



# BIODIVERSITY TNFD

The Suao Taibaishan Mine\_Light-vented bulbul's nest (native ring-cupped Oak) ▲

# 04

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**TARGETS**

**100%**

Biodiversity Management Plan Coverage

Quarry Rehabilitation Plan Coverage

**90%**

Mining Areas (Hoping and Suao) Indigenous Plant Species by 2030

**Environmental Education**

- ▶ Hoping EcoPort Courses : 12 Sessions annually & Maintain a satisfaction rate of 90% from 2022 to 2024
- ▶ Promoting TCC DAKA Open Eco-Factory as an environmental education facility

**Dr. Cecilia Koo Botanic Conservation Center**

Plants Conservation (Endangered Species Incl.) By 2030

**35,000** taxa

**2022 PERFORMANCE HIGHLIGHTS**

**88.88%**

Mining Areas (Hoping and Suao) Indigenous Plant Species

**288**

Corals Restored

**100%**

Survival Rate of Coral Larvae

**Dr. Cecilia Koo Botanic Conservation Center**

Plants Conservation (Endangered Species Incl.)

Accum. **34,154** taxa

| As of 2023/3/31

Providing Academic and Medical Research

**6,200+** | 60 Families

| From 2008 to 2023/3/31

**Hoping EcoPort Coral Restoration Project**

Nearly 3 Times of Restoration Area Increased

**TNFD** Taskforce on Nature-related Financial Disclosures

First Manufacturer in Taiwan Join TNFD Pilot Program

**BUSINESS FOR NATURE**

MAKE IT MANDATORY

自然與生物多樣性  
Taiwan Nature Positive Initiative 倡議平台

## 4.1/ Special Column Ho-Ping Ark Ecological Program

*“We believe the lives of all living beings have always been interconnected, coexisted and codependent for survival. In the ecosystem, there are tens of thousands of lives such as germs, insects, animals and plants that rely on one another to survive.*

*Around the world, 95% of food are from the soil and there are 60% of biological species that were discovered within the soil. In a natural environment, one cubic meter of soil is the home of more than 100 million protists, millions of roundworms, 100 thousand mites and insects, spiders and worms. Furthermore, soil is the most important carbon sink in the world.”*

*–Nelson An-ping Chang, Chairman of TCC*



### Soil Makes the Largest Carbon Pool on Land, about Which the Humankind Knows Little

In the various ecological environments on Earth, soil provides habitats for flora and fauna. Complicated interactions formed among the profuse creatures on land. In addition, soil also serves as the largest terrestrial carbon pool, storing CO2 from the atmosphere as solids, with twice the carbon storage of surface vegetation .

The significance of soil to humans and nature is self-evident. However, we cannot fully understand the scale of its change so far, and lack systematic knowledge and assessment of its carbon cycling mechanisms. Nor can we effectively evaluate the impacts to the ecological environment and biodiversity of soil.



### “Ho-Ping Ark Ecological Program” for Soil Research Launched by TCC in Response to COP15

TCC acknowledges the importance of soil research and emphasizes the need for long-term studies and data accumulation to understand soil biodiversity. To support this, in 2022, TCC launched the “Ho-Ping Ark Ecological Program,” a 10-year project dedicated to soil species, which is globally unparalleled.

The Program is hosted by KBCC’s Chia-Wei Li professor and aligns with Target 2 and 4 of the Kunming-Montreal Global Biodiversity Framework (GBF) adopted by COP15 of the UNCBD, aiming to avert the ecological collapse and biodiversity loss. TCC takes concrete actions in response to these targets working towards the vision of “Living in harmony with nature.”

TCC invited Dr. Chiao-Ping Wang from Taiwan Forestry Research Institute, and the team led by Professor Chih-Han Chang from the Institute of Ecology and Evolutionary Biology, National Taiwan University (NTU) to work on innovative ecological modeling, long-term monitoring and research on soil, and professional cultivation. This included mine soil sampling and testing, studying interactions between soil and plants, and researching the ecosystem function of soil in material cycles.

### Three Work Axes, the Expected Benefits, and the Preliminary Results

Work Axis

Expected Benefits

Work Results

#### The first semi-closed ecological system experimental base in the world

By removing alien species and introducing valuable species, TCC actively restores local species and conducts ecosystem rebuilding modeling to address future Earth ecology challenges.



- “Skynet-based Ark Plan” established at the mine of the Hoping Plant with an area of approximately 1.45 hectares.
- Discarded oil tanks from the mine are repurposed as water tanks for irrigating the plants. The reclaimed water from Section B of Shaft 1 is filtered before use, with 74 metric tons reclaimed as of March 2023.
- 173 plant species transplanted, including 783 orchids like Taiwan urn orchid (*Bletilla formosana*), *Bulbophyllum taiwanense*, *Papilionanthe taiwaniana*, and *Vanda lamellata*; 186 bromeliads; and 198 Apocynaceae plants.

#### Long-term Monitoring and Research of Soil

Soil biodiversity monitoring, carbon decomposition experiments, mine ecology restoration, and pedogenic properties analysis are conducted at the base to optimize soil ecology restoration in the mine. Long-term research data on soil fauna, microbiota, physico-chemical analysis, and carbon sequestration of soil and forest are accumulated.

- Long-term monitoring of the decomposition of the large stubs on the base, increase of habitat heterogeneity with dead branches and fallen woods, observation of decomposition constants for different wood qualities, investigation of soil nutrients and animal composition, measurement of microbiota in different stages of decomposition, and data estimation of the overall carbon sequestration of soil and forest.
- Expert team conducted soil sampling from the mine and the Ark program venue, with instructions given to TCC employees for follow-up and execution.

#### Scholarship Mechanism to Cultivate Soil Professionals

By offering scholarships, TCC cultivates talent for society and the academia in soil environment and biodiversity, raising public awareness of their significance.



#### Future Directions of the “Ho-Ping Ark Ecological Program”

The “Ho-Ping Ark Ecological Program” will introduce at least 1,000 plant taxa based on its microenvironment, with ongoing observation and reintroduction. The base will also serve as an environmental education center, alongside TCC DAKA and RRRRC, creating a unique venue for environmental education and leisure in Eastern Taiwan. Long-term monitoring data for soil biodiversity and carbon sequestration research are limited. The Program aims to accumulate data for ecological sustainability, maintain and restore the local ecosystem, reduce conflicts with indigenous species, and support long-term ecological research to protect biodiversity.

## 4.2 / Member of TNFD Pilot Program - The First Large Manufacturer in Taiwan Involved



### Biodiversity Policy

TCC commits to not exploring or exploiting World Heritage Sites or IUCN Protected Areas I-IV. In biodiversity-rich areas of global or national significance, TCC follows local laws and regulations to minimize and mitigate environmental impacts. We adhere to the GCCA Sustainability Guidelines for Quarry Rehabilitation and Biodiversity Management, implementing the Biodiversity Management Plan (BMP).

TCC includes partners in our value chain to address our environmental impact on biodiversity and share pertinent information.

The 23 targets of the GBF, a major resolution adopted by COP15 are taken as the compliance directions for biodiversity management at TCC. With the nature-based solutions (NbS) combined, while mitigating the climate change through nature-friendly action plans, TCC continuously creates positive impacts to nature.

### First to Employ the TNFD Framework

The Taskforce on Nature-related Financial Disclosures (TNFD), established in 2021, provides a framework for businesses and financial institutions to identify, manage, and disclose financial risks associated with nature. By utilizing the framework's methodology, businesses can effectively identify biodiversity risks and opportunities, enabling them to allocate resources for positive impacts on the natural environment.

TCC actively mitigates environmental impacts and addresses potential natural risks, while promoting opportunities for harmonious coexistence with nature. As the first traditional manufacturer in Taiwan to join the TNFD Pilot Program, TCC collaborated with Professor Chyi-Rong Chiou, the Director of the Biodiversity Research Center at National Taiwan University, and worked closely with the consultant team from Deloitte & Touche Consulting Co. to assess the corporation's biodiversity impacts, nature-related risks, and explore nature-friendly opportunities.

### Responses to Various, Domestic and International Biodiversity Initiatives

TCC signed on "Call to Action" and "Make It Mandatory" of Business For Nature to call on governments to enact ambitious policies to halt nature losses. Meanwhile, we partake in the Taiwan Nature Positive Initiative (TNPI) of the Business Council for Sustainable Development of the Republic of China (BSCD-Taiwan) and connect with the collaborative networks on nature topics to jointly address biodiversity issues.

Regarding biodiversity management, TCC aligns with the GCCA Sustainability Guidelines and has developed our BMP in accordance with international standards. With the expertise of Dr. Cecilia Koo Botanic Conservation Center (KBCC) combined, we actively contribute to biodiversity conservation efforts.

➤ **TCC TNFD LEAP (Trial) evaluation process**

- 1 Identify locations of key business activities**  
Identify the locations of key business activities based on the natural characteristics and levels of interaction between the content of TCC business activities and the locations.
- 2 Assess dependency and negative impacts of key business activities**  
Assess the level of dependency on natural resources based on the content of key business activities and the negative impacts to natural environment.
- 3 Analyze biodiversity risks and opportunities**  
Analyze the biodiversity risks and opportunities TCC may encounter based on the assessment of dependency and negative impacts and TNFD recommendations.

**TNFD** Biodiversity Research Workshop organized  
on February 20, 2023

### 4.3 / Protection of the Indigenous Species from Mines

#### MANAGEMENT APPROACH

TCC upholds strict self-management standards and requirements for nature-related business activities. All TCC-owned mines undergo thorough environmental impact assessments (EIAs), including impact projections and assessments, the proposal of countermeasures, or alternative solutions. Quarterly monitoring of environmental impacts in mining areas is conducted, along with surveys of land flora and fauna to assess species richness. Monthly monitoring of plant growth in selected areas tracks the progress of mine plant restoration efforts. Furthermore, TCC implements ecological restoration projects to enhance local biodiversity.

#### Plant Restoration & Conservation

TCC prioritizes mine restoration and local biodiversity conservation, with a focus on restoring the original limestone landscape in mines. During the initial stages of mine restoration, KBCC adopted six principles for species selection in the restoration process:

- 1 Indigenous species first; trees fit for the area selected
- 2 Utilization of soil and seed bank
- 3 Mid-succession used for estimated seedling required
- 4 Pilot introduction of pioneer plants for greenification
- 5 Fast-growing alien tree species replaced by indigenous species
- 6 Species with economic values first



**Shoushan Mine, Kaohsiung**  
*Macaca cyclops*

**Hoping Mine, Hualien**  
*Cyanoderma ruficeps praecognitum*

**Taibai Mountains Mine, Suao**  
*Urocissa caerulea*  
*Matrona cyanoptera*

Endemic-protected species in Taiwan

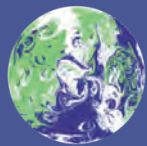


#### No Deforestation Commitment

In line with the zero-deforestation spirit of the COP26 resolution under the United Nations Framework Convention on Climate Change (UNFCCC) and in alignment with SDG 13: Climate Action and SDG 15: Life on Land, TCC has made a No Deforestation Commitment. TCC implements specific management approaches for forest areas within our mines as follows:

100% mining sites not in the nationally protected areas

100% zero deforestation beyond the mining areas and commitment to the recovery and restoration in mining areas



UN CLIMATE CHANGE CONFERENCE UK 2021  
IN PARTNERSHIP WITH ITALY



### The Hoping Mine

The Hoping Mine in Hualien has been conducting survey of the land ecology since 2006. Starting from 2016, the propagation project in the mine was launched step by step for local plants like Taiwan urn orchid (*Bletilla formosana*), Taiwan hortensia (*Hydrangea longifolia*), Oriental chain fern (*Woodwardia prolifera*), and Brush pot tree (*Sphaeropteris lepifera*). Also, the sapling nursery at the Hoping Plant received 2,000 Taiwan urn orchids restored by KBCC in 2022. The two parties worked together to propagate over 3,000 plants of Oriental chain fern and Brush pot tree from the mine via the bulbul cultivation method and seedling method, which are conserved in KBCC's greenhouse.

The botanical restoration survey was conducted in 2022 as well. According to the latest survey, the average coverage of the groundcover plants was 95%, the average tree planting density was 2,040 trees per hectare and the average survival rate was 98%. In addition, nesting boxes for birds and ecological ponds were created for habitats for life. At present, numerous endemic frog species have been recorded, demonstrating the rich biodiversity of the mine.

### The Suao Taibaishan Mine

Due to its special climate, the Suao Taibaishan Mine suffers from typhoons and fierce winds all year around, resulting in no tree growing on the windward side for decades and a harsh condition for restoration. Starting from 2017, TCC has been working with Professor Ji-Wei Huang from the Sustainable Landscape Laboratory, National Ilan University to employ innovative methods like the first solar-powered microirrigation system in Taiwan, precision irrigation, windbreak nets to block strong winds, and rainwater harvesting via 65 rainwater harvesting ponds to overcome the water retention challenges presented in the karst topography. We collaborate with nature to overcome the harsh environment for restoration.

The greenification area in the Taibaishan Mine is 14.91 hectares. Remarkably, the transplant survival rate for big trees has reached 71.81%. In terms of ecology, 5 medium and large mammals species, 7 birds species, and 11 frogs species were observed in the mine area. The Formosan serow (*Capricornis swinhoei*), Formosan rock macaque (*Macaca cyclopis*), and Formosan ferret-badger (*Melogale moschata subaurantiaca*) are the mammals most frequently observed. As for birds, the unique and special Eurasian Woodcock (*Scolopax rusticola*) were witnessed as well. To accelerate species reintroduction, we further adopted habitat recreation as compensation like artificial caves and nesting boxes for the homecoming of Taibai Mountains' "indigenous citizens"!

The Suao Taibaishan Mine goes beyond restoring indigenous species and also focuses on eco-friendly agricultural research to maximize the reutilization of the mining area. TCC's approach emphasizes not only environmental friendliness but also social benefits. Guided by the philosophy of "Respect and Conform to Nature," TCC employs eco-friendly farming methods with zero chemical fertilizers, pesticides, and additives. These methods leverage symbiotic relationships among crops, effectively preventing pests and weeds. Currently, the plan includes the cultivation of fruit trees, vines, root tubers, stem tubers, and hydroponic vegetables to provide food for mammals and gradually rebuild the ecological balance.



### The Kaohsiung Shoushan Mine

Following the termination of mining rights in 1992, the Kaohsiung Plant began its restoration efforts in 1993. Also, it worked with the national park administration to try planting endemic plants like Elephant's Ear (*Macaranga tanarius*), Chinese Soap Berry (*Sapindus mukorossii*), Formosan Ash (*Fraxinus formosana*), and Common Jasmin Orange (*Chalcas paniculata*) in lieu of the alien species White Popinac (*Leucaena leucocephala*). The restored Shoushan Mine enjoys a rich ecology, filled with lush woods and wildlife like snakes, boars, monkeys, and wild birds, which has become a popular hiking destination in Kaohsiung.

Aside from the restoration effort, the Kaohsiung Plant is also a historic site and birthplace of the cement industry in Taiwan, with century-old limestone kilns and red-brick architecture have been listed as historic monuments by the Kaohsiung City Government. TCC also allocated budgets for renovation. In the future, Kaohsiung Plant shall become a venue with history, humanity, and eco-tourism combined.

In 2022, the Kaohsiung Plant partnered with the Bureau of Cultural Affairs, Kaohsiung City Government, to organize tours of the historic Red Buildings, limestone kilns, and detention basin, guided by TCC's consultant Wen-Fu Lin. TCC plans to collaborate further with the Kaohsiung City Government in this regard.



## 4.4 / Industrial EcoPort Coral Restoration Project



Hoping EcoPort received consecutive Port Environmental Review System of EcoPorts (PERS) certifications in 2019 and 2021 and was recognized for its Class-A waters by the Ocean Conservation Administration and Ocean Affairs Council, equivalent to Penghu waters. Hoping EcoPort has broken free from the typical impression of industrial ports with high pollution and discharge. Its safety infrastructure and rigorous environmental management provide a decent living environment for the coral and marine ecosystems. The port is now a thriving habitat for coral, attracting more marine creatures to the area. TCC utilizes cement bio cubes to provide a solid foundation for coral growth, contributing to a sustainable underwater ecosystem and a diverse marine ecology.

### Bio Cube Coral Creation Project

Corals were discovered in Hoping EcoPort over a decade ago, prompting a life below water survey in 2015. In 2020, TCC conducted a survey of coral species and benthos, identifying broken branches from indigenous corals. Cooperated with Ecoangels, the bio cube coral creation project began in 2021, with nearly NT\$10 million invested to transplant broken corals to bio cubes within the port. Currently, 288 corals have been restored, with an overall restoration rate of 89%. The ecological development team also found several coral larvae, including 4 protected Tridacnae with above-average

annual growth, and 3 new coral species previously undocumented in Eastern Taiwan. The bio cubes are dominated by 25 species of Acropora, the king of reef-building corals, followed by 9 species of Merulinidae, forming a vibrant and diverse ecosystem that covers 38% of the bio cube area. In March 2023, TCC worked with Taipei University of Marine Technology to survey fish

and shellfish to identify the dominant species and plan for future ecological development. The coral reefs at Hoping EcoPort serve as habitats for a variety of marine species, with visible corals and tropical fish thriving together. "This is our Great Barrier Reef of Hoping," said by our colleagues in pride.



### Bio Cubes

Bio cubes, including cement reefs, discarded steel pipes, and abandoned ships, are used to create diverse habitats for marine life, with cement reefs being the most stable and durable material based on the team's experience. Cement allows for convenient stacking and sculpting, and the creation of pores that accommodate different species' habits, thereby enhancing habitat diversity. The surface of cement also develops micropores that support algae growth.

Hoping EcoPort utilizes TCC's low-carbon Portland Cement Type II, the core business of TCC, as the base for broken corals and locally-built bio cubes, featuring TCC's circularity symbol. The ecological development team also enhances the surface by chiseling to maximize roughness, promoting algae growth as a food source for fish and animals, fostering complete ecological shelters.



## 4.5 / Environmental Education Promotion

### MANAGEMENT APPROACH

TCC promotes biodiversity by fostering widespread participation. The Company is dedicated to environmental education, aiming to raise awareness of environmental protection and sustainable development among employees and the public. TCC encourages everyone to take eco-friendly actions and contribute to the sustainable development of nature.



### Over 90% Satisfaction with Our Environmental Education

TCC's Hoping EcoPort was certified as Taiwan's first port-based environmental education facility on Feb 22, 2022. Currently, the certified courses available are "Big Boats Entering the Port," "Tenants of Harbor," and "Port Guards" with 382 accesses as of 2022 and up to 90% satisfaction. Future plans include Land Hermit Crab, Eco-friendly Fishing, and On-campus Environmental Education Outreach-courses to expand the range of topics.



### NSTC Science Train Program Organized in Partnership with the Academia

Invited by the National Dong Hwa University (NDHU), TCC participated in the Science Train Program, offering courses centering around "Great Barrier Reef of Hoping," "Save the Local Hermit Crabs," and "Wild Guess with Corals," drawing 280 participants in total.

TCC filmed educational videos to showcase the creation of bio cubes for corals, aiming to educate the public on coral restoration and water conservation. The videos provide a visual experience and accurately depict the process of promoting biodiversity at Hoping EcoPort, addressing the challenges of presenting the underwater ecosystem.

Due to the success of the Science Train Program, TCC and NDHU extended the partnership to join the National Science and Technology Council (NSTC) Science Train Program, expanding environmental education courses beyond the port. This collaboration allows us to showcase the environmental management efforts of Hoping EcoPort, certified by the PERS, as well as the restored coral ecosystem and diverse fish population in the port. TCC effectively communicates our ocean protection and marine education ideas, inspiring more people to contribute to marine conservation.

In addition, TCC signed the Service Learning Agreement with the College of Environmental Studies and Oceanography, NDHU. Together, we cultivate talents for environmental education, fueling the talent development for nature sustainability.

## 4.6 / World-Class Botanic Conservation Base

### MANAGEMENT APPROACH

TCC prioritizes ecosystem balance and reconstruction, ceaselessly participates in restoration management, and contributes to international plant conservation efforts. We are dedicated to cultivating endangered species in Taiwan, aiming to protect the ecological environment and biodiversity.



### Over 15 Years of Efforts in Plant Conservation Topics by TCC

The Dr. Cecilia Koo Botanic Conservation Center (KBCC) was established in January 2007 with the support of TCC. Professor Chia-Wei Li from the Ho Chin Tui Lecture Series, National Tsing Hua University (hereinafter NTHU) serves as the CEO. TCC has been allocating budgets and manpower to promote the operations.

Its primary mission is to conserve tropical and subtropical plants globally, preserving the Earth's richest biodiversity. KBCC focuses on ex-situ conservation and places a strong emphasis on academic research. Engaging in international academic exchanges, KBCC strives to become a world-class botanical conservation base.



### Seeds Academy

KBCC, Taipei Zoo, and the Forestry Bureau, Council of Agriculture, organized the "Seeds Academy" campaign on Arbor Day, March 12, 2023, to promote environmental protection and ecological education.

KBCC donated 150 plants, including 15 endangered species, such as *Bulbophyllum taiwanense* (Fukuy.) K.Nakaj. and *Bulbophyllum pingtungense* S.S.Ying & S.C.Chen, to Taipei City. KBCC has also planned a one-year collaboration with Taipei Zoo. Through "Seeds Academy", KBCC guided the public and students in learning about endangered plants, caring for the environment, and protecting Taiwan's biodiversity.



### Endemic Insect Propagation Project

KBCC worked with Taipei Zoo on the "Endemic Insect Propagation Project" that targeted the endemic insect species on Lanyu (Orchid Island). Currently, there are successful insect subcultures on Lanyu, including *Pachyrhynchus sarcitis*, *Phasmotaenia lanyuhensis*, Lan-hsu giant katydid (*Phyllophorina kotoshoensis*), *Salomona ogatai*, dwarf wood scorpion (*Liocheles australasiae*), and tailless whip scorpion (*Amblypygi*). In collaboration with Taipei Zoo, KBCC reintroduced successfully propagated endemic insects back into the wild, ensuring a stable number of species for genetic diversity in the local environment.

### Homecoming of the Endemic Species of Lanyu

Lanyu and Jiteiwan boast unique natural environments, but they face significant environmental threats from climate change, exotic species, and alien species. Jiteiwan, in particular, has the additional challenges of being a former military shooting range and having experienced a major fire incident. To restore the endangered species on Lanyu and Jiteiwan, KBCC worked with the National Museum of Natural Science (NMNS), the NMNS Foundation, Taipei Zoo, Endemic Species Research Institute, National Museum of Marine Biology and Aquarium, and Taiwan Forestry Research Institute. With Lanyu as the operation base, we not only selected Nunyu Bletilla (*Bletilla formosana* (Hayata) Schltr. f. *kotoensis* (Hayata) T. P. Lin), *Dendrobium miyakei*, *Tuberolabium kotoense*, and *Vanda lamellata*, endemic to Lanyu for priority restoration, but also continuously engaged the introduction and propagation of other indigenous species as well to accumulate more materials for the future. Through the efforts of KBCC, 10,000 saplings have successfully restored and sent to Lanyu. Also, over 3,000 plants were distributed to schools, institutions, or local citizens via Taipower for adoption, so that these endangered plants may return to Lanyu and foster their growth alongside the local communities.



The once believed extinct indigenous species of Pingtung, "Pyrenaria buisanensis," has been successfully revived with the efforts of KBCC and the National Museum of Natural Science. Over 3,500 seedlings have been cultivated to date. On the eve of Mother's Day in 2023, 60 saplings were planted at the Visitor Center in Majia Township, Pingtung, symbolizing a return to the embrace of Mother Nature.



### Research on Drought-Resistant Millet Planning to Apply for the United Nations' Globally Important Agricultural Heritage Systems (GIAHS)

Millet, with its drought resistance and short growth cycle, is an important famine-resistant food source gaining attention due to climate change. Since 2019, KBCC, Cheng Kung University's laboratory, and Hualien's cultural creative group have been preserving Taiwan's tribal millet germplasm through liquid nitrogen storage. In 2023, National Sun Yat-sen University collaborates with KBCC to conduct comprehensive collection, preservation, classification research, and promotion of indigenous millet germplasm. With over 400 tribes in Taiwan, more than 300 tribes have ceased millet cultivation in the past century, leading to a germplasm disappearance rate of over 75% for this crop. This project will also apply for inclusion in the United Nations' Globally Important Agricultural Heritage Systems (GIAHS).



### Research on Nature Medical Product to Advance Human Well-being

KBCC has been collaborating with Kaohsiung Medical University (KMU) since 2014. KBCC provides botanical samples, while the Graduate Institute of Nature Medical Product at KMU conducts extraction and builds natural product libraries. The libraries currently contain plants from 83 families, totaling 920 botanical taxa. Among the research findings, KBCC has discovered that the Nepenthaceae and the Musaceae exhibit biological activity against HBV, influenza viruses, and cancers. Some findings have been published, and KBCC is pursuing patents and further research. Moving forward, KBCC will continue collaborating with NTHU on ecological conservation research and supplying botanical materials to KMU for medicinal purposes, aiming to develop more natural products for the benefit of humanity together with the academia.