

OUR SOLUTIONS ARE IN NATURE

Safeguarding traditional knowledge and biodiversity for improved health and hygiene, finding symbiotic solutions to environmental, social, and economic challenges



By **UNDP ECOSYSTEMS & BIODIVERSITY**

MAY 18TH, 2020

One way to protect biodiversity and ecosystems is to find symbiotic solutions that work for people and for the planet.

An exemplar of such a win-win solution is found in Long Telingan, located in the Malaysian state of Sarawak on the island of Borneo. Here indigenous communities are harvesting a local plant, *Litsea cubeba* for its essential oil to make a locally produced soap and hand wash.





Harnessing traditional knowledge, this soap is improving indigenous communities' livelihood through partnerships – and improving health and hygiene.

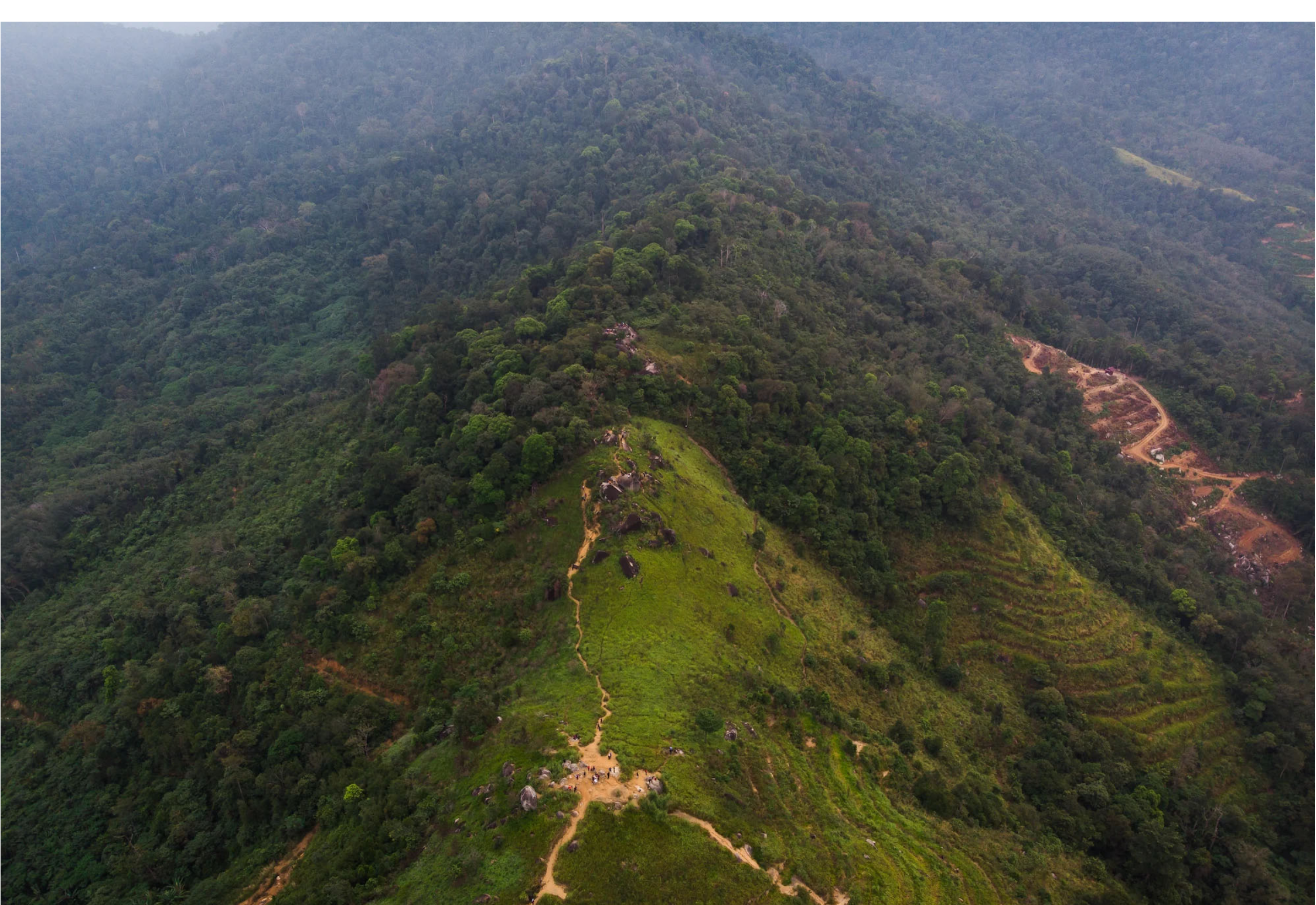
There is great value in having robust sanitation systems in place - sanitation systems that will continue to function even under stress or challenging conditions.

The locally produced Litsea cubeba essential oil has anti-microbial properties and can be incorporated into sanitary products such as soap and shampoo. / Photo courtesy of Sarawak Biodiversity Centre



‘Malaysia is one of the mega-biodiversity countries in the world with Borneo being one of the hotspots. The potential for Sarawak to tap into the bio-economy global trajectory through bio-discoveries is immense’ said Tan Sri Datuk Amar Wilson Baya Dandot, Sarawak Biodiversity Council Chairman (2018-2020).

| Photo courtesy of Hendri Sabri-Broga, UNSplash





*“We need to go into this future armed with nature
as our strongest ally.”*

We need solutions that set the path for nature recovery around the world, and reflect the reality that thriving economies and societies are dependent on healthy natural environments.

This innovative project enhanced technology sharing and increased awareness of the importance of conserving and restoring plants used by communities.

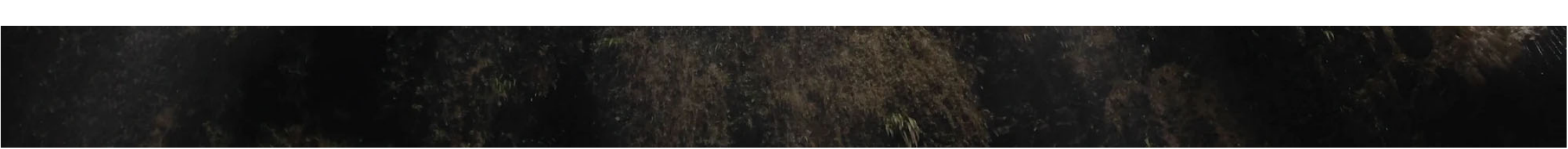
The project provided the opportunity for communities to share traditional knowledge and be recognised as its rightful owner, in addition to enabling communities to reap benefits from resulting proceeds.



Now, the locally-produced essential oil is regarded as a high potential crop and is being cultivated in a sustainable manner by the communities to ensure its continuous supply.

| *Photo credit: Marvin Galang, Unsplash*





In Malaysia, the power of innovation, derived from traditional knowledge, science and technology, has transformed genetic resources into medicines, health care and other products that are beneficial for human well-being.

For millennia, indigenous peoples and local communities have managed genetic resources, and today these resources continue to be essential in providing food, medicine and sustaining the livelihoods of communities.



THREE-FOLD BENEFITS

Since 1992, with the signing of the United Nations Convention on Biodiversity (CBD), countries have taken efforts to document and protect traditional knowledge in order to achieve the triple objective of:

1. **Conserving biological diversity,**
2. **Using natural resources sustainably, and**
3. **Fairly and equitably sharing the benefits derived from the use of genetic resources.**



AN INSTRUMENT TO ENSURE EQUITY

Specifically, through the Nagoya Protocol, the international community endeavours to ensure the fair and equitable sharing of benefits arising from the utilisation of genetic resources and associated traditional knowledge.

The Protocol enables countries to formulate their own policy and legal framework to safeguard access to biological resources and their utilisation which will result in equitable benefits to users, providers, communities and planet.

| *Collection of Litsea among the Lun Bawang of Long Telingan, Sarawak, Malaysia / Photo courtesy of Sarawak Biodiversity Centre*



FIGHTING PIRACY

In October 2017, Malaysia enacted the Access to Biological Resources and Benefit Sharing Act 2017 (known as the ABS law) to protect the country's biological heritage.

Fighting biopiracy, the new law patents genetic compounds and organisms to ensure proper acknowledgement of its origin. The law also implements requirements for all transfers of biological resources or results of research, and institutes a prior informed consent (PIC) stipulation.



In November 2018, the ABS law paved the way for Malaysia to ratify the Nagoya Protocol, **reaffirming the country's commitment to conserving its unique biodiversity while also promoting the sustainable use and equitable sharing of benefits.** In February 2019, Malaysia's ratification came into force, and has been supported by new national regulations and amended sub-national legislation.

| *Pa Ukat, Sarawak, Malaysia / Photo courtesy of Sarawak Biodiversity Centre*



“The lesson we learned from the ABS Project is that there needs to be political will and law to protect and conserve our traditional knowledge and biological resources,” Heyward, the Headman from Pa’ Lungan, Sarawak.

This project works to enable the potential of Malaysia’s rich biodiversity and biological resources to generate economic and social benefits to the nation and key stakeholders, including indigenous and local communities.

Through the discovery and development of new products such as pharmaceuticals, nutraceuticals, agro-chemicals, the project is supporting new business, employment, technology transfer, and capacity building opportunities.

These new opportunities strengthen the economic case for the conservation and sustainable use of biodiversity. This work also helps to motivate more effective protection for Malaysia's globally significant tropical forests, wetlands, and coral reefs – all of which contain vital genetic materials and attendant traditional knowledge.

| *Community from Long Kerebangan looking at Litsea leaves / Photo courtesy of Sarawak Biodiversity Centre*



INNOVATING TRADITIONAL KNOWLEDGE

To demonstrate its commitment to the CBD, the Government of Malaysia - through the Ministry of Energy and Natural Resources, has been supporting the Forest Research Institute Malaysia (FRIM), Sabah Biodiversity Centre and Sarawak Biodiversity Centre. Through this support, these organizations have helped to document traditional knowledge on medicinal and aromatic plants used by the Orang Asli (OA) indigenous people in Peninsular Malaysia, and Orang Asal in the States of Sabah and Sarawak. They have also supported research and development for using these biological resources.

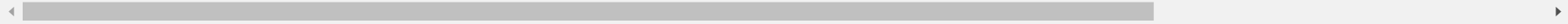
This work has raised awareness of the value of traditional knowledge and increased the understanding of what prior informed consent means.

| *Working with community members to ensure PIC / Photo credit: Forest Research Institute Malaysia*



As of July 2017, FRIM documented knowledge on medicinal and aromatic plants among all 18 OA ethnic sub-groups in Peninsular Malaysia.

A total of 364 species of medicinal plants were identified based on their uses by local peoples. Of that total, 86 species were selected for further analysis, out of which a final cohort of 33 species were deemed to have potential for development as prototype products.



For every activity conducted under this project, securing PIC from all communities involved has been mandatory. PIC enables members of the community to have inputs on proposed projects, manage their community's traditional knowledge associated to biological resources, and have a clearer understanding of project consequences - especially their potential to affect the community in terms of socio-economy and access to biological resources. PIC also allows the community to undertake negotiations on the sharing of benefits.

PROTOTYPING TRADITIONAL MEDICINE

FRIM conducted extensive research to develop prototype products for initial commercialization. To facilitate the development of prototype, FRIM drafted a model ABS agreement for local communities. This ABS agreement has served as a reference at the national level to ensure that fair and equitable benefit sharing elements are adhered to in order to improve the living standards of the OA community.

FRIM produced two prototypes of traditional medicines, named 'Pengloy Semai' and 'KaHerbs', based on the Orang Asli's TK of these medicinal plants in the States of Kedah and Perak. FRIM has negotiated two ABS agreements with the communities for initial commercialisation of these prototypes.

ENRICHING LIVES WITH BREAKTHROUGH INNOVATIONS IN BIODIVERSITY

Another partner for the ABS project is the Sarawak Biodiversity Centre (SBC). The Centre is entrusted with initiating biotech-based research and developing biological resources in Sarawak – particularly those that have been utilised by indigenous communities.

SBC also supports these communities in documenting their fast-disappearing traditional knowledge since 2001.




| *Headman Ringib Gelawat's Tenem Farm at Long Kerebangan, Sarawak / Photo courtesy of Sarawak Biodiversity Centre*





Achievements include:

- Development of a supply chain for essential oil product with seven indigenous communities
- Distillation of essential oil carried out by five villages with sheds and equipment supported by project
- Income generation for communities selling the essential oil to Sarawak Biodiversity Centre
- Royalties paid to the communities from the proceeds of health and personal care product sales derived from the essential oil.



SBC ABS agreements were signed by the Chairman of the Sarawak Biodiversity Council, and further vetted by the State Attorney General. Intellectual Property Rights for LitSara® products are now registered - the name 'LitSara' (derived from Litsea and Sarawak) oil is trademarked under the Intellectual Property Corporation of Malaysia. The Sarawak State Government is named as the 'service provider' for the intellectual property, while the indigenous and local communities are now duly recognised as the TK provider (www.litsara.com).

| *Pa Ukat landscape / Photo courtesy of Sarawak Biodiversity Centre*



SEAL THE DEAL

In 2019, the Sarawak Biodiversity Centre (SBC) successfully signed ABS agreements with five communities involved in *Litsea cubeba* (aromatic litsea tree) oil production namely Pa'Ukat, Pa'Lungan, Long Kerebangan, Long Telingan and Kampung Kiding.

The pilot project demonstrated a complete value chain: **from biological resource (raw material) collection, through primary oil extraction, to secondary product processing (soap, essential oil, air freshener), to marketing and sales.**

| *ABS Signing with 5 communities / Photo courtesy of Sarawak Biodiversity Centre*

BENEFIT SHARING AGREEMENT SIGNING CEREMONY



FOR
LITSARA® PROJECT



BETWEEN
SARAWAK BIODIVERSITY COUNCIL

AND

THE COMMUNITY OF
KAMPUNG Y...

THE COMMUNITY OF
LONG KERBAH...

THE COMMUNITY OF
LONG TELINGAN

THE COMMUNITY OF
KAMPUNG...

THE COMMUNITY OF
KAMPUNG...



BIODIVERSITY FOR A BETTER TOMORROW

From recording information to product development for benefit sharing, Malaysia has charted a new direction in research and development activities emphasizing fair and equitable sharing of the benefits realized through traditional knowledge.

For more information on TK and SBC's work: www.sbc.org.my | www.litsara.com | www.facebook.com/sarawak.biodiversity.com

For more information on Access and Benefit-Sharing of Biological Resources in Malaysia:

- [*UNDP Project Profile: Developing and implementing a national access and benefit sharing framework in Malaysia*](#)

Since 2011, the United Nations Development Programme (UNDP) with funding from the [Nagoya Protocol Implementation Fund \(NPIF\)](#) and the [Global Environment Facility \(GEF\)](#) have been supporting governments, local communities and the private sector to develop national ABS frameworks, build capacities, and harness the potential of genetic resources to develop novel products for the agriculture, crop protection, pharmaceutical, personal care and food/beverage industries in over 40 countries.

- For more information on the broader ABS work, visit: [*CBD: The Nagoya Protocol on Access and Benefit-sharing*](#)

FOOTNOTES

Andrea Egan, Gan Pek Chuan, Tan Seok Ling, Photos: UNDP Malaysia, Forest Research Institute Malaysia, Sarawak Biodiversity Centre, Gan Pek Chuan, Hendri Sabri-Broga, Marvin Galang of Unsplash

Perak, Kedah, Sabah and Sarawak, Malaysia

© 2021 UNDP ECOSYSTEMS & BIODIVERSITY



Exposure

START PUBLISHING FOR FREE