 Citizen Power Plant” in eastern Taiwan. The plant has a capacity of 225.6 kilowatts, generating approximately 240,000 kilowatt-hours of green electricity per year, which can reduce carbon emissions by about 122 metric tons annually. Additionally, MCH has installed a rainwater recycling system to effectively reuse water resources.

Looking at MCH’s wards today, they have widely adopted smart and automated equipment, making them true “smart wards.” For example, the “wireless transmission physiological monitor” used by medical staff can record patients’ vital signs and directly upload the data to the database. Medical staff can then log into the system to instantly view patients’ electronic medical records and make medical decisions. This not only significantly simplifies work processes, reduces workload, and promotes environmentally friendly paperless practices but



also enhances the accuracy of information. “The sustainable operation of the healthcare industry must adjust and evolve according to the needs of people’s lives and health. With rapid technological advancements, smart healthcare, digitization of medical records, and visualization are inevitable trends,” Mr. Chang stated. The newly planned projects are also gradually incorporating smart building technologies, with the aim of improving energy efficiency.

Mr. Chang revealed that over the next two years, MCH will more comprehensively implement the ESG blueprint and SDG goals, starting with national policies, trends, and medical-related guidelines. They will first conduct a self-assessment of their ESG execution status, and then identify areas where they can distinguish themselves from their peers. Most importantly, they will ensure that all MCH staff, from the board of directors to frontline employees, understand the future direction of ESG and make systematic adjustments and innovations. “Everything we do is based on our original intention of ‘beyond

healthcare, carrying the torch of hope,’ with the aim of providing a safe and comfortable medical environment for patients and safeguarding people’s health and well-being.”



臺灣基督教門諾會醫療財團法人門諾醫院 Mennonite Christian Hospital, Taiwan Christian Mennonite Foundation

成立時間：1948 年

Date of establishment: 1948

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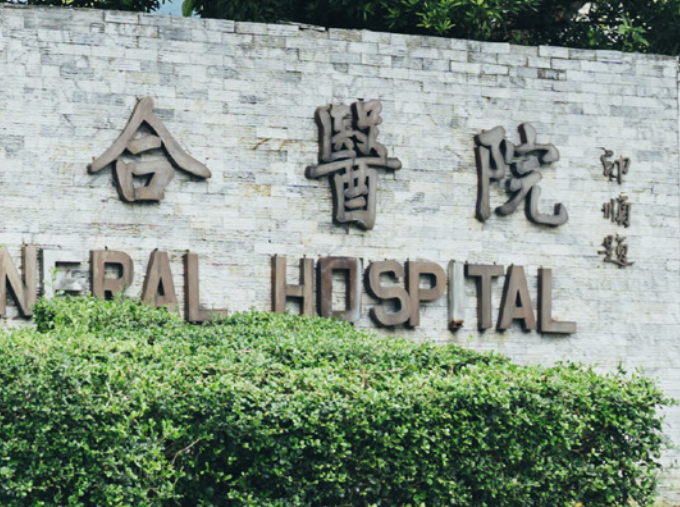
花蓮慈濟醫院

Hualien Tzu Chi Hospital



提起慈濟，不僅全臺無人不知、無人不曉，其遍布全球的分會，更造福了世間幾多眾生。慈濟有「慈善、醫療、教育、人文、國際賑災、骨髓捐贈、環保和社區志工」等八大志業，而對花蓮慈濟醫院來說，則從醫療角度向下深耕、向外擴散，如今，影響力也逐漸串連至慈善、教育、人文和環保等不同領域。

When people think of Tzu Chi, it is a name known throughout Taiwan, and its global branches have brought blessings to countless lives. Tzu Chi's Eight Core Missions—Charity, Medicine, Education, Humanism, International Relief, Bone Marrow Donation, Environmental Protection, and Community Volunteerism—are well recognized. For Hualien Tzu Chi Hospital, the focus has been on deeply rooting itself in medical care while expanding its influence outward. Today, its impact has gradually extended into charity, education, humanism, and environmental protection.





花蓮慈濟醫院院長林欣榮指出，花蓮慈濟醫院的醫療水準，是有目共睹的。今（2024）年有位香港的漸凍症患者，原先手不能動、腳無法抬，但來到慈濟接受中西醫精準治療後，竟然在手臂練出碩大的二頭肌，「花蓮慈濟做為臺灣東部唯一的醫學中心，先進的醫療技術是基本，更重要的是，我們本著『人本醫療，尊重生命』的信念，為社會服務。」

Dr. Lin Shinn-Zong, the superintendent of Hualien Tzu Chi Hospital, pointed out that the hospital's medical standards are widely recognized. Earlier this year (2024), a patient from Hong Kong with amyotrophic lateral sclerosis (ALS) arrived at the hospital, initially unable to move his arms or lift his legs. However, after receiving precise treatments combining traditional Chinese and Western medicine at Tzu Chi, the patient remarkably developed significant muscle mass in the arms. "As the only medical center in eastern Taiwan, Hualien Tzu Chi's advanced medical technology is fundamental, but what is even more important is our belief in Life-respecting Healthcare as we serve society," said Dr. Lin.



舉辦健檢、烹飪班 關注員工身心靈健康

Promoting Physical and Mental Well-Being for Employees

林欣榮舉例，像是在照護病患之餘，慈濟最關注的，是院內同仁的身心靈健康，「員工是我們要直接關懷的最大對象。」院內除了固定提供同仁健檢，每三年也會安排一次腦血管、頸椎、心肺、腹腔等精密且全面的高階健檢，而營養科的專業營養師，會定期舉辦減重班、烹飪班，教導正確的減重方法和健康飲食知識。2024 年慈濟成立「壽喜燒」員工健康運動中心，裡頭除了設置跑步機、腳踏車、壺鈴等器材，更陸續試辦皮拉提斯、紓壓流動瑜珈、筋膜運動、有氧舞蹈、嬋柔、壺鈴重訓等團課，「我們是在幫員工制定運動處方箋，再搭配專業教練與舒適環境，促進同仁健康。」

為了提升健康職場能量，慈濟還推行母性健康保護、肌肉骨骼疾病預防、工作負荷管理等職場健康服務，更關注同仁的心理健康，提供定期情緒量測、安心減壓講座、心理諮詢服務等多項支援措施，期望有效減輕同仁因工作、地震等因素產生的心理負擔。

隨著 ESG 當道，慈濟也積極改善院內的軟、硬體，致力提供患者、醫護人員舒適良好的就醫環境。院內導入智能 AI 化的「室內空氣品質優化系統」，藉由 AI、大數據再搭配時間電價，預測出最佳的二氧化碳濃度控制模式。精準預測後，和傳統全載時的耗能相較，節能效果提升了 71%，等於每年可節省相當於 1.55 座大安森林公園的能耗，約為 603 噸的二氧化碳排放量。

Dr. Lin also highlighted that beyond patient care, Tzu Chi places great emphasis on the physical and mental well-being of its employees. “Our employees are the most important group we take care of directly.” The hospital regularly provides employee health checkups, and arranges comprehensive high-level examinations every three years, including cerebrovascular, cervical spine, cardiopulmonary, and abdominal assessments. The hospital’s nutrition department also hosts weight management and cooking classes to teach proper weight loss methods and healthy

eating habits. In 2024, Tzu Chi established the “Sukiyaki” Employee Health and Fitness Center, equipped with treadmills, exercise bikes, kettlebells, and other equipment. The center has also piloted group classes such as Pilates, stress-relieving yoga, fascial exercises, aerobics, gyrokinesis, and kettlebell strength training. “We are helping our employees create exercise prescriptions, supported by professional trainers and a comfortable environment, to improve their health.” explained Dr. Lin.

To enhance workplace wellness, Tzu Chi has also implemented various occupational health services, including maternal health protection, musculoskeletal disease prevention, and workload management. The hospital pays particular attention to employees’ mental health, offering regular emotional assessments, stress-relief workshops, and psychological counseling services, aiming to alleviate the psychological burden that can arise from work and natural disasters like earthquakes.

As ESG (Environmental, Social, and Governance) practices gain prominence, Tzu Chi has actively improved both its software and hardware within the hospital, aiming to provide a comfortable and high-quality environment for patients and medical staff. The hospital has introduced an AI-powered Indoor Air Quality Optimization System, which utilizes AI and big data, combined with time-based electricity pricing, to predict the optimal carbon dioxide concentration control model. Compared to traditional full-load energy consumption, this precise forecasting has improved energy-saving efficiency by 71%, equivalent to conserving the annual energy consumption of approximately 1.55 Da’an Forest Parks, reducing around 603 tons of carbon dioxide emissions per year.

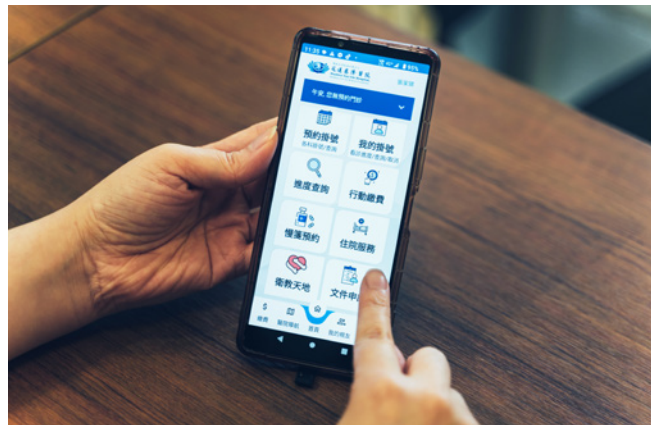
從病患服務 App 到行動火車站 「以人為本」發展各項服務

Pioneering Smart Services: From Patient Apps to Mobile Train Stations

如今，伴隨「無牆醫院」理念而生的智能巡房 App、病患服務 App，也成為醫師、護理人員、患者的重要工具。智能巡房 App 能降低醫護人員來回護理站調閱資料的時間，也取代將病患資訊、巡房記錄謄寫在紙本的模式，減少紙張浪費，醫師還能透過行動裝置，向患者解釋數據、影像等檢查結果，降低醫療訊息的不對等。而病患服務 App 整合了就醫與個人資訊，讓民眾不必再索取紙本門診表、同意書，還能即時掌握看診進度、來院時間，做到人潮分流和減碳。

林欣榮強調，2024 年慈濟再推出全臺醫院首創的「行動火車站」服務，臺鐵專員每週有三天上午會在院內的售票窗口協助偏鄉患者、醫療人員，即時處理退換票事宜。他進一步解釋，花蓮地形狹長，許多住在偏鄉的病友、長者，經常是特地搭乘火車來到慈濟，一方面看診時間難料，加上久久來一次醫院，可能會和醫師多聊幾句，導致結束看診後，需要調整車票時間，有了售票口，民眾不再需要擔心錯過重要的乘車時刻，「慈濟是『以人為本』，在發想各項服務。」

In line with the “Hospital Without Walls” philosophy, the hospital has developed smart ward-rounding and patient service apps, which have become essential tools for doctors, nurses, and patients. The smart ward-rounding app reduces the time medical staff spend retrieving



information from the nurse's station and replaces the paper-based recording of patient information, thus reducing paper waste. Doctors can also use mobile devices to explain test results, such as data and images, directly to patients, reducing the information gap in medical communication. The patient service app integrates medical and personal information, eliminating the need for printed outpatient slips and consent forms, and allowing patients to monitor their appointment progress and arrival time, thereby reducing crowding and carbon emissions.

In 2024, Tzu Chi launched Taiwan's first “Mobile Train Station” service at a hospital. Taiwan Railways staff are available three mornings a week at the hospital's ticket counter to assist patients from remote areas and medical personnel with ticket changes and refunds. Dr. Lin explained that Hualien's elongated geography means that many patients and elderly residents from remote areas often take the train to Tzu Chi for medical appointments. Unpredictable appointment times, combined with the infrequency of hospital visits, often lead to extended conversations with doctors, requiring ticket adjustments. With the ticket counter service, patients no longer need to worry about missing their trains. “Tzu Chi is ‘people-centered’ in all its service innovations,” Dr. Lin emphasized.



在完善院內軟、硬體之外，多年來，慈濟持續將醫療、慈善的能量向外擴散。花蓮有較多偏遠地區，疫情後，慈濟即結合虛擬健保卡和行動憑證，推動遠距專科醫療服務。林欣榮鼓勵全院各科都開設遠距醫療門診，每日保留二至三個遠距名額，照顧偏鄉居民，促進醫療平權。

近來，慈濟又廣泛與國際合作，參與新南向醫衛合作計畫和邦交國史瓦帝尼的孕產婦及嬰兒保健功能提升計畫，致力提高當地孕婦接受產檢比例、降低新生兒死亡率，以及培訓種子醫師。在與菲律賓 11 家醫學中心的合作中，慈濟培育了 294 位醫衛人才，「能做的事太多了，我們要繼續為人們的福祉而努力。」林欣榮如此決意。

In addition to improving internal services and infrastructure, Tzu Chi has consistently expanded its medical and charitable efforts outward over the years. Hualien's remote areas have been a particular focus, especially post-pandemic, with Tzu Chi combining virtual health insurance cards and mobile

certificates to promote telemedicine services. Dr. Lin encourages all departments to offer telemedicine consultations, reserving two to three telemedicine slots daily to care for residents in remote areas and promote medical equity.

Recently, Tzu Chi has also engaged in extensive international collaborations, participating in the New Southbound Policy's health cooperation projects and a maternal and infant healthcare enhancement project in Eswatini. These efforts aim to increase prenatal care rates among pregnant women, reduce neonatal mortality rates, and train local medical professionals. Tzu Chi has also partnered with 11 medical centers in the Philippines, cultivating 294 medical and healthcare professionals. "There is so much we can do, and we will continue striving for the well-being of people everywhere," Dr. Lin affirmed.

佛教慈濟醫療財團法人花蓮慈濟醫院 Buddhist Tzu Chi Medical Foundation Hualien Tzu Chi Hospital

成立時間：1986 年

Date of establishment: 1986

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封面照片於花蓮石梯坪拍攝，石梯坪位於豐濱鄉石梯灣的南側，海蝕地形非常壯觀。

花蓮為北回歸線（北緯 23.5°）經過的地點之一，封面以花蓮著名景觀石梯坪結合世界地圖，標示北回歸線經過的 18 個國家、地區：

中華民國、中國、緬甸印度、孟加拉、阿曼、阿拉伯聯合大公國、沙烏地阿拉伯、埃及、利比亞、尼日、阿爾及利亞、馬利共和國、茅利塔尼亞、西撒哈拉、巴哈馬、古巴、墨西哥

The cover photo was taken at Shitiping in Hualien. Located on the southern side of Shiti Bay in Fengbin Township, Shitiping is known for its impressive coastal erosion landscape.

Hualien is one of the places where the Tropic of Cancer (23.5°N latitude) passes through. The cover features the famous Shitiping landscape in Hualien, combined with a world map highlighting the 18 countries and regions crossed by the Tropic of Cancer.

Republic of China, China, Myanmar, India, Bangladesh, Oman, United Arab Emirates, Saudi Arabia, Egypt, Libya, Niger, Algeria, Mali, Mauritania, Western Sahara, The Bahamas, Cuba, Mexico



Livable Hualien

Vol. 2

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SDG 14
Life below Water

SDG 1
No Poverty

SDG 5
Gender Equality

SDG 10
Reduced Inequalities

SDG 15
Life on Land

SDG 2
Zero Hunger

SDG 6
Clean Water and Sanitation

SDG 11
Sustainable Cities and Communities

SDG 16
Peace, Justice

SDG 3
Good Health and Well-being

SDG 7
Affordable and Clean Energy

SDG 12
Responsible Consumption and Production

SDG 17
Partnerships for the Goals

SDG 4
Quality Education

SDG 8
Decent Work and Economic Growth

SDG 13
Climate Action

Weekly Sustainability Challenge !!

Day 1

I purchase local, seasonal foods.



Day 2

I make it a habit to save water when washing my hands, brushing my teeth, showering, and during daily water use.



Day 3

I carry reusable shopping bags, eco-friendly cups, and reusable utensils with me.



Day 4

I choose to walk or bike more often.



Day 5

I use emails or digital files instead of traditional paper.



I support and prioritize products from social enterprises.

Day 7



Day 6

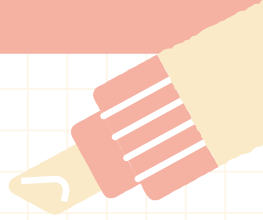
I care about anti-discrimination efforts and work to eliminate inequality.



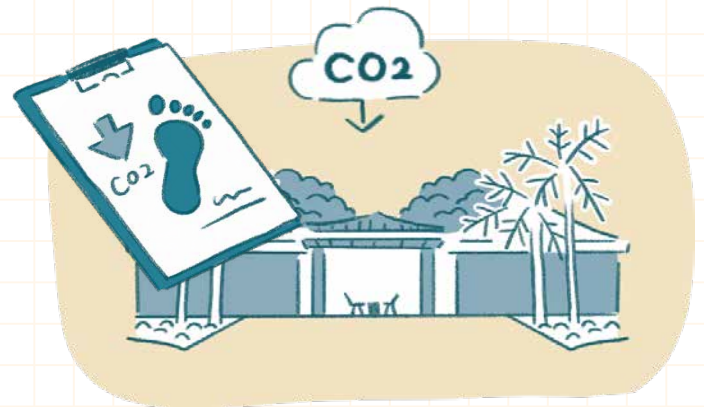


小測驗大探索

Quiz Time: Exploring Sustainability



歡迎租借
Welcome to rent



Q1

東大門夜市自2019年起設置環保餐具租借中心，每年約可減少 _____ 個免洗餐具。

Since 2019, Dongdamen Night Market has established an eco-friendly utensil rental center, reducing about _____ disposable utensils each year.

Q2

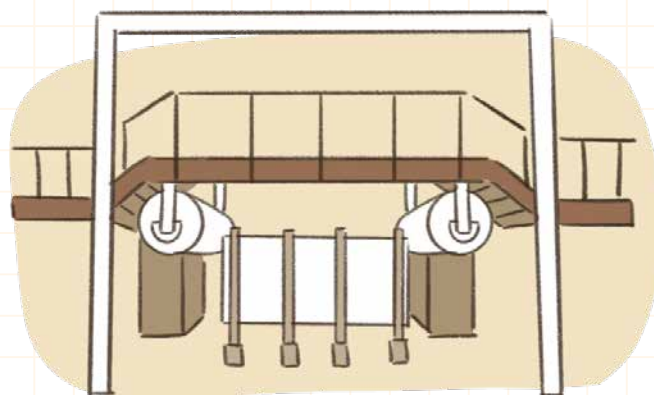
秧悅美地度假酒店經東華大學永續發展中心完成碳盤查，發現旅客在此消耗每次入住一晚的碳排量，較其他旅宿少了 _____ 公斤。

After a carbon audit by the Center for Sustainable Development at National Dong Hwa University, Gaeavilla Resort found that guests consume _____ kilograms less carbon emissions per night compared to other accommodations.

還記得本期專刊，分享的永續推動內容嗎？
透過小小測驗，一起複習吧！

Remember the sustainability initiatives shared
in this issue?

Let's review with a quick quiz!



Q3

立川漁場的蜆殼經回收做成清潔劑，
達到年減碳 噸。

Li Chuan Aquafarm recycles
clam shells into cleaning agents,
achieving an annual carbon
reduction of tons.

Q4

棟隆企業引進「鑽石套環多索鋸」
石材切割機後，較先前可減少
 耗能。

After Dong Loong Enterprise
introduced the “Diamond Bead
Multi-Wire Saw” for stone cutting,
it reduced energy consumption
by compared to previous
methods.

一週永續挑戰!!

Day 1

我購買當地、當季的食物。



Day 2

我在洗手、刷牙、洗澡及日常用水時，養成節約的習慣。

Day 3

我會隨身攜帶購物袋、環保杯、環保餐具。



Day 4

我可以多走路或騎自行車。



Day 5

使用電子郵件或數位檔案
取代傳統紙張。



Day 6

我關心反歧視和
消除不平等的活動。

我支持及優先購買社會企業的產品。

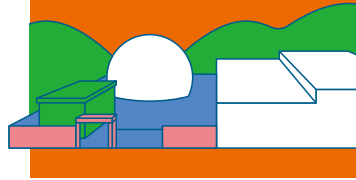
Day 7



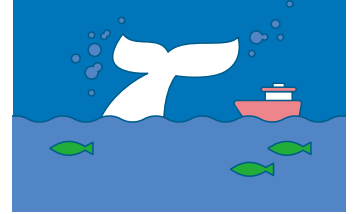


SUSTAINABLE DEVELOPMENT GOALS

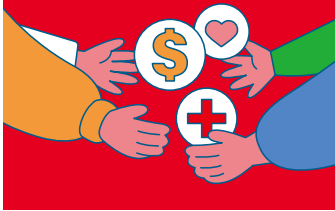
SDG 9
產業創新與基礎設施



SDG 14
保育海洋生態



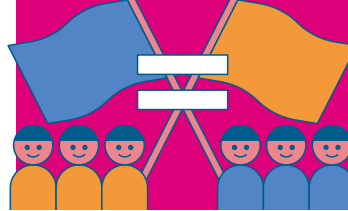
SDG 1
消除貧窮



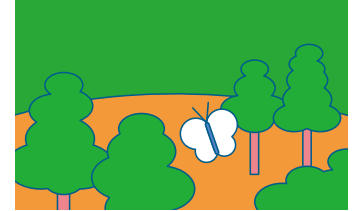
SDG 5
性別平等



SDG 10
減少不平等



SDG 15
保育陸域生態



SDG 2
消除飢餓



SDG 6
潔淨水與衛生



SDG 11
永續城市與社區



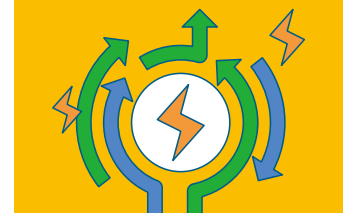
SDG 16
和平、正義及健全制度



SDG 3
良好健康和福祉



SDG 7
可負擔的潔淨能源



SDG 12
負責任的消費與生產



SDG 17
多元夥伴關係



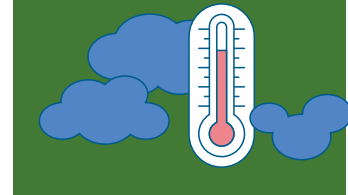
SDG 4
優質教育



SDG 8
合適的工作及經濟成長



SDG 13
氣候行動





成為一個永續實踐者吧！



從起床的那一刻起，
我們的每一個行動和選擇，都和永續息息相關，
如：節約用水、食用在地食材、愛用環保袋……等，
這些看似微小的行動，
皆是友善環境與地球的方式之一。

這本書希望您能和家人、朋友們分享，
並討論更多永續實踐的作法，
讓我們一起成為「永續種子」，從日常扎根，
使永續成為生活的一部分。



因為
對

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