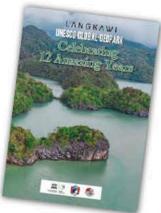


CONTENT

MESSAGES		LANGKAWI MAP	14
Foreword by	3	LANGRAWIMAI	160
Dr Hezri Adnan, Chief Executive Officer Langkawi Development Authority	3	SHOWCASE	
Messages by Azmil Munif Mohd Bukhari, Geopark & Conservation Manager Langkawi Development Authority	4	Landmarks of Langkawi Award-winning Kilim Community Co-operative Aspiring Geosite Kubang Badak	
Professor Emeritus Dato' Dr Ibrahim Komoo, LUGGp A	Advisor	Geopark Discovery Centres	
THIRD REVALIDATION Third UNESCO Global Geopark revalidation exercise	5	LESSONS LEARNT Eco-friendly Kedah Cement Plant	
LANCKAWI UCC. JOHDNEY		Friends of Langkawi Geopark (FLAG)'s Tuba Island	Мар
LANGKAWI UGGp JOURNEY	100	Exciting New 3 rd Generation Information Board	
Celebrating 12 Amazing Years of Global Geopark	5	Abandoned Charcoal Kilns Now Tourist Attractions	3
SUCCESS STORIES		WAY FORWARD	
Forging International Geopark Partnerships	8	The Way Forward in the words of: Dr Hezri Adnan, Chief Executive Officer Langkawi Development Authority	
For The Love of Langkawi UGGp	12		
Delightful Bounties of the Geopark	14	. ,	
		FACT SHEET	
AWARDS		Facts & Figures of Langkawi	
Awards and Recognitions	10	SDG	
BEST PRACTICES		UNESCO Global Geoparks contributing to the Sustainable Development Goals	
Keeping Langkawi Clean, Green and Sustainable	13		
GeoParkians in Action	18		
Support Groups	19		

Front cover photo

Ujong Buloh Island shown in the foreground and Dayang Bunting Island at the back.



20 22

23 24

26

28

30

31

He is named after a trilobite, one of the oldest and longestliving marine species that dates back to over 550 million years ago.

Obit - The Mascot of Langkawi UNESCO Global Geopark (LUGGp)

It had a hard crustacean upper shell on top and three longitudinal lobes at the bottom. Trilobite first appeared during the Palaeozoic era and become extinct at the end of the same era that spanned 290 million years.

Trilobite is the oldest fossil found in Malaysia, entombed in sandstone in the Machinchang Cambrian Geoforest Park. The Obit name is derived from the word trilOBITe.



Foreword

Dr Hezri Adnan, Chief Executive Officer Langkawi Development Authority

Langkawi is a land of plenty. It is famous for its beautiful beaches and rich biodiversity with equatorial flora and fauna. The most enviable, however, is its heritage with the unique geological formations that date back 550 million years ago. It is for this reason that Langkawi is known as the birthplace of Malaysia.

Building on from the 1991 Declaration of the Rights of the Memory of the Earth, the administrators of the Langkawi Development Authority (LADA) started to work with geologists to identify and characterise significant geoheritage sites in Langkawi. The findings were used as the baseline to prepare all the necessary dossiers to affirm what Langkawi has to offer before it was formally inscribed as a Global Geopark in 2007.

Herein we would like to pay homage to Professor Emeritus Dato' Dr Ibrahim Komoo for his visionary scientific leadership in helping Langkawi and its archipelago of 99 islands to be inscribed as Southeast Asia's first Global Geopark but also gained UNESCO recognition eight years later in 2015.

Today, we are proud to announce that we are aiming for another 'first'; the upcoming merger of Langkawi UNESCO Global Geopark (LUGGp) and our neighbour Satun UGGp in Thailand to become Asia's first Transnational Geopark.

If successful, Malaysia and Thailand will join four other transnational geoparks whose mergers transcend the borders of Austria and Slovenia; Germany and Poland; Hungary and Slovakia; and the United Kingdom and Northern Ireland respectively.

The benefits from a merger are hassle-free movement for visitors across borders between Langkawi and Satun, shared duties of conservation, co-managed development and joint promotion.

On another front, LUGGp is now a part of the network of eight sister island geoparks in the world that share almost the same challenges in its promotion and waste management. The shared experience will be beneficial to us all.

This publication celebrates the 12-year journey of Langkawi as a global geopark. Since the previous revalidation exercise in 2015, LUGGp has consolidated the number of geosites from 90 to 38 to simplify communication with the development stakeholders. This step will hopefully assist them in developing more geotourism products.

Evidence of the geopark idea being mainstreamed in Langkawi is discernible. For example, eight geopark products developed by the local community are already carrying the LUGGp logo on their packaging. We are also pleased to see a 5-star hotel launching its own geopark discovery centre recently. On the conservation side, there have been many instances whereby the status of Langkawi as a UNESCO Global Geopark had been cited by the authority and citizens alike to stop environmentally damaging projects from being implemented on the island.

Under my watch, I will ensure that efforts in promoting and conserving the Langkawi LUGGp will continue to get the traction it deserves. The duty is to ingrain the importance of a geopark in the minds of our people as a prelude to action – both on the island and beyond. As a development agency, LADA will continue to cultivate the science, philosophy and aesthetics of geopark in order to embed it further in Langkawi's lifestyle, culture and economy.

We are also in solidarity with the United Nations in localising the 2030 sustainable development agenda. Some of the efforts undertaken by LUGGp are already in sync with the 17 Sustainable Development Goals or SDGs. The challenge ahead is to find nexus solutions that will realise the transformational potential of all the SDGs concomitantly.

The UNESCO Global Geopark status is a powerful policy tool in mobilising collective actions that will shape a sustainable socio-economic development pattern in Langkawi as it marches towards the future. That's our belief and conviction.

Happy reading.

Dr Hezri Adnan

Azmil Munif Mohd Bukhari, Geopark & Conservation Manager

Langkawi celebrates its 12th anniversary of being conferred the UNESCO Global Geopark (UGGp) status this year and it has truly been a memorable journey.

This year also marks the third time when UNESCO Geopark inspectors will visit our island to carry out the status revalidation, which is done once every four years since 2007.

To commemorate these 12 amazing years of Langkawi UNESCO Global Geopark (LUGGp), the Langkawi Development Authority's Geopark & Conservation felt it was a timely occasion to publish this 32-page booklet that succinctly captures the significant milestones of what we have achieved to date.

This commemorative compilation is divided into four main categories: Success Stories, Best Practices, Showcase and Lessons Learnt for easy reference and a quick browse of the key highlights and milestone events.

Dive into the Showcase pages for details of the 38 geosites, conservation measures undertaken, new privately-owned geopark galleries, individual initiatives of resorts providing essential information about Langkawi LUGGp, local communities engaging in enterprising geopark products, the regular cleaning-up of trash by Langkawians themselves and more.

Central to all these preservation and conservation efforts is the desire to achieve the United Nations Sustainable Development Goals. Langkawi is looking at banning singleuse plastics and has started



to incorporate sustainability into the DNA of its development strategy in stages. The island's municipal council has enforced "no plastic day" two days a week while Langkawi Development Authority (LADA) recently celebrated a major festive occasion using only bio-degradable cutlery.

It is our aim to use the opportunity of the coming 3rd revalidation exercise to tell the story of our 12-year geopark journey – warts and all. Our hope is that as with the successful first (2011) and second (2015) revalidation exercises, Langkawi will again pass with flying colours.

To our important guests – the two UNESCO inspectors – we welcome you with warm smiles, open arms and our unique brand of Malaysian hospitality.

Azmil Munif Mohd Bukhari LADA Geopark & Conservation Manager

Prof Dato' Dr Ibrahim Komoo, LUGGp Advisor



Langkawi was inscribed as a global geopark in the year 2007 and was the 52nd to be listed as such. To date, the total number of global geoparks has grown to 147 found in 41 countries in the world.

It is heartening to note that

Langkawi has charted a memorable 12-year journey as a UNESCO Global Geopark (UGGp). At slightly more than a decade of existence, Langkawi UNESCO Global Geopark (LUGGp) is considered as a mature global geopark. With maturity, the time has come for LUGGp to take the lead in the global geopark movement and play a mentoring role to guide aspiring geoparks in Southeast Asia and in the Asia Pacific region.

In Malaysia alone, there are five aspiring national geoparks that LUGGp is grooming to become global geoparks.

Langkawi is presently enjoying the status of a UGGp that brings along with it benefits that, among others, empower the local communities and even help attract an increase in the number of tourists.

Once every four years, LUGGp will have to undergo a revalidation

exercise; which is a health check of sorts. This exercise will prompt LUGGp to reflect on how much has been done in the areas of heritage conservation, environmental protection, sustainable tourism and community empowerment. The sum of all these parts and its respective performances shall determine if it still meets the stringent qualities of a global geopark.

There is always a lot of work to do to keep up and to maintain the status quo, and the efforts of the Langkawi Development Authority (LADA) are commendable, without which LUGGp would not have grown from strength to strength.

All that has been achieved is very much due to LADA as well as the contributions from all stakeholders, particularly the Geopark & Conservation, Langkawi Research Centre, Universiti Kebangsaan Malaysia, government agencies; geopark partners and ambassadors and the ordinary village folk.

Keep up the good work and we shall thrive.

Professor Emeritus Dato' Dr. Ibrahim Komoo

Vice President, Global Geoparks Network Association (GGN); Advisory Committee, Asia Pacific Geoparks Network (APGN); Chairman, Implementation Committee National Geoparks; Advisor, Langkawi UNESCO Global Geopark (LUGGp); Principle Fellow, Langkawi Research Centre, UKM

THIRD UNESCO GLOBAL GEOPARK REVALIDATION EXERCISE

Langkawi UNESCO Global Geopark (LUGGp) marks this year 2019 as its twelve-year of an amazing journey since its inscription in 2007.

At the same time, this year is also a crucial year for it is time to have its UNESCO global geopark status revalidated the third time.

Obtaining a green card confers the right to carry the title UNESCO Global Geopark which every geopark is subject to undergo revalidation once every four years.

This August, Dr Kirstin Lemon from the Geological Survey of Northern Ireland and Mr Sigurður Sigursveinsson from the University Centre of South Iceland will arrive on a four-day field inspection trip from Aug 7 to 11.

Dr Lemon is the Vice-Chairperson of the UK Global Geopark Committee, chairperson of the Irish Global Geoparks Committee and sits on the Geological Society of London Geoconservation Committee.

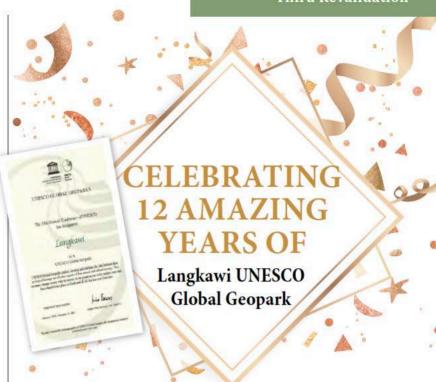
Since 2009 Mr Sigursveinsson is the Director at University Centre of South Iceland, which aims to elevate South Iceland's economic and social standing. The University's pilot study of the Katla volcanic region in 2008 led to Katla Geopark being inscribed as Iceland's first global geopark in September 2011.

The two evaluators will assess what's happening on the ground against the report submitted by LUGGp that outlines a brief description of highlights, news, most important progress, developments in Langkawi during the past 4 years.

The field evaluation is to find out whether the quality, management and functioning of LUGGp have improved since its previous revalidation.







The un-spoilt natural beauty that is Langkawi UNESCO Glocal Geopark (LUGGp) is a force to be reckoned with.

Langkawi was once the paradise lost for many a backpacker from Europe in the early 1990s.

Planeloads of chartered air flights from especially Germany flew directly to the pristine island brought in Germans who so much loved the sandy beaches and easy laid-back lifestyle that many decided to stay on.

A small German community has stayed on and quite a number started businesses with their spouses after settling down and have children of their own through mixed marriages.

Then, Langkawi was renowned to local visitors for its sand beaches, verdant paddy fields and, of course, the legendary tales of princess Mahsuri who cast a seven-generation curse on the island for being wrongfully killed for adultery, the burnt rice remnants, and the black beach phenomenon, which remains a mystery to this day.

At about this time, the trending green movement caught the attention of local earth scientists to descend upon Langkawi to study its rock formations.

Fast forward a few decades later, Langkawi was declared a duty-free island in 1987, a Global Geopark in 2007 and a UNESCO Global Geopark in 2015.

In many ways, Langkawi was transformed with the advent of eco-tourist attractions such as Kilim mangrove tours that won the 2018 Malaysia Tourism Award for best eco-tourism product, and most notably, the geopark-centric initiatives that are being pursued by LADA and the travel trade.

Yet in many respects, Langkawi remains unspoilt and with

Davang Bunting Marble Geoforest







Universiti Kebangsaan Malaysia (UKM) started research Langkawi on Langkawi's Development geological Authority (LADA) heritage was established

Celebrating 12 Amazing Years of L

each subsequent visit, new enhancements can clearly be seen. New attractions, improvements to the road and transportation system, a higher standard of living for the local community and a cohesive effort towards sustainable tourism are all very apparent.

The air remains fresh and the waters clean as LADA takes on the mantle to continue raising environmental awareness in a multipronged effort.

LADA's Hall of Fame

The progress and development of LUGGp to its present state as an internationally-acclaimed geo-tourism destination owed its success to the excellent leadership of LADA and its general managers and chief executive officers. Their tireless efforts while in office have elevated the island's status by leaps and bounds.

2007 marked the year Langkawi was inscribed as a Global Geopark and the then general manager was Dato' (Dr) Kamarulzaman Abdul Ghani. It was his vision that started the elaborate process that led to the success of Langkawi receiving the status of a Global Geopark.

Although retired, his passion has prompted him to continue to serve in a different capacity as the president of Friends of Langkawi Geopark (FLAG), a community-based NGO he founded in 2013. FLAG helps to keep an eye on things on the ground level and are quick to assist LADA and the community to do what is necessary when it comes to sustainability practices on the island.

Four years later in 2011 when it was time for the first revalidation of the global geopark status, Dato' Azman Umar who took over the helm as LADA's general manager led it to greater heights by garnering the support of all stakeholders to come alongside LADA in terms of understanding the concept of geopark and how they can play a role in this arena.

During the second revalidation in 2015, Langkawi was in the able hand of Tan Sri Khalid Ramli under whose tenure Langkawi received international recognition by UNESCO as a geopark reference centre for Southeast Asia. The accolade was conferred at the 4th Asia-Pacific Geoparks Network (APGN) San'in Kaigan Symposium held in Tottori, Japan.

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(Nov) - Asia Pacific Geoparks Network (APGN) established



Langkawi as a

National Geopark

Malaysia

angkawi UNESCO Global Geopark

When Dato' Haji Azizan Noordin assumed the position of LADA CEO in December 2016, he introduced a strategic plan that covered three major areas: sustainable tourism, investment and community development for Langkawi. As a key member of Pacific Asia Travel Association (PATA), Dato' Azizan was responsible for introducing LUGGp to the non-profit regional travel association that champions responsible development of travel and tourism to, from and within the Asia Pacific region.

Today, under the leadership of Dr Hezri Adnan, LADA is bent on raising the bar by working towards the culmination of Asia's first Transnational Geopark with the merging of LUGGp with neighbouring Satun UGGp. Both will benefit from the merger through the carrying out of joint efforts in cross-border geopark tourism research and promotion.

Starting Them Young

To ensure that the geopark legacy is protected, it makes sense to inculcate the islanders to have a sense of belonging and it is best done at an early age. The younger generation will be the custodians of UGGp.

Three years ago, Geopark Clubs were introduced to the 27 primary and secondary schools on the island where children were taught about the history and immense value of LUGGp and how to protect this precious asset from being eroded and contaminated.

They took part in clean-up activities, mangrove sapling plantings, recycling programmes, educational cruises and attending talks by trained geopark teachers. In October 2018, LUGGp achieved a world's first for introducing the Geopark Junior Guide programme where primary and secondary school students were trained to be in-house guides to visitors, a title which they are proud of.

A Change For The Better

The local adults, too, receive ample opportunities to be involved in the LUGGp initiatives such as the weekly Geosite Cleaning Programme among others. Recently, 103 members of Langkawi Tourist Guide Association were certified as Geopark Guides Level 101 (basic) and there are plans in the pipeline to certify them to Level 102 (intermediate) and Level 103 (advanced).

"This is a huge contrast as compared to when the geopark concept was first introduced to the tourism industry players," according to Dr Hezri.

"Back then, people only knew Langkawi for its beaches. The concept of geopark, which covers community development, social-economic growth, lifelong learning, gender equality, global partnerships and sustainability, were foreign to them.

The hoteliers, restaurateurs and tour operators were against it and told us that the tourists do not need nor appreciate the geopark concept," says Dr Hezri. "It took a lot of tireless and patient effort to get their buy-in, but the results made it worthwhile. When they saw how the geopark initiatives benefited the community and industry as a whole, they became our strongest supporters."

To date, there are 22 appointed geopark partner organisations and geopark ambassadors ranging from hotels, restaurants, NGOs and tour operators who have the platforms to propagate the geopark agenda. The well-equipped Geopark Discovery Centre at the Four Seasons Resort, the Nature Centre at The Datai Langkawi and Coral Nursery at The Andaman together with the role of their respective resident naturalists are just three of the many testaments to this.



LUGGp Royal Patron, Kedah princess Tunku Puteri Intan Safinaz unveiled the first edition of Geopark Gazatte. Present were LADA CEO Dato' Haji Azizan Noordin (right) and LUGGp advisor, Prof Emeritus Dato' Dr Ibrahim Komoo at the 10th LUGGp anniversary.







Forging International Geopark Partnerships

As Southeast Asia's first Global Geopark, Langkawi has led in its role like a big brother.

It mentored the establishment of the Asia Pacific Geoparks Network (APGN) a year after its inscription in 2007. Langkawi was looked up to by aspiring global geoparks to gain recognition especially hosting working visits from China, which has the largest number of global geoparks.

In 2015, Langkawi gained recognition by the United Nations by becoming a UNESCO Global Geopark (UGGp). Since then, it has formed formal partnerships with seven UGGp in the Asia Pacific region and recently joined the network of nine island UGGp in the world.

Last year, it assisted neighbouring Satun in Thailand during its preparation to gain the UGGp status.

The best is yet to come. This year, Langkawi signed a memorandum of understanding (MoU) to merge LUGGp and Satun UGGp into Asia's first transnational UGGp. This MoU is the first step in collaborating towards becoming a transnational geopark in Asia within four years.

Both LUGGp and Satun UGGp were formed at the same time about 550 million years ago, thus they share the same history and geological aspects but different cultural heritages. The impending merger will see the sharing of conservation duties, development and promotional efforts between the two parties.

LADA Chief Executive Officer Dr Hezri Adnan believes the cross-border collaboration will be a great boon to Langkawi's tourism industry as tourists will be able to enjoy the attractions of both places with minimal immigration hassle.

He says the cross-border attraction will attract tourists from around the world who will be able to immerse themselves in the natural wonders and cultures. Travel time by ferry between Langkawi and Satun is 45 minutes and 30 minutes by speedboat.

The MoU signing ceremony was held at LADA office. Dr Hezri signed on behalf of Langkawi while Satun UGGp was represented by Satun UGGp's Vice Director Assistant, Prof. Dr Pongsak Thongnueakhaeng. Also present were LADA Geopark & Conservation Manager Azmil Munif Mohd Bukhari and Satun UGGp Advisor Dr Tawsaporn Nuchanong.

There are, presently, four transnational UGGps in the world; namely,

Karawanken / Karavanke UGGp, Austria & Slovenia Muscau Arch / Łuk Mużakowa UGGp, Germany & Poland Novohrad-Nógrád UGGp, Hungary & Slovakia Marble Arch Caves UGGp, Ireland & United Kingdom of Great Britain and Northern Ireland. To date, the seven geopark sisterships Langkawi is partnered with are Dali-Cangshan UGGp, Fangshan UGGp, and Zigong UGGp in China, Dong Van UGGp (Vietnam), Jeju Island UGGp (South Korea), Muroto UGGp (Japan) and Satun UGGp (Thailand).

Sister geopark agreements promote greater communication and international cooperation towards promoting environmental conservation, sustainable development and research advancements

Additionally, LUGGp works closely with nine island global geoparks under the Global Geoparks Network (GGN), where members of the Island Geoparks Working Group share best practices and scientific information and join hands to raise the standards of all UGGps.

These geoparks are:

- 1. Azores UGGp, Portugal
- 2. El Hierro UGGp, Spain
- 3. Hong Kong UGGp, China
- 4. Jeju Island UGGp, South Korea
- 5. Lanzarote and Chinijo Island UGGp, Spain
- 6. Oki Islands UGGp, Japan
- 7. Petrified Forest of Lesvos UGGp, Greece
- 8. Qeshm Island UGGp, Iran
- 9. Shetland UGGp, UK









Firm handshake... LADA CEO Dr Hezri Adnan (2nd left) exchanging documents with Assistant Prof Dr Pongsak Thongnueakhaeng, Satun UNESCO Global Geopark vice-director after signing an MOU to establish Asia's first Transnational UNESCO Global Geopark (UGGp) between LUGGp and Satun UGGp recently.



LADA CEO Dr Hezri Adnan (4th from left) exchanging gift with Governor Satun, Mr Charuwat KlaengKlao for establishing a Transnational Geopark partnership.











AWARDS & RECOGNITIONS



Multiple awards won at the national and regional levels have placed Langkawi firmly on the world map of tourism.

The recipients are not only the Langkawi Development Authority (LADA) itself but also travel trade operators and owners and, not surprisingly, the local community.

Most of the awards only started to flow in eight years after Langkawi attained recognition as a UNESCO Global Geopark (UGGp). The island archipelago was inscribed as a Global Geopark in 2007.

Arguably, the apex awards that LADA received were the two Gold Awards at the PATA Travel Mart in 2017 and 2018.

In 2017, LADA received the PATA Gold Award for the Heritage and Culture - Heritage, with LUGGp emerging winner among contenders in the Asia Pacific region.

A year after that, LADA also bagged the PATA Gold Award in the Marketing - Adventure Travel category. A reality show entitled 'Differences Aside' was produced by the international cable television network, CNN, in collaboration with Travel Leisure Channel (TLC), where nine participants from other parts of the world engaged in treasure-hunting activities in Langkawi.

The 3-part video clip demonstrated the 'Malaysia: Truly Asia' spirit with the backdrop of LUGGp. The reality show can be viewed on https://youtu.be/OfBgnB5pS2c.

Besides LADA, a private hotel, The Frangipani Langkawi Resort & Spa, won PATA Gold Awards for three consecutive years since 2016 in various categories.

The first was the Environment - Educational Programme in 2016 with its Eco Walk, followed by an award in the Education and Training category in 2017 for educating, transferring skills and knowledge, creating awareness and training on sustainability to the staff and public locally and internationally; and in 2018, Environment – Environmental Education Programme through its 300 Ways to Save - Green Practices.



The PATA Gold Awards are a recognition of excellence, innovation, and the best tourism standards in Asia Pacific's travel and tourism industry.

The Frangipani Langkawi Resort & Spa's managing director Anthony Wong has himself volunteered his time as a Geopark Ambassador and Geopark Partner (via his resort) in their efforts in promoting, developing and conserving the LUGGp.

For his exceptional work, Wong was recognised by the Ministry of Tourism, Arts and Culture by being conferred with the Minister's Awards at the Malaysia Tourism Awards 2017/2018 award ceremony.

He is passionate about being green. Having been involved in the tourism industry for more than four decades, he started adopting and implementing sustainable practices and initiatives into the resort's operations when he took over its management in 2005. His efforts in instilling awareness through education and training programmes have earned him these prestigious awards.

The Malaysia Tourism Awards is the highest form of recognition by the Ministry of Tourism, Arts and Culture and Tourism







Malaysia for industry players whose outstanding contributions have played a significant role in the success of Malaysia's tourism industry.

At the same award ceremony, two others in stood out with their exemplary contributions to sustainable tourism in Langkawi.

Tour operator Hussein Mohd Said who operates Mega Water Sports that offer water sports tour packages won the Best Water Sports Tour Package at the Malaysia Tourism Award 2018.

Hussein's packages bring tourists riding jet skis to reach the doorsteps of the geopark's rock formations to appreciate its majestic natural beauty.

The other is Kampung Kilim Community Cooperative which won the Best Natural Attraction/Eco-Tourism/Agro-Tourism at the Malaysia Tourism Awards ceremony 2017/2018.

The cooperative manages tour packages within the Kilim Karst Geoforest Park. It is a shining example of how the local community in Kampung Kilim reinvented themselves and has succeeded in running the best-run cooperative in the country.

Kampung Kilim Comunity Cooperative has been awarded The ASEAN Community-based Tourism Standard certification for 2017-2019, which recognises its business model as a sustainable tourism approach in the region.

It has also been awarded the Excellent Corporation (Community Based) category nationally by the Co-operative Commission of Malaysia in 2015.

Much earlier, an initiative by LADA to support a private college to set up a Tourism Academy in Langkawi has seen positive results.

In 2015, Taylor's University, Malaysia, received the PATA Grand Award in the Education and Training Category for setting up the Tourism Academy at its Community College Langkawi and for its tremendous positive impact on the local community in the area of human capital development and capacity building. The graduates went on to work in leading hotels and other tourism industries on the island.





For The Love of Langkawi UNESCO Global Geopark

The success of Langkawi as a UNESCO Global Geopark (LUGGp) is more than just the attractions of its beaches, mangrove forests, diversity of flora and fauna, cultural heritage, archaeological richness, and geological landscapes.

It is how much the local community, or Geoparkians as they are fondly known in LUGGp, would embrace it as their own.

Langkawi Development Authority's (LADA) Geopark Division has achieved a record of sorts when it succeeded in its task to register a directory of geopark ambassadors and geopark partners - all volunteers - who are the self-declared frontliners of the geopark.

In its fourth year running, this collaboration between the local community, geopark ambassadors and partners is holding on its own because its members love Langkawi.

103 Geopark Guides Certified

LADA recently certified 103 members of Langkawi Tourist Guide Association (LTGA) as Geopark Guides with a Level 101 (basic) certification. This certification on basic geology knowledge has been incorporated into the Green Badge (local nature guide) training program approved by the Tourism Ministry.

"This certification is a good foundation but as Geopark Guides who are expected to know these sites like the back of their hand, the onus is on them to cultivate their field experience and story-telling skills by reading books, talking to the community members and finding all they can about the areas that they are bringing tourists to," says Prof Dato' Dr Ibrahim Komoo, the Advisor of LUGGp.





Othman Ayeb - The Snake Man

Othman Ayeb, 52, President of Langkawi Tourist Guide Association (LTGA) is among those certified as Geopark Guides.

"Today, it's such a proud moment to be among my friends in the industry as we are finally recognised as such. It will definitely motivate us to continue acquiring more knowledge of our global geopark."

Othman is also one of Malaysia's most revered snake handles and has won many awards to his name.



Rosina Ismail - Veteran Travel Agent

Rosina Ismail, 50, a veteran in the tourism industry, says "I came from a marketing and accounting background but fell in love with the tourism industry 25 years ago and have never looked back since."

"To me, being certified as a Geopark Guide is an act of appreciation by the authorities for all the hard work we tourist guides have put in over the years.'



Anthony Wong - The Green Activist

Anthony Wong Kim Hooi is someone who walks the talk and integrates conservation values in all his award-winning social and business enterprises.

He volunteered to join LUGGp as a Geopark Ambassador and his resort, Frangipani Langkawi Resort & Spa, is a Geopark Partner. His resort uses many sustainable technologies from rainwater harvesting to solar panels and recycles soda bottles into arty décor for its restrooms. His staff harvests vegetables for use in the kitchen.

Keeping Langkawi Clean, Green and Sustainable

Langkawi Development Authority (LADA) is the custodian of the Langkawi UNESCO Global Geopark (LUGGp), and the responsibility to oversee the geopark lies on its Geopark Division under the leadership of Azmil Munif Mohd Bukhari.

The division's tasks cover geoheritage and cultural conservation and community engagement; a seemingly wide scope. Thankfully, it has managed to garner the assistance of many Geopark volunteers who have shown a deep sense of belonging and ownership, with a high degree of commitment to protect and promote the natural assets they have been endowed with.

These Geopark volunteers are the muscle behind the regular activities carried out to keep Langkawi clean, green and sustainable.

LADA's Geopark & Conservation organises regular, weekly cleanups under the GeoEducation programme that have become part of the local lifestyle in the past few years, involving volunteers from all walks of life doing their bit for the environment.

GeoMangrove activities are held every Sunday, Geosite Cleaning on Wednesdays and the GeoCoral programme that involves diving trips to clean up coral gardens are held once a month.

"Everyone is free to join our Geosite Cleaning programme where we head to one of our 38 geosites to clean it up. Our staff will be on hand to lead our Geopark Volunteers in these cleanups," says Azmil.

"School students in Langkawi are taking part in these cleanup activities on their extra-curricular day which falls on every Wednesday, a day they are encouraged to perform voluntary work."

The GeoMangrove programme is open to corporations who wish to incorporate environmental conservation as part of their CSR programme. "We have executives from banks and airport staff showing up to clean up the mangrove and plant new saplings," explains Azmil.

On a typical outing, about 30 executives will show up to plant over 200 mangrove seedlings, and clean up and collect about 120kg of rubbish and bamboo spikes from the mangrove sanctuary area. The feel-good factor from these clean-up programmes motivates these Geopark volunteers to return for more clean-up outings.

The GeoCoral programme involves coral reef clean-ups in the waters surrounding islands, such as Pulau Singa Besar and Tepor.. The activity attracts snorkelers and scuba divers and the arrangement requires at least a month's prior notice.

While LADA provides light refreshments to all volunteers, it encourages all to bring their own water bottles to promote the practice of using less plastic.

"In all of our events or events related to us, we strongly encourage our guests to bring their own containers for food and beverages. This is in line with our efforts to reduce single-use plastic and styrofoam containers, and promote the use of biodegradable materials," Azmil emphasizes.

Do visit LADA's Facebook Page at https://www.facebook.com/ langkawiglobalgeopark/ for details of the next clean-up session.

GeoEducation was formed with the purpose to develop and sustain LUGGp's international status via activities that inspire and inform the community about the Geopark's conservation. These programmes include:



GeoMangrove

Educating the community on the importance of the mangrove swamp ecosystem to the environment



GeoCoral

Creating a generation concerned about the health of our oceans by teaching them about marine problems and encouraging them to practice responsible environmental behavior.



GeoClub

To increase the influence of LUGGp by establishing Geopark clubs at every school in Langkawi.



GeoTeacher

Provides teachers more knowledge and experience about LUGGp and the ability to deliver such information to students more effectively.



Acts as a platform to strengthen ties between teachers, parents, students and other agencies.



Geopark to School

An outdoor classroom concept that focuses on giving inspirational and educational talks regarding the Geopark.



School to Geopark

Provides more exposure to students about the concept and mission of the Geopark.



Geosite Cleaning

Provides opportunities for the public to clean all Geosites on the island, available every Wednesday.



Delightful Bounties of the Geografs

Tourists to Langkawi would be remiss to leave the island without buying some Geopark products to bring home as souvenirs or for own use. Eight local products have been identified because at least 50% of the raw materials used are sourced from Langkawi and are locally produced. Authentic and made with love, here are the eight goodies to choose from as well as the inspiring stories and faces behind them.

Some of them are already carrying LUGGp logo on their packaging.

1) Kamarul Faizy Roslan - Glass-Blown Crystal

Faizy arrived in Langkawi in 1997 to work as an apprentice in a glass-blown crystal studio. In 2002, he opened his own studio which steadily grown popular due to his detailed craftsmanship. He also conducts glass-blowing classes for visitors. Today, Faizy's business generates a sales volume of RM35,000 per month.

He has a showroom at the Langkawi Craft Complex and stocks handmade crystal glasses, art glass, souvenirs, gifts, trophies and laboratory glasses. His crystal products, mostly inspired by the island's natural beauty, are also available in boutiques and souvenir shops at hotels and the Oriental Village shopping gallery.





2) Fabillah Rahim - Granite Marble Craft

Palau Timun in Langkawi boasts of the finest white marble in the world and Fabillah is the sole local producer of marble ware. Using marble sourced from Kedah Marble, His marble ware such as kitchen countertops, tabletops, flooring, sinks and even tombstones are in demand by locals and tourists. He makes a monthly revenue of RM20,000 and acknowledges that business has been thriving since Langkawi was inscribed as a Geopark.



3) Mardiana Shaari - Virgin Coconut Oil

When Mardiana witnessed how virgin coconut oil healed a burnt wound without leaving any scars, she decided to turn her village home in Datai Valley into a workshop for making virgin coconut oil. At 68, Mardiana is still going strong selling about 100 to 200 of these 100gm bottles monthly, fulfilling orders from hotels and stocking the shelves of the boutique outlets in Oriental Village under the Datai Valley brand name.







4) Mardiana Shaari - Herbal Handmade Soaps

An enterprising business woman at heart, Mardiana Shaari also produces handmade herbal soaps as a side business.

She sells up to 300 bars a month, and her products are a hit among the Arab, Indian and Chinese tourists. Her signature soap is made with ingredients sourced from seaweed from the nearby hot springs, while the other types are made with turmeric, coconut and cinnamon.



Azlina Ahmad - Geocookies

Tourists and geologists who adore the rock formations in LUGGp can now literally consume their passion by eating cookies in the shape of a trilobite, an ancient 500-millionyear-old arthropod that is found fossilised in the island's rocks.

A brainchild of tourist guide Azlina Ahmad, she collaborated with her graduate daughter Fatimah Shafiqah, to bake cookies in different shapes of rock formations found in Langkawi. Their mission is to impress upon their customers to think about geopark when visiting the island.

In business for the past few years, Azlina sells up to 300 boxes daily at the Oriental Village and the Kilim Karst Geoforest Park.

8) Tok Che Ah Che Ngu - Claypot Coffee (Kopi Periuk Tanak Langkawi)

The unique Periuk Tanak Coffee, which is coffee that is processed and mixed in a clay pot and steamed, can be savoured at an eatery at Langkawi Parade Megamall in Kuah.

Infused with a strong herbal and the nutritious gamat (sea cucumber) combination, the coffee's recipe was passed down for three generations by Tok Che Ah Che Ngu, who is the sixth generation descendant of Dato Pekermajaya, the father-in-law of the famed princess Mahsuri who, as legend has it, was wrongfully killed for adultery. In revenge, she cast a seven-generation curse on the island.

Tok Che Ah Che Ngu's grandson and his aunts are now marketing it in convenient sachets. The sales outlet sells about 400 boxes of coffee per month at RM60 per box. Sales manager, Shah Mimi binti Raseh





5) Mahadzir Md Isa - Tempurung (Coconut Shell) Craft

Mahadzir Md Isa transforms discarded coconut shells into lovely souvenir items such as soap holder, pots, candleholders, ashtrays, cutleries from his small workshop cum home and gallery in Kampung Lawer, Padang Matsirat.

A definite hit among the tourists, he sells about 4,000 pieces a month. His hand-made items are sold at boutique outlets in the Oriental Village and certain hotels as well as retail outlets in Kuah.

Mahadzir offers 25 different types of coconut shell handicraft under his brand Twopai Craft, which is a wordplay on 'tupai', the Malay word for squirrel.

7) Hasruha Othman - Sea Cucumber (Gamat) chocolate chip cookies



Gamat has properties for a thousand uses, so say the village folk. Entrepreneur Hasruha Othman came up with the novel idea to incorporate sea cucumber as an ingredient to a delicious snack that she was selling the chocolate chip cookies.

Perceived to be a novelty item, her orders of the 'enhanced' cookies immediately tripled. Each nicely packaged box of cookies sells for RM5. Hasruha says the island's Geopark status has been good for her business and that she sells up to 2,000 boxes during the peak holiday season.



LANGKAWI

Dangli Remnant Islands B10

MACHINCHANG CAMBRIAN GEOFOREST PARK (4,274 ha)

The Machinchang mountain range forms a spectacular landscape comprised predominantly of sedimentary sandstone and granite. These Cambrian rock formations are estimated to be over 550 million years old—among the oldest on Earth. It is also home to probably the oldest rainforest on the planet. In addition to numerous mountain trails, Mt. Machinchang can be accessed by the famous SkyCab, one of the longest and steepest free-span cable car rides in Southeast Asia.



Langkawi Intil Airport

"WELCOME, ECO-LOVERSI"

Meet Trilobite, our official Langkawi UNESCO Global Geopark mascot! He is a fossil marine arthropod which was abundant during the Paleozoic Era, which goes back over 550 million years. He is therefore quite an appropriate mascot, and a superb guide to Langkawi UNESCO Global Geopark, where many of the geosite highlights date to that era and beyond. His top part is a carapace or hard crustacean upper shell, while the lower part is divided longitudinally into three lobes (hence, 'tri-' and 'lobite').

Bukit Malut Pantai Cenang Pantai Tengah



TRILOBITE'S GREATEST HITS -

1. Unique Tropical Karst Island

Ever since the emergence of Langkawi island resulting from geologic uplift, there has been a slow but steady process of dissolution, carving the limestone rocks to create karstic formations unique to Langkawi's tropical island environment. These formations take various forms, from limestone pinnacles to sea stacks and sea arches, all of which are prevalent within Kilim Karst Geoforest Park.

2. Dropstones One Billion Years Old

Isolated rock fragments called dropstones, along with cold water fossils, were scooped up and transported by a glacier, eventually to be deposited in Langkawi's Singa Formation over 300 million years ago in the Permian period suggesting that Langkawi island was part of the ancient supercontinent Gondwanaland. Some of these dropstones are estimated to be one billion years old.

Oldest Rock Fo

The deltaic sandstones which Cambrian Period of the Pale Machinchang mountain rang Southeast Asia-over half a



- 02. Pasir Tengkorak Cross-Bedding 03. Pulau Jemuruk Cambrian Fossil
- 05. Taniung Chinchin Dig Stope
- 04 Temurun Waterfall
- 07 Pinano Cave
- 09. Tanjung Dendang Sea-Notch
- 11. Kelawar Cave

- 13. Bukit Kechil Fold

- 19. Pulau Ular Abrasional Platform

- 20. Pulau Singa Kechil Limestone Tow 21. Sungai Itau Brachiopod Fossils
- 22. Batu Asah Brachionod Fossils
- 23. Pulau Rebak Red Beds
- 74. Gunung Raya Roof Pendant
- 25. Uiono Buloh Remnant Islands
- 26. Davano Bunting Bolina

- 30. Telaga Tujuh Waterfall

BIOSITES B1. Gunung Raya

- - 85. Pulau Singa Besar
- 89. Teluk Datai

B10. Dangli Remnant Islands

- B2. Wat Wanararm B3. Lubuk Semilano
- B6. Sungai Kilim/Kisap
- B7. Air Terjun Temurun
- B8 Gua Kelawar

- SkyCab & SkyBridge
- Dataran Lang

B4. Telaga Tujuh

- Ayer Hangat Village
- Laman Padi
- Taman Lagenda
- Royal Langkawi Yacht Club
- Resorts World Langkawi
- Rebak Marina AR.
- A9. Telaga Harbour
- A10. Pantai Teluk Datai
- A11. Pantai Tanjung Rhu A12. Pantai Tengah

- A13. Pantai Cenang A14. Pantai Kok
- A15. Pantai Lagenda
- A16. Air Terjun Durian Perangin
- A17. Kompleks Kraf
- A18. MARDI Agro Technology Park
- A19. Crocodile Adventureland
- A20. Langkawi Wildlife Park
- A21. Underwater World Langkawi
- A22. Beras Terbakar
- A23. Makam Mahsuri
- A24. Masjid Al-Hana



mation in Southeast Asia

formed 550 million years ago during the zoic Era, and now make up the e, comprise the oldest rock formation in oillion years old.

4. Part of an Ancient Supercontinent

Despite its small land area, Langkawi boasts a complete geologic sequence stretching back over 550 million years; strong evidence to support the theory that the region was part of the ancient supercontinent of Gondwanaland that existed during the Paleozoic Era.

5. Meteorite Impact Crater

A large horseshoe-shaped ridge structure known as "Mahsuri's Ring" situated in the central part of Langkawi Island is evidence of a meteorite impact. It is believed to be the remnant of a round-shaped meteorite with a diameter of approximately 1.5km.



Geoparkians in Action



TRASH HERO LANGKAWI

Every Saturday morning without fail a group of yellow shirts trudges through a stretch of beach in Langkawi picking up trash, plastic bottles, wrappers, rubber slippers, soiled baby diapers and cigarette butts.

TRASH HERC

This group who called themselves "Trash Hero" is bent on a single mission to do their share of cleaning up and has been at it since 16 November 2015.

To date, they have collected 41,750 kilos of trash, and still counting. During the past 196 trips they organized, a total of 5,333 volunteers were involved.

These unsung heroes are led by a local lady Zuraidah Zainal Abidin who is fondly called 'Kak Zu' and a Swedish citizen Ulrika Player, a long-stay resident in Langkawi for over a decade.

Trash Hero Langkawi's volunteerism has touched the hearts of many others who took up the call and have since set up similar groups in 27 different locations in Malaysia, doing cleanups on a regular basis.

"Much of the trash that washes up on our beaches is trash being thrown in the ditches and rivers in Langkawi. It's our trash. They are mostly plastic bottles but also a lot of candy wrapping, dirty diapers, food containers and of course cigarette butts. We all need to change our habits," Ulrika says.

The private sector and local authorities have extended a lot of help by providing trash bags, gloves, picking sticks and on occasion, a special cleanup was carried out on an island where the companies with boats would provide transport for the volunteers.

The colour yellow chosen is not a coincidence. Ulrika was inspired by islanders in a nearby island of Koh Lipe in Thailand she visited and from whom the idea of starting a group took shape in Langkawi.

The Thais also wore yellow t-shirts because to them, the colour yellow is a royal tribute to the royalty.

Trash Hero Langkawi walks the talk by reminding volunteers to 'bring your own bottles' (BYOB) and advocates reducing waste rather than recycling trash.

"We need to reduce our waste all together. And by using our own bottles, shopping bags, coffee mugs, etc, we can make a small change in our lives and collectively effect a larger impact worldwide."

In 2017, Trash Hero Langkawi was inducted as a Geopark partner and received the certificate from Kedah princess Tunku Puteri Intan Shafinaz celebrated her birthday last year by bringing her team to pick up trash on a beach in Langkawi in 2018.

Check out Trash Hero Langkawi's Facebook https://www. facebook.com/TrashHeroLangkawi for details of the next clean-

ONE MAN'S CRUSADE

Jet skis rule the seas. Hussein Mohd Said is the owner of Mega Water Sports providing jetski tours to Dayang Bunting Marble Geoforest, the site of Malaysia's largest freshwater lake. He operates 77 water scooters.

As a graduate who gave up a cushy desktop job for the sea, Hussein has, in the past decade, built up his jetski tour business offering four-hour island tour to visitors to enjoy the island's geopark formation such as caves and the freshwater lake.

Hussein and his staff collect close to 15 kilos of discarded bottles and trash daily among the flotsam found near to the beaches. The bulk of the trash, he notes, were washed ashore from elsewhere as the prints were in a foreign language.

It has become the company's standard operating procedure to bring along a net to keep the trash collected and tow back to shore to recycle or re-use.



Support Groups

The fervent support from stakeholders and the local community for Langkawi UNESCO Global Geopark (LUGGp) did not come as a matter of fact.

Efforts initiated by Langkawi Development Authority (LADA) to effect buy-in took time, albeit frustrating at times but with persistence and perseverance, it finally paid off.

With the strong support, LADA has moved on to achieve the unbelievable; several world's first; a network of geopark volunteers, fondly called Geoparkians, the budding Junior Geopark Guides in schools and a mascot in the shape of an extinct 500 million-year old trilobite whose fossils are embedded in the ancient rocks in Langkawi.

Langkawi is also fortunate to have cultivated an active network of support groups comprising travel trade stakeholders and NGOs whose voices - of all things geopark - in the public domain add to the chorus of consent of a job well done.



Sustainable Langkawi Chat Group

This chat group, Sustainable Langkawi, was set up on 26 Sept 2014 and it has grown to include 246 members comprising the academia, local press, tourist agents, tourism product operators and owners, hoteliers, companies involved in solid waste disposal and local opinion leaders.

Former CEOs and GMs of LADA including local municipal councillors, district officers, politicians, are also active online members there.

Anthony Wong who spearheaded this chat group is all too glad about the dozens of conversations posted on the chat group daily. Typical discussions range from how to build wetlands, ban plastics, clean sewage discharges to courses on planting organic vegetables.







Langkawi Business Association

Langkawi Business Association (or NiagaKawi) Deputy President Datuk Alexander Issac is one of the more vocal voices on issues about LUGGp.

His company Tropical Charters which bagged the Best Boat Operator in Langkawi has embarked on the Geopark Educational Cruise where almost every weekend, schoolchildren and teachers are invited on board his catamaran on a three-hour cruise around the island.

Since starting on this Corporate Social Responsibility project five years ago, his boat has brought onboard 3,000 students and 900 teachers on these geopark cruises which includes stopovers at the Dayang Bunting Marble Geoforest Park.





Malaysian Association Hotels Kedah/Perlis Chapter

Langkawi hoteliers were the initial skeptics wanting LADA to spend money on overseas promotion rather than on geopark infrastructure in the early days. But also fast at lending support once they realised that the geopark is bringing in tourist dollars.

Many of the 37 members in MAH Kedah/Perlis Chapter are now Geopark partners and some of them have put up a Geopark Information Corner in their respective lobby areas.

Its deputy chairman Ramzi Rahmat, the general manager of Adya Hotel, says LUGGp is good for tourism as it offers the ecotourism sustainability option to brand the island's tourism





Malaysian Nature Society Langkawi Chapter

Veteran travel agent Eric R. Sinnaya sees the need for more sustainable practices to cope with the demand from foreign tourists seeking eco-tourism travel.

For him, MNS should continue to play the role as a pressure group to remind the authority and also local community including tourists alike of the need to help to preserve and conserve the biodiversity and geo-heritage of the geopark.

Landmarks of Langkawi

Langkawi Sundial Perched on the entrance into the sprawling Eagle Square landmark in Langkawi is the resort island's modern version of a sundial - an ancient clock which tells the time of the day.

This sculpture in Langkawi is made up of a stainless steel tower and a stainless steel disk entombed into a granite stone base. The tower is 13.5 meters high and the disc is 5.5 meters in diameter while the stone blocks that hold up the tower are local granites extracted from the Bukit Lembu quarry at the Gunung Raya Mountain range. The granite stones have been around for 230 million years ago.

As the Sun moves across the sky, the tower casts a line of shadow that aligns with the different hour-lines which are marked on the dial to indicate the time of day. The line will also fall on a directional chart on the dial that points to the locations of all the key places in Langkawi.

The sundial is a symbol of the island's status as a UNESCO Global Geopark (UGGp) because it symbolizes the essence of sustainability - a 'solar-powered' way to tell time.

Those who want to delve into a deeper appreciation of Langkawi's status as a UGGp will find much information in the landmarks listed below. The list is growing by the day.

Discovery Centre Langkawi UNESCO Global Geopark, Kilim Karst Geoforest Park

As Kilim Karst Geoforest Park's latest attraction, Langkawi Geopark Discovery Centre boasts of a comprehensive display of the island's geopark history and also serves as a centre for education for geological enthusiasts.

Developed by Langkawi Development Authority (LADA), the establishment of the centre is hoped to inculcate the spirit and awareness of environmental conservation among the locals and tourists.

Based on the concept of "Making the Past Present for The Future", the centre focuses on various segments, such as geography, geology, flora, fauna, sociocultural and international, a themed exhibition space, an amphitheater facility as well as a library.





KILIM KARST GEOFOREST









Langkawi Research Centre

Langkawi Research Centre or Pusat Penyelidikan Langkawi (PPL) is a one-stop centre that is the ideal place to learn more about the Langkawi journey to become a UNESCO Global Geopark (UGGp).

PPL runs a gallery that display samples of ancient rocks and fossilised stones and an engaging timeline of milestone events that led Langkawi to attain the geopark status.

Visitors can expect to gawk at the many realistic and lifelike taxidermy of some of many species of bats, butterflies, turtles, various reptiles that can be found in Langkawi.

The building is well-equipped with state-of-the-art facilities, such as scientific laboratories, seminar rooms, an auditorium, galleries and a hostel. At the courtyard stands an impressive built-to-scale traditional Malay house constructed entirely from timber, beams and poles, that gives a delightful peek into how the locals used to live in the yesteryears.

PPL was set up by the Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia (UKM). In fact, UKM pioneered numerous research studies since the 1970s and was the first to identify the Malaysian Palaeozoic rock formations which are the oldest rocks and the most complete Paleozoic-Mesozoic sequence of sedimentary formations, which literally makes Langkawi the birthplace of the land we now call Malaysia.

Under the tutelage of researchers, such as Prof Emeritus Dato' Dr Ibrahim Komoo, PPL was instrumental in highlighting the importance of the island's geological treasures.



Langkawi Geopark Information Centre, Oriental Village

The Langkawi Geopark Information Centre located near the entrance of Oriental Village serves as a hub for fun, educational and experiential activities that tourists, both local and foreign, can do while taking a break from shopping and sight-seeing.

The informative and interactive displays contain a wealth of information about Langkawi's status as a Geopark and the wealth of treasures in the form geological, flora, fauna and culture that it contains.

Langkawi UNESCO Global Geopark Gallery, LADA Lobby

The Geopark's pictorial journey with photographs and charts and timeline are on display at the lobby on the ground floor of the LADA office in Kuah.

Information and educational elements pertinent to the Geopark are attractively displayed on various information panels located there. Visitors can browse and help themselves to the information brochures and leaflets containing LUGGp, its attractions, accommodation and tour packages offered by travel agents on the racks.









If you are looking for an exemplary model in communitybased ecotourism, look no further than Kampung Kilim.

Kampung Kilim of today is vastly different from its yesteryears as a fishing village.

It is a classic model of how a sleepy village could transform into a bustling tourist attraction – a direct beneficiary - right after Langkawi was inscribed as a Global Geopark.

Almost overnight, figuratively speaking, large crowds of tourists are converging there to enjoy the beauty of Kilim's renowned mangrove forests and majestic limestone karst hills.

Exciting tour packages are drawing tourists who love outdoor activities such as snorkelling, fish feeding, eagle watching, caving, edutourism, mangrove conservation, coral conservation, picnics, canoeing and fishing.

Over the past nine years, an impressive network of boardwalks had been erected to bring visitors on an immersive mangrove walking tour and a modern jetty was added to handle the steady stream of tourists.

The Kilim Community Co-operative was set up by the 184 villagers in Kampung Kilim in July 2010, to manage their natural assets. It now owns 137 boats for charter and the income collected from boat fees has uplifted the villagers' livelihood.

The co-operative manager Imran Ismail says about 30% of the Kilim community are employed and involved in running the ecotourism activities.

Last year, Kilim Karst Geoforest Park's popularity led to it winning the Best Eco-Tourism Attraction in the country at the Malaysian Tourism Council Award in 2018.

It is the talk of the town and a testament as to how Langkawi UNESCO Global Geopark (LUGGp) status has resurrected the fishing village.

"Before the Co-operative was set up, the Kilim jetty was managed by the Fisherman Economic Association under the jurisdiction





Kilim Co-operative manager, Imran Ismail



of the Fishery Department from 2000 until mid-2010. The villagers' mainstay was fishing," says Imran.

Today, the Co-operative is focused on ecotourism and managing the tourist attractions along the Kilim river.

Their main revenues came from boat charters around the Kilim Karst Geoforest Park (Mangrove Tour), entrance fees to Gua Kelawar (Bat Cave), car rentals, the Kilim Jetty gift shop and the Anjung Lestari Restaurant.

The Co-operative has collaborated with numerous universities to ensure its activities are sustainable, such as working with Universiti Malaysia Terengganu (UMT) in its Mangrove Sanctuary Conservation Programme, University Community Transformation Centre of Universiti Kebangsaan Malaysia (UKM) to market its Edutourism package, and collaborating with Universiti Institut Teknologi Mara (UITM) Perlis for the Kilim Marine Park Programme.

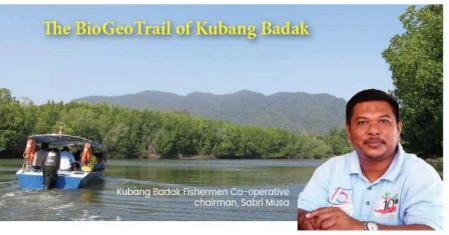
It has kept itself busy by organising and hosting 35 to 50 programs annually. "One of the most memorable events was our very first World Mangrove Day celebration on 5 July 2018 that was jointly organised with Langkawi Development Authority (LADA), UKM, UMT and Langkawi Tourist Guide Association (LTGA)," Imran recalls. Participants were taught the proper way of planting mangrove saplings.

The Co-operative has launched the Kilim Geoforest Park website in 2017 to increase its online presence and succeeded in boosting the inbound tourist arrival numbers by 94.6% from 204,000 in 2016 to 397,000 that year.

As an added boon, Kilim's latest attraction is the Langkawi Geopark Discovery Centre that houses the most comprehensive information on LUGGp presented via a variety of audiovisual and interactive media platform.

In honour of the Co-operative's outstanding performance and contribution to its community, it was voted as the Best-run Co-operative in the whole country and at the international fora, it clinched the 1st ASEAN Community Based Tourism Standard (2017-2019) Award in the ASEAN Tourism Awards 2017.

ASPIRING GEOSITE





4 960

111

The Kubang Badak BioGeoTrail promises to be an awardwinning Kilim Karst Geoforest Park tourist attraction in the making.

It has what Kilim would envy; more geotrails and a marine park which are being developed to their full ecotourism potentials.

The unique ecosystem there features an estuary that is rich with geological and biological diversity, lush mangroves, and was the former settlement site of the island's first Thai community. Villagers there can speak Thai too.

Located at the border of the Machinchang Cambrian Geoforest Park, it is Langkawi UNESCO Global Geopark's (LUGGp) latest geotourism attraction. The Kubang Badak geosite has 13 BioGeoTrail with unique geological, biological and cultural significance. Tourists will be enchanted by the exciting stories and folklore by a geopark guide.

The star attractions are the Fishermen's Base, Kubang Badak's Information Centre / Gallery, the island itself, Siam I River, Siam II River, Siam III River, Pinang Cave (Gua Pinang), Cape of Boiling Water (Tanjung Air Mendidih), Jemuruk Island, Blind Cape (Tanjung Buta), Point-of-view Landscape (Titik Pandang Landskap), Bohor Labi and Kubang Badak Jetty.

Langkawi Development Authority (LADA) has joined forces with Langkawi Research Centre (PPL) UKM to showcase Kubang Badak as a viable tourism destination that will be the embodiment of a sustainable development that can happen in a strong fishermen community.

"Our intention is to grow both our tourism and fishery activities together. One should not succeed at the expense of the other," says Sabri Musa, the Kubang Badak Fishermen Co-operative chairman.

Kubang Badak jetty houses seven boats dedicated for tourist charters and 90 fishing boats. The boats are owned by the 170 cooperative members and about 20 villagers are involved in the tourism trade

The majority of Kubang Badak's residents, like Sabri who operates a restaurant, can speak the Thai language, a testament to the influence of the Thai community there.

According to Sabri, every tourist who book the BioGeoTrail package will get to see all the 13 sites. "They will basically get the whole gamut of experience from exploring caves, visiting abandoned charcoal kilns, touring the young mangrove forest, island hopping, fishing and snorkeling.

The whole trip will take about 2 hours. We are proud to say that some of the most beautiful and majestic corals are found within our BioGeoTrail," savs Sabri.

The co-operative members are committed to preserving the natural beauty of the place and as such, they are cautious when it comes to the development of Kubang Badak.

"We have learnt a lot from the sharing of experiences from other more established geosites such as Kilim Karst Geoforest Park. These lessons have helped us to hopefully develop our beloved village in a sustainable manner right from the start," he explains.

Since the introduction of the Kubang Badak BioGeoTrail and the side activities, Sabri could see a marked improvement in the community's standard of living.

Hotel guests can experience fishing on day trips and they are willing to pay for a good catch that the hotels will cook for dinner. It has generated a good side income for the fishermen, who by night, still go out to sea.



Geopark Discovery Centres

Initial skepticism has turned into a full-fledged embrace of the geopark concept as witnessed by the actions of three high-end resorts to fund their own set up of a geopark discovery centre, a nature centre and a coral nursery.

As naturalist Aidi Abdullah noted, any serious competitor worth its salt would have to up its ante by doing something similar yet different to showcase Langkawi's geopark assets while vying for the tourist dollars. Here are their stories.

Geopark Discovery Centre at Four Seasons Resort Langkawi

Crazy Rich Asians fans will be thrilled to know that the location shooting for Araminta Lee's hen party was actually filmed at Four Seasons Resort Langkawi, which now has its very own swanky Geopark Discovery Centre (GDC).

Step into this well-designed gallery to explore the treasures of Langkawi from the complete Paleozoic sedimentary sequence in Malaysia to unique animals and birds, mangroves, rainforests, beaches, caves, tidal flats, estuaries, karsts and coral reefs in great detail.

Guests can peruse the stunning display of exhibition boards, interactive presentations and displays by themselves or under the capable guidance of the resort's naturalist Aidi Abdullah who is only too happy to share his extensive knowledge of Langkawi's plants, animals and natural history.

Those seeking a deeper immersion of these natural wonders can join Aidi and his team for fun-filled tours which include exploring the resort's 12-metre majestic limestone outcrop, coastal kayaking to a salt-water lake which is linked to the sea by a 15-metre cave tunnel or take a breathtaking boat tour along the mangroves of the Kilim Karst Geoforest Park located just minutes away.

The GDC opens from 9am to 6pm daily.

FOUR SEASONS RESORT LANGKAWI, MALAYSIA





Coral Nursery at The Andaman



The Andaman boasts of the first private Coral Nursery in Southeast Asia, which gives the golden opportunity to its guests to help grow new corals, which will be 'planted' in the sea when they have matured after 4 to 12 months.

The Nursery, as well as a marine lab, were established in December 2010 under the Resort's Coral Conservation program. This is an on-going effort to restore the Andaman Reef, which is still recovering from the 2004 tsunami.

Helmed by resident naturalist, marine and coral curator, Hidayah Husein and her team of two helpers, the Coral Conservation program comprises a plethora of activities, such as Coral Transplanting, Coral Nursery Feeding, Coral Talk, Coral Clearing and Private Guided Snorkel that gives guests breathtaking views of the coral nursery.

Guests can also explore the marine lab accompanied by one of Andaman's Marine Science students where they can view tiny















The Nature Centre at The Datai Langkawi

Nestled within the lush rainforest surrounding The Datai Langkawi is The Nature Centre, a rustic open-air bamboo building that seamlessly blends in with its natural environment.

The interiors are inviting with comfortable seats for guests to lounge in to view documentaries played back on TV, read books about Langkawi and Malaysia's natural wonders from the wellstocked in-house library and be regaled with entertaining wildlife stories by the seasoned resident naturalist Irshad Mobarak and his team that consists of a savvy naturalist, geologist and marine biologist.

Guests can learn about the various herbs and spices used to make herbal teas at the Tea Corner. They can also savour these deliciously healthy concoction made with ingredients that were specially chosen by the late Dr Ghani, Langkawi's famed herbalist and Geopark ambassador. Be sure to flip through the book of herbs that is beautifully handwritten and hand-drawn by one of the talented The Datai's staff.

The Nature Centre also serves as a starting point for several educational nature guided tours, both complimentary and chargeable, such as the Rainforest Awakening morning walk, Rainforest After Dark evening walk, Butterfly Garden Walk and Journey through the Forests including a Canopy Walk which leads to walk through a lovely mangrove forest before walking up wooden stairs that lead up to the top platform to view the canopy of the rainforest.

Also on the menu are a coral reef exploration as well as jungle trails to natural pools and waterfalls. Guests who join these guided tours are guaranteed to learn and remember a lot about the plants and animals that they encounter thanks to the incredible storytelling skills of the resort's naturalists.

When not guiding tourists on these activities, Irshad and his team are focused on conservation work such as artificial reef planting and even building a nest for a hornbill family. The Nature Centre is open from 9am to 6pm daily.

marine life under the microscope like the Tiger Tail seahorse that makes its home in Langkawi's 8,000-year-old reef.

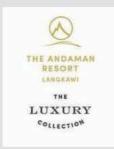
Since the Coral Transplanting project began in 2012, at least 1,000 pieces of corals have been released back to the coral garden area each year. Last year, the Resort has increased the transfer of 2,038 pieces of corals back to the sea, thanks to its Coral Team Building program, which attracted various private corporations to join in.

The Goniopora stokesi coral species or flower coral is the main focus as it has a higher transplant success rate compared to the other coral species. Thus far, the Andaman's team efforts have successfully restored 20% of the reef area.

Hidayah and her team are passionate about protecting as many species of corals and animals that they encounter. As such, the program has expanded to mini Artificial Reef Modules being used to propagate or transplant corals and will include the Sea

Anemone Rehabilitation Project and Sea Cucumber Project in the near future.

The first initiative aims to address the decreasing number of sea cucumbers due to over-farming while the latter project's goal is to restore the colour of bleached sea anemones due to global warming which leads to their starvation. The Marine Life Laboratory is open from 10am - 12pm (morning session).







Lessons Learnt



Langkawi Development Authority (LADA) has undergone four consecutive changes of leadership during its 12 years' journey as a global geopark and has come through unscathed; thanks to the strong foundation laid down by its predecessors.

Each of them had used their core competency and experience to turn weaknesses, be it structural or activities gone wrong, into strengths that further enhance on the best practices it has adopted towards a sustainable global geopark.

The lessons learnt - through a gradual maturing of age - has helped to put Langkawi in a position of strength as it readies itself for the third revalidation by UNESCO Global Geopark (UGGp) inspectors.

Grounded in a sincere approach to champion the island's geopark heritage, LADA has bonded stronger with stakeholders

and the local community who are united with the same vision.

While still a long way from perfection, LADA's consistent purpose-driven efforts have translated into tangible positive results.



Eco-friendly Kedah Cement Plant

One of the challenging aspects of spreading the principles of Langkawi's UGGp (LUGGp) status is to reach out to industries that have been operating longer than when the island started growing as a popular eco-tourism destination.

The Kedah Cement Plant, recently acquired by YTL Corp, in Teluk Ewa has been operating in Langkawi with over 200 employees since 1983; 24 years before the island acquired its UGGp status.

Since 2013, there has been an effective engagement between LADA and the cement plant management. Following which, in April this year, the cement plant made history by becoming the first among other cement plants in Malaysia to have attained a lower dust emission of just 20mg per cubic meter for its second production line.

"This is a reduction of over 50% which is below the national average standard baseline of 50mg per cubic meter. Our plant now has a much lower emission rate than the national average," says its operations manager Ahmad Azlan Aminsah.

"This is truly a positive result of LADA's engagement with the industrial community in Langkawi in our common bid to protect the environment," Azlan adds.

Geopark & Conservation Manager Azmil Munif Mohd Bukhari is a happy man with the efforts of the cement plant management to ensure the sole factory in Langkawi is extracting limestones and doing it sustainably.

Their staff is always carrying out CSR activities that support all the green initiatives in the nearby Kubang Badak and Teluk Ewa areas, adds Azmil.





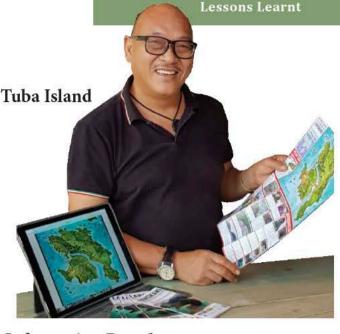
Friends of Langkawi Geopark (FLAG)'s Tuba Island

FLAG founded by Dato' (Dr) Kamarulzaman Abdul Ghani in 2013 has published a tourist map of unspoilt Pulau Tuba.

The map is conceptualised by FLAG committee member Rosle Khalid - a restaurateur-cum-artist, who utilised his skills to design the eco-tourism-centric map, a first in Langkawi.

Pulau Tuba is just a 20-minute boat ride from Kuah in Langkawi and the home of about 1,000 families who are fishermen, farmers and geopark product producer.

FLAG printed 10,000 copies that contain highlights of new ecological discoveries, homestay and eco-outdoor and teambuilding activities.



Exciting New 3rd Generation Information Board

Signages are important media platform to publicise and educate visitors of geopark information.

LADA has the advantage of hindsight in preparing better visuals and interesting display as this would be the third generation of signages describing the geology, flora, fauna and geomorphology of each geoforest and their geosites on the island.

A preview of these information boards show vivid and colourful maps as well as images of the geosite, wildlife and culture it contains. Engagingly written in simple to understand languages in both Malay and English, the info panels are appealing to tourists as young as 12 years old.

It also contains the do's and don'ts to remind visitors not to throw trash and help to conserve the geological treasures and wildlife.

Abandoned Charcoal Kilns Now Tourist Attractions

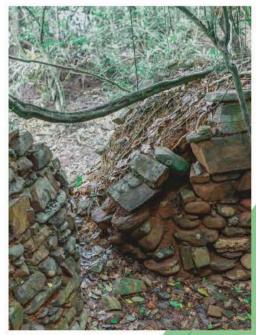
For more than 100 years ago right up to the 1980s, Langkawi's mangroves along the banks of Kilim and Kubang Badak were where charcoal kilns were found.

The mangrove wood is ideal for charcoal making and here's where a Siam community thrived. As gas stoves replace charcoal as fuel, demand for it dropped and the community dwindled.

Thanks to the collaboration between LADA and PPL, the abandoned charcoal kilns are cleverly marketed as tourist attractions and now form an integral part of Kubang Badak's BioGeoTrail.

As an eco-tourism attraction, the kilns are a throw-back to a different way of life. Today, Langkawi is fiercely protective of its 6% landmass comprising mangrove swamps.

"In the past, the fishermen need to go out to sea, catch some fish and come back to sell the fish to get money but now they earned much more just by bringing tourists for a fishing experience," says Azmil.



THE WAY FORWARD

Dr Hezri Adnan LADA Chief Executive Officer

Langkawi Development Authority (LADA) is proud to have a UNESCO Global Geopark (UGGp) that is now a mature entity after 12 amazing years of existence under its belt.

The positive impact of a UNESCO Global Geopark status is undeniable and manifold. This international recognition has raised Langkawi's profile to become a top 10 tourism destination in the world. More importantly, it has also directly benefited the local community who is imbued with a deep sense of ownership.

The travel fraternity – also a beneficiary - has felt the immediate spin-offs derived from the 3.63 million tourist arrival recorded in 2018.

The tasks ahead are not only to sustain what we, from LADA, have achieved at a satisfactory level but also to move forward to ensure Langkawi will progress in the right direction.

The core must be whole and the DNA in it must be modelled to bring out the best among planners, stakeholders and particularly the local community. They must profess a penchant for sustainability – the buzzword of today – and capable not only to 'think and act' intuitively but also to aim for tangible results from sustainable development.

We are fortunate in this respect; we have the United Nations on our side. The United Nations' target for 2030 is enshrined in the 17 Sustainable Development Goals (SDGs) that address all issues and prescribe solutions to engineering a world that will live in peace and prosperity.

Among the 17 SDGs, eight of them are directly related to geopark sustainability. And, herein, lies the challenge, to localise sustainable development programs that are already spelled out about what we should do and do them well.

In Langkawi, not unlike what other island global geoparks are facing, we have to manage the ever-increasing solid waste



generated by the domestic and industrial sectors. Achieving this will require the conceptualisation of a circular economy plan that will have a capacity to cope with the expected increase in tourist arrivals and influence our consumption pattern.

The next challenge is putting limited resources to work especially in education, ensuring the younger generation will share the same love and appreciation of what they have been endowed with. We have to shape our society to accept that nature is culture.

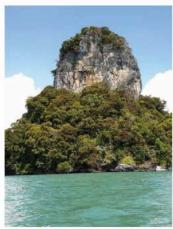
For this to happen environmental consciousness must be locked into our collective psyche – from young – and reinforced by the philosophy of life that we embrace, and manifested in the visual arts that we value and cherish.

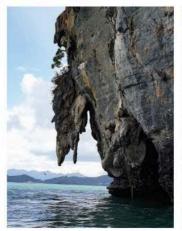
Some baby steps are being developed to turn Langkawi into a national showcase of green technology application for sustainable development. Ten charging stations for electric cars have been installed on the island to encourage the shift to electric mobility.

The Government is also exploring the possibility of installing large-scale solar farms in Langkawi to meet its growing power needs. In the pipeline now are iconic development projects that will feature state-of-the-art low carbon technologies.

I am also happy to announce that Langkawi UNESCO Global Geopark (LUGGp) will soon add another geoforest park, which is the Gunung Raya Granite Geoforest Park to its assets. Research and documentation of the unique rock formation in Gunung Raya is on-going. The other geoforest parks we have are the Machinchang Cambrian, Dayang Bunting Marble and Kilim Karst.









Geopark Promotion Within and Beyond Our Borders

LUGGp is constantly exploring innovative ways to publicise geotourism and to promote the visibility and awareness of the geopark to tourists and more importantly, its own community.

Our aim, moving forward, is to introduce visibility enhancement initiatives which promote a sense of awareness and community pride to the frontliners, making them our Geopark's greatest and most passionate ambassadors.

We have witnessed the effectiveness of online marketing promotion of geosites in increasing the tourist footfall; case in point, the success of Kilim Karst Geoforest Park. We will step up efforts in our digital marketing strategy by way of social media, regular website updates, engaging with travel influencers, online geopark gazettes, e-newsletters and even a geopark app with loyalty program elements to bring LUGGp firmly into the mindshare of the Millennials and Gen-Z.

In March this year, 24 UGGps from all over the world took part in the travel trade expo in Berlin, each promoting the unique characteristics inherent in their respective global geoparks with the common theme; Adventure and Responsible Tourism.

For the first time, the Global Geoparks Network (GGN) published a book on tourism packages of all the participating Global Geoparks Network GGN members that was distributed to the 113,500 visitors and delegates from 181 participating countries.





Transnational Partnership

Lastly, with the signing of a MoU with our sister Satun UGGp, we are moving closer towards making history in being Asia's first Transnational UNESCO Global Geopark. The Langkawi and Satun communities have been close to one another, sharing geological similarities.

A few years ago, LUGGp has assisted Satun in its preparation to be inscribed as a UNESCO Global Geopark, which she succeeded in 2018.

> LADA will want to continue to play a leading role to raise the bar in assisting the five aspiring geoparks in the country to become a national Geopark or receive recognition from UNESCO.

> The five are Jerai and Kinta which are already national geoparks, Mersing and Kinabalu which are being evaluated to become national geoparks and Sarawak Delta which is being proposed to be a national geopark.

> It only proved that LADA will not only remain relevant but would push ahead in doing its share of nurturing, mentoring and pioneering efforts in the interest of Geopark as a whole.

> I look forward to the near future when LADA and the Satun authority would work towards establishing Asia's first transnational UGGp, where we will share the duties of managing, developing, promoting and conserving the two geoparks.

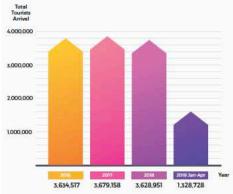
> LUGGp is here to stay and, I vouch, it will move on to etch its indelible mark in the annals of geopark progress and development and LADA is delighted to play its laudable role for Langkawi and the world.

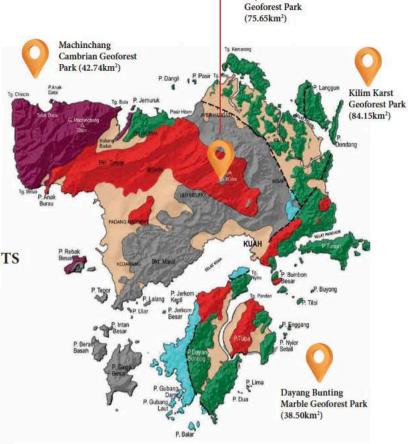


LANGKAWI UGGP

- 99 ISLANDS
- 38 GEOSITES
- 10 BIOSITES
- 4 CULTURE SITES
- 35 LIMESTONE CAVES
- 3 GEOFOREST PARKS
- 4 GEOLOGICAL MONUMENTS

Tourist arrival to Langkawi





Proposed Gunung Raya Granite



Strong teamwork...Azmil (left with a thumbs-up) and his staff in the Geopark Division of Langkawi Development Authority









Goal 1: End poverty in all its forms everywhere (especially target 1.5)

Disaster risk reduction is essential to ending poverty and fostering sustainable development. The bottom-up approach of the UNESCO Global Geoparks reduces the vulnerability of local communities to extreme events and other shocks and disasters through active risk awareness and resilience training.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (especially target 4.7)

UNESCO Global Geoparks actively educate their local communities and their visitors of all ages. UNESCO Global Geoparks are outdoor classrooms and incubators for sustainable development, sustainable lifestyles, appreciation of cultural diversity and the promotion of peace.









Goal 5: Achieve gender equality and empower all women and girls (especially target 5.5) UNESCO Global Geoparks strongly emphasize the empowerment of women through educational programmes or the development of women's cooperatives. Such cooperatives provide an opportunity for women to obtain an additional income in their own area and on their own terms.

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (especially target 8.9)

The promotion of sustainable local economic development through sustainable (geo)tourism is one of the key pillars of a UNESCO Global Geopark. This creates job opportunities for the local communities through tourism, but also through the promotion of local culture and products.











Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable (especially target 11.4)

Protecting, safeguarding and celebrating our cultural and natural heritage is the foundation of the holistic approach of the UNESCO Global Geoparks. UNESCO Global Geoparks aim to give local people a sense of pride in their region and strengthen the identification with the area.

Goal 12: Ensure sustainable consumption and production patterns (especially target 12.8 and 12.b)

UNESCO Global Geoparks educate and create awareness on sustainable development and lifestyles. They teach the local communities and visitors to live in harmony with nature.









Goal 13: Take urgent action to combat climate change and its impacts (especially target 13.3)

All UNESCO Global Geoparks hold records of past climate change and are educators on current climate change. Through educational activities awareness is raised on the issue and people are provided with knowledge to mitigate and adapt to the effects of climate change.

Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development (especially target 17.6, 17.9 and 17.16)

UNESCO Global Geoparks are all about partnership and cooperation, not only between local stakeholders but also internationally through regional and global networks were knowledge, ideas and best practices are shared. Experienced geoparks guide aspiring geoparks to reach their full potential.





