



THE MALAYSIA-THAILAND BORDER JOINT  
GEOLOGICAL SURVEY WG meeting  
NO. 1/2018

13<sup>th</sup> MARCH, 2018 JOHOR, MALAYSIA



# Progress Report on Activities of the Malaysia-Thailand Border Joint Geological Survey (MT-JGS) in 2017-2018

**By**

**Suvapak Imsamut**

*Thai Working Group Leader*



# Activities as agreed during the 14<sup>th</sup> MT-JGSC Meeting held in 16th August 2017, Penang, Malaysia



Activities	Year 2017 (2560)	Year 2018 (2561)	Year 2019 (2562)	Year 2020 (2563)	Year 2021 (2564)
1. Geological mapping along Malaysia-Thailand border	Compilation of the Geology and Mineral Resources along the Malaysia-Thailand border for the Transect 1-6.	Compilation of geological sites visited by the geoscientists of the Malaysia-Thailand Border Joint Geological Survey		Correlation of Malaysia - Thailand metallogenic maps	
2. Geo-conservation and Geotourism Activities	-3rd Regional Geo-heritage Conference in Thailand (December 2017) -4th Satun Geopark Fossil Festival	-4th Regional Geo-heritage Conference in Malaysia (October 2018) -5th Satun Geopark Fossil Festival (February 2018)	-5th Regional Geo-heritage Conference in Indonesia (October 2019)	-6th Regional Geo-heritage Conference in Thailand (October 2020)	-7th Regional Geo-heritage Conference in Malaysia (October 2021)
					Compilation of geoheritage sites potential for geotourism along Malaysia-Thailand border
3. Cooperative study and geological research in term of stratigraphy, paleontology, and sedimentology.	Stratigraphic correlation of the Setul Formation /Thung Song Group		Stratigraphic correlation between the Jentik Formation and the Pa Samed Formation.		Stratigraphic correlation between the Chuping Formation and the Khao Rub Chang Fm
	Detailed study on Permian-Triassic radiolaria in radiolarian-bearing rocks along the Malaysia- Thailand border				

Activities	Year 2017 (2560)	Year 2018 (2561)	Year 2019 (2562)	Year 2020 (2563)	Year 2021 (2564)
4. Study on Geological Hazards along the Malaysia-Thailand Border	Case study on geological hazards (Active fault)		Case study on geological hazards (Climate change-sea level change)	Case study on geological hazards (Sinkhole)	
5. Capacity building in Malaysia and Thailand	<ul style="list-style-type: none"> <li>-Training on Active fault in Thailand</li> <li>-Workshop on trenching for active fault study in Kenyir, Terengganu (October 2017)</li> <li>-Training on Dinosaur Footprint in Kelantan (October 2017)</li> </ul>	<ul style="list-style-type: none"> <li>-Training on Conodont in Thailand (March 2018)</li> <li>-Training on trenching in Pahang (February 2018)</li> <li>-Training on Marine Geology in Malaysia (June 2018)</li> </ul>	Training, seminar, conference and workshop		
6. Information sharing and outreaching	Presenting papers at international seminar and conference				
	International Conference in the conjunction with 20th Anniversary of the Malaysia – Thailand Border Joint Geological Survey Project				
7. Working Group and Committee meeting	-1 <sup>st</sup> WG meeting & Joint report Thailand	-1 <sup>st</sup> WG meeting & Joint report Malaysia	-1 <sup>st</sup> WG meeting Thailand	-1 <sup>st</sup> WG meeting Malaysia	-1 <sup>st</sup> WG meeting Thailand
	-2 <sup>nd</sup> WG Meeting 14 <sup>th</sup> MT-JGSC 14-19 August 2019 Malaysia	-2 <sup>nd</sup> WG Meeting 15 <sup>th</sup> MT-JGSC 13-18 August 2020 Thailand	-2 <sup>nd</sup> WG Meeting 16 <sup>th</sup> MT-JGSC August 2019 Malaysia	-2 <sup>nd</sup> WG Meeting 17 <sup>th</sup> MT-JGSC August 2020 Thailand	-2 <sup>nd</sup> WG Meeting 18 <sup>th</sup> MT-JGSC August 2021 Malaysia



# 1. Geology and Mineral Resources along Malaysia-Thailand border



**Aim:** Compilation of geological sites visited by the geoscientists of the Malaysia-Thailand Border Joint Geological Survey (year1)

**Status:**

- Review > 80 geological sites visited in Thailand
  - 1) 20 Excursion Guide books (2002-2017)
  - 2) 6 Geological Report (2003-2016)
- Database structure



# Excursion Guidebook



**GUIDE BOOK**

The Malaysia-Thailand Border Joint Geological Survey Working Group Meeting No. 1

Satun Aspiring Group  
Satun, Thailand  
4th -6th May

**EXCURSION GUIDE BOOK**

THE 13<sup>TH</sup> MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY COMMITTEE MEETING

KRABI, THAILAND  
18<sup>TH</sup>-19<sup>TH</sup> AUGUST 2016

ORGANIZED BY  
DEPARTMENT OF MINERAL RESOURCES

**GUIDE BOOK**

The Malaysia-Thailand Border Joint Geological Survey Working Group Meeting No. 1/2015

Surat Thani, Chumphon and Ranong, Thailand  
25<sup>TH</sup>-27<sup>TH</sup> MARCH 2015

Thai Working Group

**EXCURSION GUIDE BOOK**

THE 11<sup>TH</sup> MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY COMMITTEE MEETING

PHANG-NGA, KRABI, THAILAND  
28<sup>TH</sup>-29<sup>TH</sup> AUGUST 2011

ORGANIZED BY  
DEPARTMENT OF MINERAL RESOURCES

**[GUIDEBOOK]**

The 8<sup>th</sup> Joint Interim Working Group Meeting on Geology of the Satun-Hala Transect Area

Satun Province, Thailand  
20-26 March 2011

Prepared by Thai Working Group

**[GUIDEBOOK]**

The Second Interim Working Group Meeting on Geology of the Satun-Hala Transect Area

Satun Province, Thailand  
20-26 March 2011

Prepared by Thai Working Group

**FIELD CHECK GUIDEBOOK**

for  
Bukit Batu Putih - Satun Transect  
(Thai side)

The Meeting of  
Malaysia - Thailand Working Group

Prepared by Thai Working Group

Satun Province  
Thailand  
6-7 May 2009

**MT-JGS**

**FIELD CHECK GUIDE BOOK**

The 8<sup>th</sup> Malaysia-Thailand Border Joint Geological Survey Committee Meeting

Belum-Hala Transect (Thai side)  
Prepared by Thai Working Group

Krabi-Phang Nga-Phuket  
Thailand, 23-25 June 2010

**Field Check GUIDE BOOK**

The 9<sup>th</sup> MT-JGS

THE NINTH MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY COMMITTEE (MT-JGS) MEETING

Surat Thani-Samui Island-Nakhon Si Thammarat  
13-16 September 2010

Thai Working Group

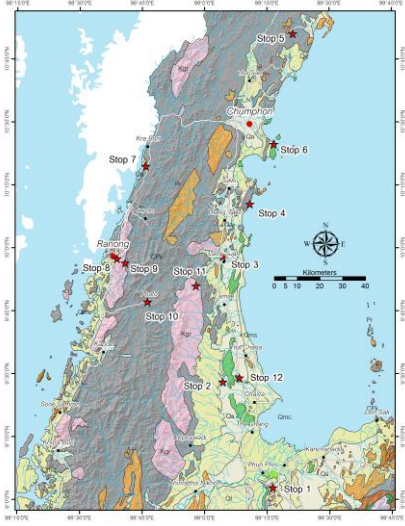
**GUIDE BOOK**

The Malaysia-Thailand Border Joint Geological Survey Working Group Meeting No. 1/2013

Surat Thani, Thailand  
2-7 March 2013

Thai Working Group

## Geology of Southern Thailand & Excursion stops



### ATTRACTION GRANITE

**Location:** Rocky beach at Hin Ta Hin Yai attraction site  
**Grid ref:** 0614129E 1044994N in Ko Samui (4927)  
**High light:** Triassic porphyritic biotite granite phase of Samui Islands (hammer is prohibited in)



#### Description:

Hin Ta Hin Yai is a large stone located in the beach. Weathering surfaces shaped like male and female organs are classified as one is the symbol of Koh Samui. The tourists, both Thai and foreigners, visit to explore the circulation. On the way to visit the Hin Ta Hin Yai, souvenirs, variety of handmade souvenirs such as batik, handicrafts, coconut, and Kalamas (A Thai dessert) display for sale.

Geology of the stop is assigned by geological map on scale 1:50,000 Ko Samui (4927) Sheet to be the Triassic porphyritic biotite granitic rocks as the main phase of granite in Samui Island. In detail, the rocks in this tourist area are mostly porphyritic biotite-granite. Characteristics of the rocks are light gray to white, orientation of minerals is normally in the E-W direction. Phenocrysts are 50-70% by volume, consisting of K-feldspar, lath shape (0.5-2 x 3 cm). Groundmass is coarse-grained, consisting of quartz (50%), feldspar (40%) and biotite (10%). Quartz and feldspar crystals represent anhedral to subhedral. Biotites are flake and book. Cognates of aplite with 10-15 cm in diameter are also found.

This granite is affected by two joint sets i.e. NW-SE and N-S directions which parallel to the main structure. Two closed space joints in these rocks together with the erosion by wave, wind and rain should be the reasons for the miracle landform in this area.



# Geological Report



## GEOLOGY ALONG THE MALAYSIA-THAILAND BORDER AREA



by  
The Malaysia-Thailand  
Working Group

## GEOLOGY OF THE GUBIR-SADAO TRANSECT AREA ALONG THE MALAYSIA – THAILAND BORDER



The Malaysian and Thai  
Working Groups

A joint project carried out by  
Minerals and Geoscience Department Malaysia  
and  
Department of Mineral Resources, Thailand

## GEOLOGY OF THE BATU MELINTANG-SUNGAI KOLOK TRANSECT AREA ALONG THE MALAYSIA – THAILAND BORDER



By  
The Malaysian and Thai  
Working Groups

A joint project carried out by  
Minerals and Geoscience Department Malaysia  
and  
Department of Mineral Resources, Thailand

## MINERAL RESOURCES ALONG THE MALAYSIA-THAILAND BORDER AREA



by  
The Malaysia-Thailand  
Working Group

## GEOLOGY OF THE BUKIT BATU PUTEH-SATUN TRANSECT AREA ALONG THE MALAYSIA-THAILAND BORDER

### GEOLOGICAL PAPERS VOLUME 8



by  
The Malaysian-Thai  
Working Group

A joint project carried out by  
Minerals and Geoscience Department, Malaysia  
and  
Department of Mineral Resources, Thailand

The Malaysia-Thailand Border Joint Geological Survey Committee  
(MT-JGSC)  
2009

## GEOLOGY OF THE BELUM – HALA TRANSECT AREA ALONG THE MALAYSIA-THAILAND BORDER

### GEOLOGICAL PAPERS VOLUME 9



by  
The Malaysian- Thai  
Working Group

A joint project carried out by  
Minerals and Geoscience Department, Malaysia  
and  
Department of Mineral Resources, Thailand

The Malaysia-Thailand Border Joint Geological Survey Committee  
(MT-JGSC)  
2012

## GEOLOGY OF THE LANGKAWI-TARUTAO TRANSECT AREA ALONG THE MALAYSIA-THAILAND BORDER



by  
The Malaysia-Thailand  
Working Group

A joint project carried out by  
Minerals and Geoscience Department, Malaysia  
and  
Department of Mineral Resources, Thailand

The Malaysia-Thailand Border Joint Geological Survey Committee  
(MT-JGSC)  
2013

## GEOLOGY OF THE PENGKALAN HULLI-BETONG TRANSECT AREA ALONG THE MALAYSIA-THAILAND BORDER

### GEOLOGICAL PAPERS VOLUME 7



by  
The Malaysian-Thai  
Working Group

A joint project carried out by  
Minerals and Geoscience Department, Malaysia  
and  
Department of Mineral Resources, Thailand

The Malaysia-Thailand Border Joint Geological Survey Committee  
(MT-JGSC)  
2009



# Database structure



## Data Structure

NO	Name	Type	Size	Key	Comment
1	DMR_REF_ID	NUMBER		PK	รหัสแหล่งธรณี(ระบบ)
2	DMR_CODE	VARCHAR2	10		รหัสแหล่งธรณี(เดิม)
3	PRESNAT_ID	VARCHAR2	255		ชื่อย่อของแหล่งธรณี
4	PN_NAME_T	VARCHAR2	255		ชื่อแหล่งธรณี
5	PROVINCE_CONE	VARCHAR2	2		รหัสจังหวัด
6	PROVINCE	VARCHAR2	255		ชื่อจังหวัด
7	DISTRICT_CODE	VARCHAR2	4		รหัสอำเภอ
8	AMPHOE	VARCHAR2	255		ชื่ออำเภอ
9	SUBDISTRICT_CODE	VARCHAR2	6		รหัสตำบล
10	TAMBON	VARCHAR2	255		ชื่อตำบล
11	SPECIAL_AREA	VARCHAR2	255		พื้นที่พิเศษ
12	EASTING	VARCHAR2	15		พิกัดตามระบบ...
13	NORTHING	VARCHAR2	15		พิกัดตามระบบ...
14	LATITUDE	VARCHAR2	25		ละติจูด
15	LONGTTITUDE	VARCHAR2	25		ละติจูด
16	ZONE	VARCHAR2	20		โซน
17	M_SHEET_NO	VARCHAR2	255		รหัสสรวาง
18	M_SHEET_NAME	VARCHAR2	255		ชื่อสรวาง

Code&Name

Place

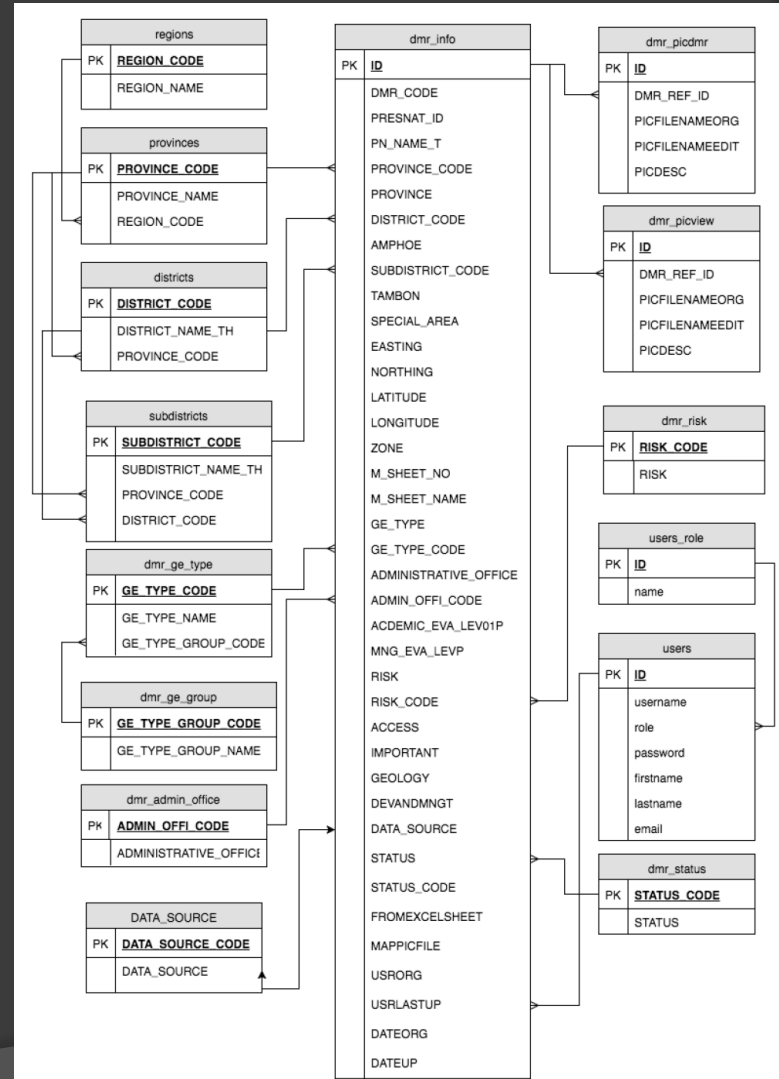
Coordinate  
&Mapsheet



# Database structure



## Entity Relationship Diagram (E-R Diagram)





# Database structure



## Query

กรมทรัพยากรธรณี | ข้อมูลแหล่งธรณีวิทยาและแร่

bgs.dmr.go.th/dmr/

ค้นหา ชื่อ, ที่อยู่

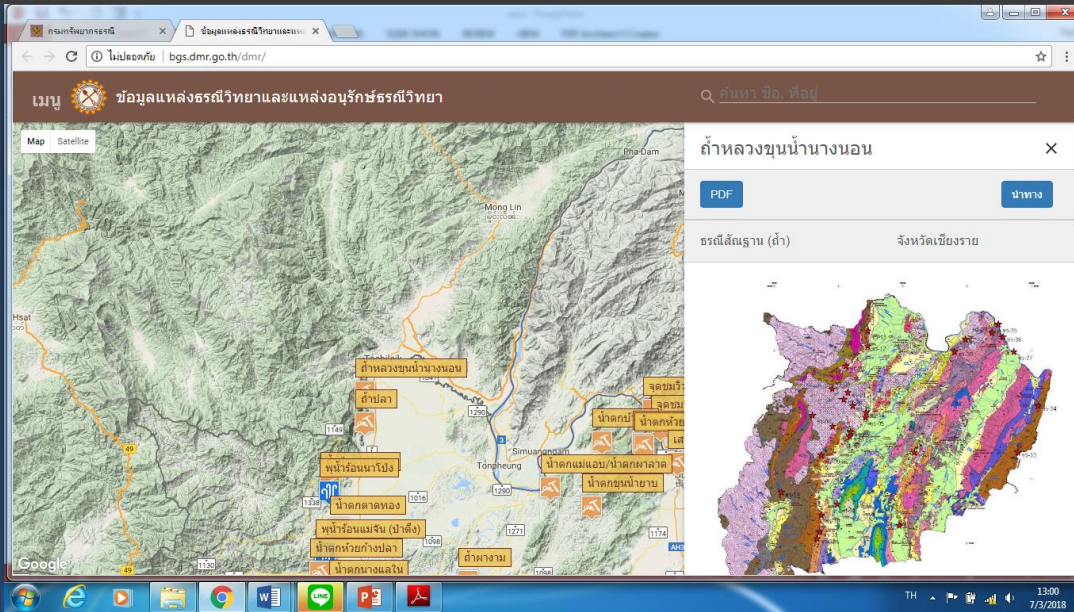
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<input checked="" type="checkbox"/>	เลือกทั้งหมด	
ธรณีโครงสร้าง		
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<input checked="" type="checkbox"/>	ธรณีโครงสร้าง (รอยแตก)	
ธรณีเสถียรภาพ		
พืดร้อน		
แหล่งแร่แบบฉบับ		
ซากดึกดำบรรพ์		
ลำดับชั้นหินแบบฉบับ		
หินแบบฉบับ		

Map data ©2018 GBRMPA, Google, SK telecom, ZENRIN / Terms of Use

EN 12:49 7/3/2018



# Database structure



## Display

### ความโดดเด่น/ความสำคัญของแหล่ง

จุดเด่นของแหล่งท่องเที่ยวประเภทถ้ำ จำนวน 6 แห่ง คือ 1) ถ้ำหลวง ศาว่า "หลวง" เป็นภาษาพื้นเมือง แปลว่าใหญ่ ถ้ำหลวงเป็นถ้ำหินปูนขนาดใหญ่ เชื่อว่ามีความยาวมากที่สุดในประเทศไทย ระยะทางที่สำรวจได้ประมาณ 7 กิโลเมตร ปากถ้ำอยู่ทิศเหนือ 2) ถ้ำพระ เป็นถ้ำขนาดเล็กมีความสงบร่มเย็น ชาวบ้านได้สร้างพระพุทธรูปประดิษฐานไว้ เพื่อเป็นที่สักการบูชา 3) ถ้ำเสียงหา เป็นถ้ำที่มีเปลือกลอย อายุหลายล้านปี (กำลังอยู่ในระหว่างการสำรวจข้อมูลที่ชัดเจน) แต่เดิมมีคนกล่าวไว้ว่าเป็นแหล่งน้ำ ซึ่งจะมีเสียงผกามกิ่นน้ำในบริเวณนี้เป็นประจำ จึงได้ชื่อว่า "ถ้ำเสียงหา" มีความชุ่มชื้นตลอดเวลา 4) ถ้ำมัลดีคาเทร หรือถ้ำพญานาค เป็นถ้ำขนาดเล็ก มีหินงอกคล้ายรูปพญานาค กล่าวกันว่าครั้งหนึ่งเคยเป็นที่ปฏิบัติธรรมของพระอริยสงฆ์รูปหนึ่ง และได้มรดกภาพภายในถ้ำนี้ 5) ถ้ำพุทธทอง มีความงดงามของหินงอก หินย้อย พื้นถ้ำเต็มไปด้วยสาค และสามารถเดินทะลุไปอีกส่วนหนึ่งของถ้ำได้ (อยู่ในบริเวณขุนน้ำนางนอน) 6) ขุนน้ำนางนอน เป็นแอ่งเก็บน้ำซึ่งซึมผ่านออกมาจากรอยแยกของหินปูน มีน้ำไหลตลอดปี และมีปลาหลากหลายชนิดอาศัยอยู่ มีความอุดมสมบูรณ์ของธรรมชาติอยู่มาก

### ธรณีวิทยา

บริเวณถ้ำหลวง (cavern) ถ้ำพระ ถ้ำมัลดีคาเทร และถ้ำทรายเป็นธรณีสัณฐานภูมิประเทศแบบคาสต์ (Karst topography) เป็นเทือกเขาหินปูน อายุคาร์บอนิเฟอรัส-เพอร์เมียน ที่เกิดจากน้ำฝนชะล้างละลายหินออกไปมากจนเป็นตะปุ่มตะข่ำเต็มไปด้วยหลุม บ่อ ถ้ำ ภายในถ้ำประกอบด้วยหินงอก (stalagmite) หินย้อย (stalactite) เสาหิน (Colum) ม่านระย้า (curtain) ถ้ำหลวงนั้นยังพบซากดึกดำบรรพ์หอยน้ำจืดผาเดี่ยว อยู่ในลักษณะมีการสะสมตัวกันเป็นชั้น สันนิษฐานว่าเกิดจากการที่มนุษย์สมัยก่อนนำมาทำเป็นอาหาร เนื่องจากที่ผาหอยถูกตัดทุกตัว และนำมากองไว้รวมกัน เมื่อเวลาผ่านไปมีตะกอนสะสมตัวจึงเกิดกระบวนการทำให้เป็นซากดึกดำบรรพ์ และทางน้ำใต้ดินที่มีน้ำละลายเอาเนื้อหินดังกล่าวนั้นแทรกซึมหายลงไปรวมตัวอยู่ที่ขุนน้ำนางนอน ซึ่งมีลักษณะเป็นอ่างเก็บน้ำที่มีลักษณะเป็นลิ้นเขี้ยวกรวด ซึ่งเกิดจากสารละลายที่ปนอยู่ในน้ำเป็นพวกสารละลายแคลเซียมคาร์บอเนต

### พิกัด

ตำบลโป่งผา อำเภอแม่สาย จังหวัดเชียงราย พิกัด(WGS84) 2253647,590458  
รวาง 4949 I

### การเข้าถึงสถานที่

สามารถเดินทางด้วยรถยนต์อยู่ห่างจากถนนจังหวัดเชียงราย-อำเภอแม่สาย (ถนนพหลโยธิน) 2.2 กิโลเมตร และอยู่ระหว่างอำเภอแม่จัน-อำเภอแม่สาย ถนนลาดยางตลอดสายจนถึงวนอุทยานฯ การเดินทางไปวนอุทยานสะดวกสบายมากเนื่องจากอยู่ห่างจากจังหวัดเชียงราย 60 กิโลเมตร ห่างจากอำเภอแม่จัน 14 กิโลเมตร และห่างจากอำเภอแม่สาย 8 กิโลเมตร





## 2. Geo-conservation and Geotourism Activities



### **Aim:** Geo-conservation and Geotourism Activities

### **Status:**

1. Discussion on evaluation on Satun Aspiring Geopark to GGN with UKM and JMG in Malaysia (10<sup>th</sup>-11<sup>th</sup> September 2017)
2. Participate on 5<sup>th</sup> Asia Pacific Geopark Network (APGN) Symposium 2017 in China (15<sup>th</sup>-23<sup>th</sup> September 2017)
3. Participate on 5th Satun Geopark Fossil Festival, Thailand (20<sup>th</sup> -28<sup>th</sup> February 2018)
4. Preparation on 3<sup>rd</sup> Regional Geo-heritage Conference in Khon Kaen, Thailand (2<sup>nd</sup>-4<sup>th</sup> April 2018)



# 1. Discussion on Satun Aspiring Geopark with UKM and JMG in Malaysia (10<sup>th</sup>-11<sup>th</sup> September 2017)



Discussion on the evaluation on Satun Aspiring Geopark to GGN at UKM on 11 Sept. 2017 at 9.00-12.00 am /JMG on 11 Sept. 2017 at 14.00-16.00 am

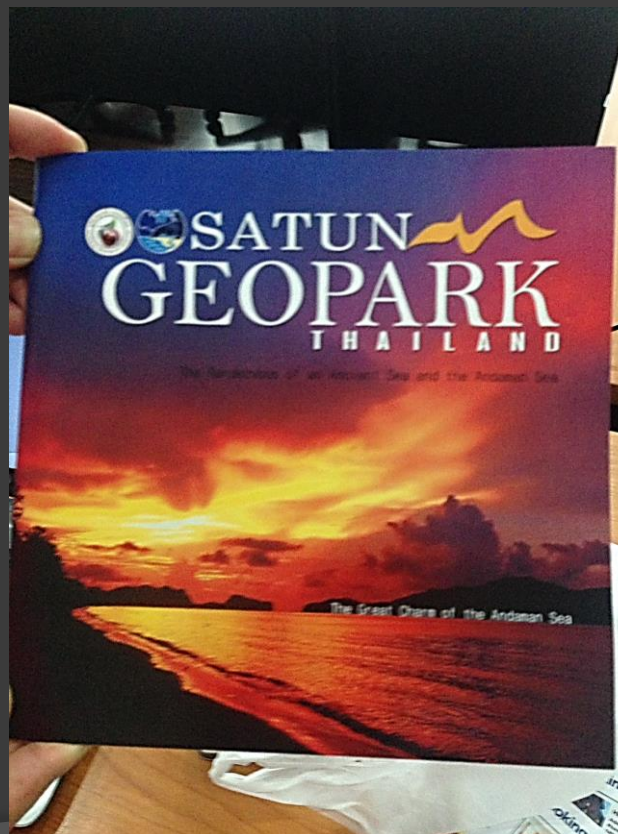


## 2. Participate the 5<sup>th</sup> Asia Pacific Geopark Network (APGN) Symposium 2017 Guizhou Zhijindong Cave, China (15<sup>th</sup>-23<sup>th</sup> September 2017)

Ten DMR and Four Satun Aspiring Geopark delegates were participated on the 5<sup>th</sup> APGN Symposium

### Proposed Schedule

Date	Contents	
Sept. 16 <sup>th</sup> 2017-17 <sup>th</sup> 2017	Meeting of the UNESCO Global Geoparks Council	
Sept. 18 <sup>th</sup> 2017	Registration	
	Meeting of APGN Advisory Committee Meeting of APGN Coordination Committee	
Sept. 19 <sup>th</sup> 2017	09:00-10:00	Opening Ceremony
	10:00-12:00	Keynote 1
		Keynote 2
		Keynote 3
Sept. 20 <sup>th</sup> 2017	13:00-17:00	Oral Presentations
	18:00	Welcome Banquet
	09:00-10:00	Keynote 5
Sept. 21 <sup>st</sup> 2017	10:00-12:00	Oral Presentations
	13:00-17:00	Oral Presentations
	18:00	Dinner
	09:00-17:00	Mid-Symposium Excursion
Sept. 22 <sup>nd</sup> 2017	09:00-12:00	Oral Presentations & Posters
	13:00-17:00	Oral Presentations & Closing Ceremony
	18:00	Dinner
Sept. 23 <sup>rd</sup> -25 <sup>th</sup> 2017	19:00-21:00	Campfire Party
	Post-Symposium Excursion	Route A: Huangguoshu Waterfall - Xingyi National Geopark-Wanfenglin-Gulyang(The Guizhou Typical Karst Landscape )
		Route B: Zunyi-Maotai-Chishui National Geopark (World Nature Heritage Site)-Gulyang
Sept. 23 <sup>rd</sup> -25 <sup>th</sup> 2017	Post-Symposium Excursion	Route C: Xijiang Miaozhai-Gulyang(Local Culture)
		Route D: ZunYin - Suiyang Shuanghedong Cave National Geopark -Gulyang(Guizhou Typical Karst Landscape )
		Route E: Huangguoshu Waterfall - Xingyi National Geopark-Wanfenglin-Gulyang(The Guizhou Typical Karst Landscape )





2. Participate the 5<sup>th</sup> Asia Pacific Geopark Network (APGN) Symposium 2017 Guizhou Zhijindong Cave, China (15<sup>th</sup>-25<sup>th</sup> September 2017)

1. Meeting on UNESCO Global Geopark council (16<sup>th</sup>-17<sup>th</sup> Sept 2017)



Representative of DMR and Satun Aspiring Geopark are observers  
*(Mr. Guy Martini General Secretary of GGN Executive Board)*

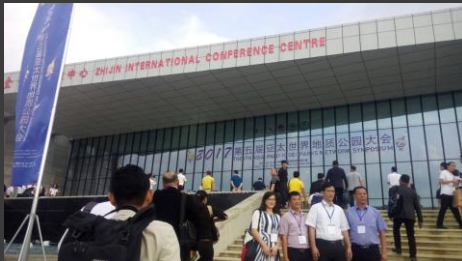
2. Meeting on APGN Advisory committee and coordination committee (18<sup>th</sup> Sept 2017)





## 2. Participate the 5<sup>th</sup> Asia Pacific Geopark Network (APGN) Symposium 2017 Guizhou Zhijindong Cave, China (15<sup>th</sup>-25<sup>th</sup> September 2017)

### 3. Opening Ceremony (19<sup>th</sup> Sept 2017)



### 4. Symposium and Excursion (19<sup>th</sup> -22<sup>th</sup> Sept 2017)





### 3. Participate on 5th Satun Geopark Fossil Festival, Thailand (20<sup>th</sup> -28<sup>th</sup> February 2018)

#### 1. Opening Ceremony (20<sup>th</sup> Sept 2017)

Representative of DMR/Satun Aspiring Geopark  
*(His Excellency General Surasak Kanchanarat :  
 Minister of Natural Resources and Environment )*





## 2. Participate on 5th Satun Geopark Fossil Festival, Thailand (20<sup>th</sup> -28<sup>th</sup> February 2018)



### 2. Geopark network training (20<sup>th</sup> -24<sup>th</sup> Sept 2017)





2. Participate on 5th Satun Geopark Fossil Festival, Thailand (20<sup>th</sup> -28<sup>th</sup> February 2018)



3. Certification on the Geopark school (20<sup>th</sup> Sept 2017)





## 2. Participate on 5th Satun Geopark Fossil Festival, Thailand (20<sup>th</sup> -28<sup>th</sup> February 2018)



### 4. Youth Geo-guide activities (26<sup>th</sup> Sept 2017) : Nautiloid/Graptolite/Stromatolite





# 3. Preparation on 3<sup>rd</sup> Regional Geo-heritage Conference in Khon Kaen, Thailand (2<sup>nd</sup>-4<sup>th</sup> April 2018)



## REGIONAL GEOHERITAGE CONFERENCE 2018

FIRST CIRCULAR

### "GEOHERITAGE FOR PEOPLE"

April 2<sup>nd</sup> - 4<sup>th</sup>, 2018

At the Pullman Khon Kaen Raja Orchid Hotel,  
Khon Kaen, Thailand

Organized by



Department of Mineral Resources (DMR), Thailand  
Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP)  
The National Geopark of Thailand

In collaboration with



Geological Heritage Group of Malaysia (KWGM)  
Department of Mineral and Geoscience Malaysia (JMG)  
Universiti Kebangsaan Malaysia (UKM)  
Universitas Pembangunan Nasional "Veteran", Indonesia (UPN "Veteran")  
Geological Society of Thailand (GST)



### Introduction

Over the past decade, Thailand, Malaysia and Indonesia have rapidly and significantly growth of both traditional and emerging geotourism. Both international and local tourists are attracted to a number of sites where unique geological heritages are exhibited. Many of these are well-known and popular among tourist worldwide and some of the sites are world class tourist places.

The conservation of these numerous valuable geohéritages is urgent and key aspect for all government agencies and partnerships, which is responsible for advising all aspects of geosciences as well as providing professional geosciences advice to the public, to conservable develop them as sustainable and highest exploitation especially in academic, tourism and socio-economic purposes. Finally, it leads to achieve the Global Geoparks Network (GGN) membership from UNESCO.

In this regard, Department of Mineral Resources (DMR), Thailand, Coordinating Committee for Geoscience Programmes in East and South East Asia (CCOP), and The National Geopark of Thailand, in collaboration with the Geological Heritage Group of Malaysia (KWGM), Department of Mineral and Geoscience Malaysia (JMG), Universiti Kebangsaan Malaysia (UKM), Universitas Pembangunan Nasional "Veteran", Indonesia (UPN "Veteran") and Geological Society of Thailand (GST) organized the "Regional Geohéritage Conference 2018" in Khon Kaen Province, Thailand with the theme "Geohéritages for People". This conference officially represent the first forum of tripartite conference for Indonesia-Malaysia-Thailand countries. The main objective of the conference is to diversified the role of geologists and it deemed necessary to improve the most active role of geologists in utilization of geohéritage in the form of geotourism and public education within geopark as a driver for economic and society well-being.

This conference is expected to contribute to practical approaches among various group namely a reference for stakeholders, especially the government in developing policy in protecting and conserving geohéritage, preparing trails and product for geotourism. Platform for discussion among government agencies and academia in preparing the proposal for new geopark are also included.

### Objectives

1. To exchange and sharing information and experiences in sustainable development of geohéritage resources and geotourism
2. To strengthen networking in geohéritage conservation, geotourism and geopark
3. To establish knowledge learning center for capacity building among regional countries
4. To standardize geohéritage and geotourism in term of quantities and qualities aspects among regional countries



### Keynote Speakers

1. Prof Emeritus Dato' Dr. Ibrahim Komoo, FASc, Principle Fellow, LESTARI, UKM
2. Dr. Tawaporn Nuchanong Director General of DMR
3. Dr. Sawitree Suwansathit Intangible Cultural Heritage Committee, Thailand
4. Dr. Varavudh Suteethone, Dinosaur Expert



# 3. Preparation on 3<sup>rd</sup> Regional Geo-heritage Conference in Khon Kaen, Thailand (2<sup>nd</sup>-4<sup>th</sup> April 2018)



## TIME SCHEDULE

	Morning (8.30-12.00)			Afternoon (13.00-19.00)		
2 April 2018	Registration	Opening Ceremony	Keynote Speeches	Conference and Technical Presentation	Conference and Poster session	Phu Wiang Research Center (Night Dinosaur festival)
3 April 2018	Conference and Poster session	Conference and Poster session	Conference and Poster session	Conference and Poster session	Conference and Poster session	Group Discussion on Establishment of Tripartite
4 April 2018	Excursion at Sirindhorn Museum	Excursion at Phu Kum Khao excavation site	Excursion at Phu Noi excavation site	Excursion at Kalasin Petrified wood		Wellcome dinner

### Official Language

The official language of the conference is English

### Theme: "Geoheritages for People"

1. Appreciation of nature and landscape
2. Geoconservation, geoheritage, geodiversity, education and tourism
3. Aspiring Geopark
4. Geoheritage policy
5. The economic benefit of geoheritage conservation and geopark
6. Geoheritage conservation, geotourism and geopark networking

### Abstract & Full Paper

Abstract should be written in English using Microsoft Word Document on A4 paper size, should not exceed 500 words with font type Times New Roman, size 10pt and single line spacing. Full paper is limited to 10 pages of A4 paper size, font type Times New Roman, size 11pt, double column and all figures are put after the text body. Abstract and full paper must be emailed to: [suvapaki@hotmail.com](mailto:suvapaki@hotmail.com) and CC to: [janram113@hotmail.com](mailto:janram113@hotmail.com)



### Important Dates

Abstract Submission Deadline	15 March 2018
Full Paper Deadline	15 March 2018
Notification of Acceptance	20 March 2018
Poster Submission (80x110cm)	
Deadline	20 March 2018

## Registration Fees

Participants	International	Local
Oral Presenter	3,000 THB	Free
Non-Presenter	3,000 THB	Free
Student	1,500 THB	Free

Registration includes Proceeding, Conference Programme, Meeting Package (lunch and coffee break) and local transportation. Detail kindly visit [www.dmr.go.th](http://www.dmr.go.th), banner on "Regional Geoheritage 2018"

**Please note:** Payment will be accepted on site by cash only in Thai Baht.

### Venue: Pullman Khon Kaen Raja Orchid Hotel

The hotel is ideally situated in the heart of the central business district. It is close to shopping centres - Tuk Com Khon Kaen (IT Mall & Department Store), Central Plaza Khon Kaen as well as several banks and hospitals. This hotel is not far from Lake Park, and also a 10-minute drive to government offices and Khon Kaen University. The hotel is also easily accessible from the Khon Kaen Railway Station as well as the bus stations. There are several flights from and to Bangkok daily.

### Room & Rates:

- Single Standard Room, THB 1,700
- Twin Standard Room, THB 1,800
- Single Superior Room, THB 2,300
- Twin Superior Room, THB 2,450

### Contact:

9-9 Prachasumran Road, Nai Muang, Muang 40000  
 KHON KAEN THAILAND  
 Telephone: (+66)43/913333  
 Fax: (+66)43/913334  
 Email: [pullman@pullmankhonkaen.com](mailto:pullman@pullmankhonkaen.com)

### General information

Khon Kaen is one of the large major provinces in Northeastern Thailand that is Located in the heart of Isan, Thailand's northeast region and divided into 20 districts and 5 minor districts. Historically, Khon Kaen is quite a new town, established a little over two centuries ago but prehistorically, this town on the plateau has been home to various cultures as well as other fascinating creatures, heretofore unknown to the modern world. Artifacts have proven that millions of years ago the area was occupied by gigantic dinosaurs, several of which were endemic to the region. The ancient cultures, traditions, and historical sites in this area have all contributed to shaping the people and culture of Khon Kaen.

### Contact Persons

Mr. Suvapak Imsamut  
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 Phone: (66) 08 1889 5064, 08 9227 9944

Ms. Janram Putthasem  
 Department of Mineral Resources, Thailand  
 Email: [janram113@hotmail.com](mailto:janram113@hotmail.com)  
 Phone: (66) 08 9187677



### 3. Cooperative study and geological research in term of stratigraphy, palaeontology, and sedimentology



**Aim:** Detailed study on Permian-Triassic radiolaria in radiolarian-bearing rocks along the Malaysia-Thailand border (year2)

**Status:** -Final report 65%  
(year2)



Detailed study on Permian-Triassic radiolaria in radiolarian-bearing rocks along the Malaysia- Thailand border



# Study progress 65%

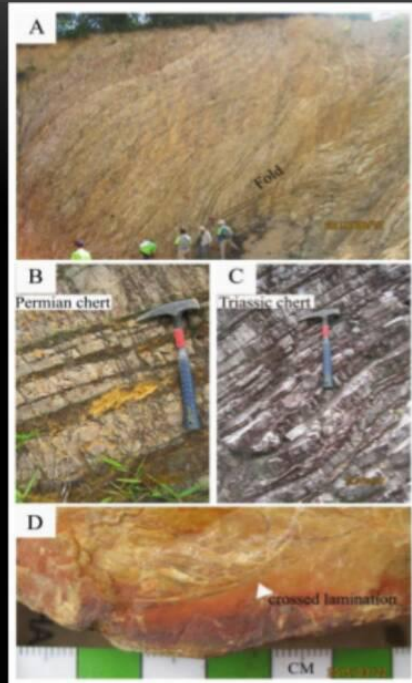
- ✓ Literature review
- ✓ Fieldworks and rock samples collection
- ✓ Laboratory work (radiolarian exaction, pick up, SEM)
- ✓ Fossil Plates
- ✓ Radiolarian identification

18 localities

71 rock samples

All about 49 plates

✓ 30 plates

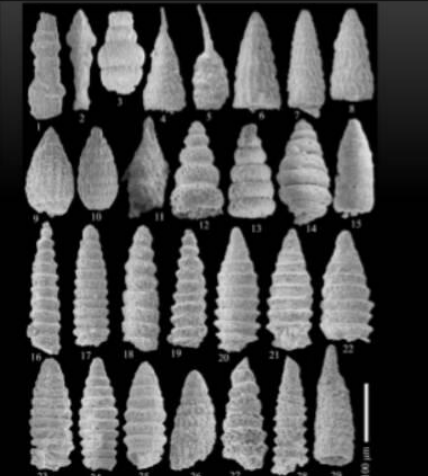


15 localities

63 rock samples

studied sections	Locality (WGS 84, Series L7018, sheet 5023 I)			Area	Fossil Occurrence
	UTM zone	Easting	Northing		
KM 1-6	47N	0647605	0814031	Ko Mak	TR, F, S
KM 7-14	47N	0648349	0817688	Ko Mak	TR, F, S
KM 15-16	47N	0650255	0821392	Ko Mak	TR, S
KM 17	47N	0650555	0823222	Ko Mak	TR
KM 18-19	47N	0649312	0824822	Ko Mak	TR, S
KM 20-24	47N	0647992	0826307	Ko Mak	PR, TR, F, S
KM 25-27	47N	0648882	0826862	Ko Mak	TR, F, S
KM 28-29	47N	0647625	0813602	Ko Mak	TR, F, S
NK 1-9	47N	0655942	0808683	Ko Nangkham	TR, F, S
NK 10-16	47N	0653845	0813711	Ko Nangkham	PR, TR, F, S
NK 17-18	47N	0651201	0817202	Ko Nangkham	PR
NK 19	47N	0653615	0816898	Ko Nangkham	TR, S
PY 1-3	47N	0645523	0811263	Pak Phayun city	TR
PY 4-12	47N	0647851	0808713	Pak Phayun city	PR, TR, F, S
PY 13-15	47N	0647718	0808275	Pak Phayun city	PR, TR, S

Symbol: TR= Triassic radiolarian, PR= Permian radiolarian, F= foraminifer, S= sponge spicule



1-2. *Xiphotheca rugosa*, 3. *Xiphotheca* ? sp., 4. *Spongosilicamiger* sp., 5. *Yohania* sp., 6. *Corum* ? sp., 7, 8. *Hindooxaphera bispinosa*, 9, 10. *Crucella tenuis*, 11. *Ladinoampe* sp., 12. *Pararuesticyrtium medioassanicum*, 13, 14. *Canopton* sp., 15. *Nassellaria* gen. et sp. indet. B, 16. *Triassocampe myterocoyis*, 17, 19. *T. coronata*, 18. *Annulotriassocampe campanilla*, 20-22, 25. *T. deweveri*, 23, 24. *A. spinosa*, 26. *Triassocampae* sp. cf. *T. cylindrical*, 27, 28. *Pseudotriassocampe angustianulata*, 29. *Striotoressocampe laevianulata*

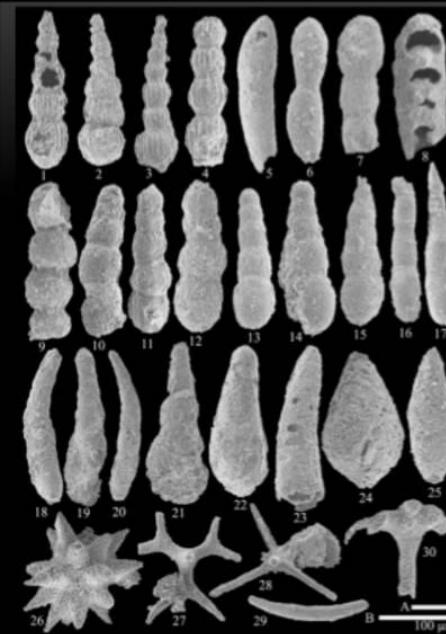


1. *Archaeosemantis venusta*, 2-5. *Parentactinia* ? sp., 6, 8. Spine A2, *Oertlispongus* sp. cf. *O. inequispinosus*, 7. Sp. A1, *Pareortispongus* sp. cf. *P. multispinosus*, 10-12. Spine Tritoria, 13. Spine of *Pentaspionodiscus*, 14, 15. Spine *Falcispongus falciformis*, 16-18. Spine C, *Dumitricasphaera* cf. *D. planistylis*, 19-21. *Pseudoheliodiscus* sp., *Praeobiculiformella* sp., 23. *Triassospongusphaera multispinosa*, 24, 25. *Spongostephanidium* sp., 26. *Pseudosepsagon* sp., *Tetrapaurinella* sp., 28. *Cenosphera igoi*, 29. *Spumellaria* g et sp. indet. A. Scale bar A=23-29; B=1-22



Permian radiolarian (Capitanian to Wuchiapigian)

1-4. *Follicuculus monocanthus*, 5, 6. *Pseudoalibaillella* sp. cf. *Ps. Elegans*, 7, 8. *Parafollicuculus lomentarius*, 9, 10. *F. scholasticus*, 11. *Follicuculus* sp. cf. *F. ventricosus*, 12, 13. *F. orthoganus*, 17, 18. *F. porrectus*, 19, 20, 24. *Raciditor scalae*, 21-23. *R. gracilis*, 25. *Latentifistula texana*, 26. *Ruzhencevispongus* sp., 27, 28. *Pseudoalibaillella scalprata* m. *scalprata*, 29, 30. *Ishigaum* ? sp., 31, 32. *Latentifistula* sp., 33. *Hegleria mammilla*, 34. *Stigmosphaerostylus* sp., 35. *Svakaesphaera minuta*, 36. *Nassellaria* gen. et sp. Indet., 37. *Pseudospongprunum*? sp. Scale bar A=19-26, 29-32; B=1-18, 27, 28, 33-37



Foraminifera and sponge spicule specimens from the Phatthalung area, southern Thailand. All figures are scanning electronic micrographs.

1-25. Foraminifera,  
26-30. Sponge spicules;  
26. polyaxon: spheraster,  
27, 28. Tetraxons,  
29. monoaxons: Amphity,  
30. Amphidiscophor.

Scale bar A= 29; B=1-28, 30



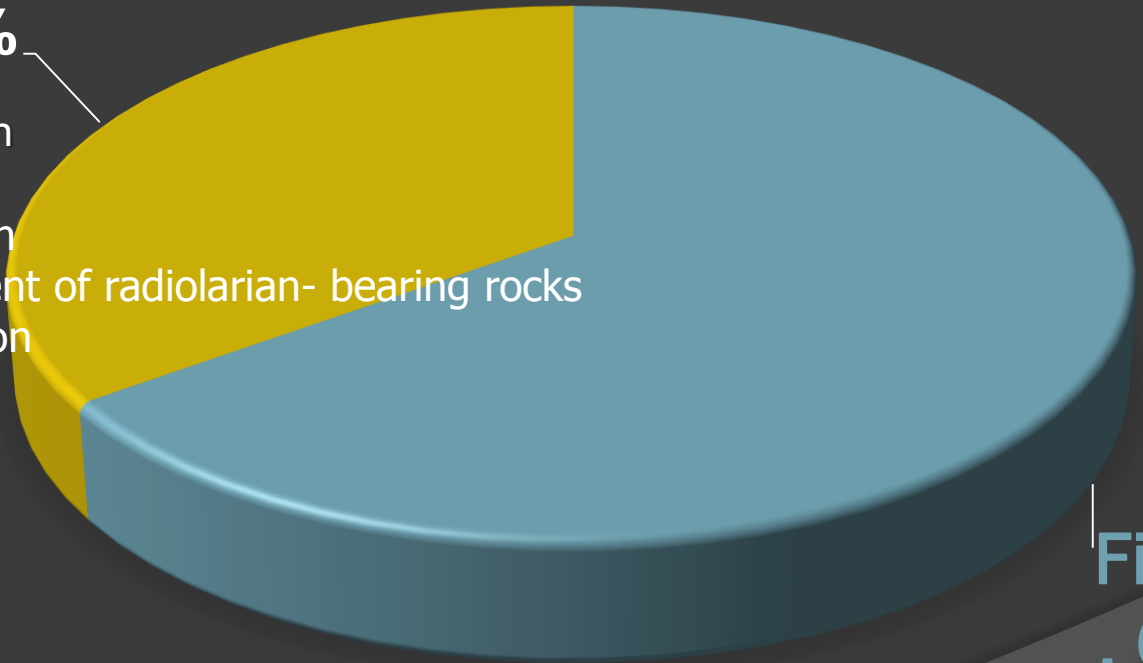
Detailed study on Permian-Triassic radiolaria in radiolarian-bearing rocks along the Malaysia- Thailand border



# STUDY STATUS

**Future work  
35%**

- Microfossil identification
- Age assignment
- Stratigraphic Correlation
- Depositional environment of radiolarian- bearing rocks
- Malaysia-Thai Correlation
- Tectonic



**Finish  
, 65%**



## 4. Study on Geological Hazards along the Malaysia-Thailand Border

**Aim:** Progress report of geohazards: case study on Active Fault in Thailand 2017

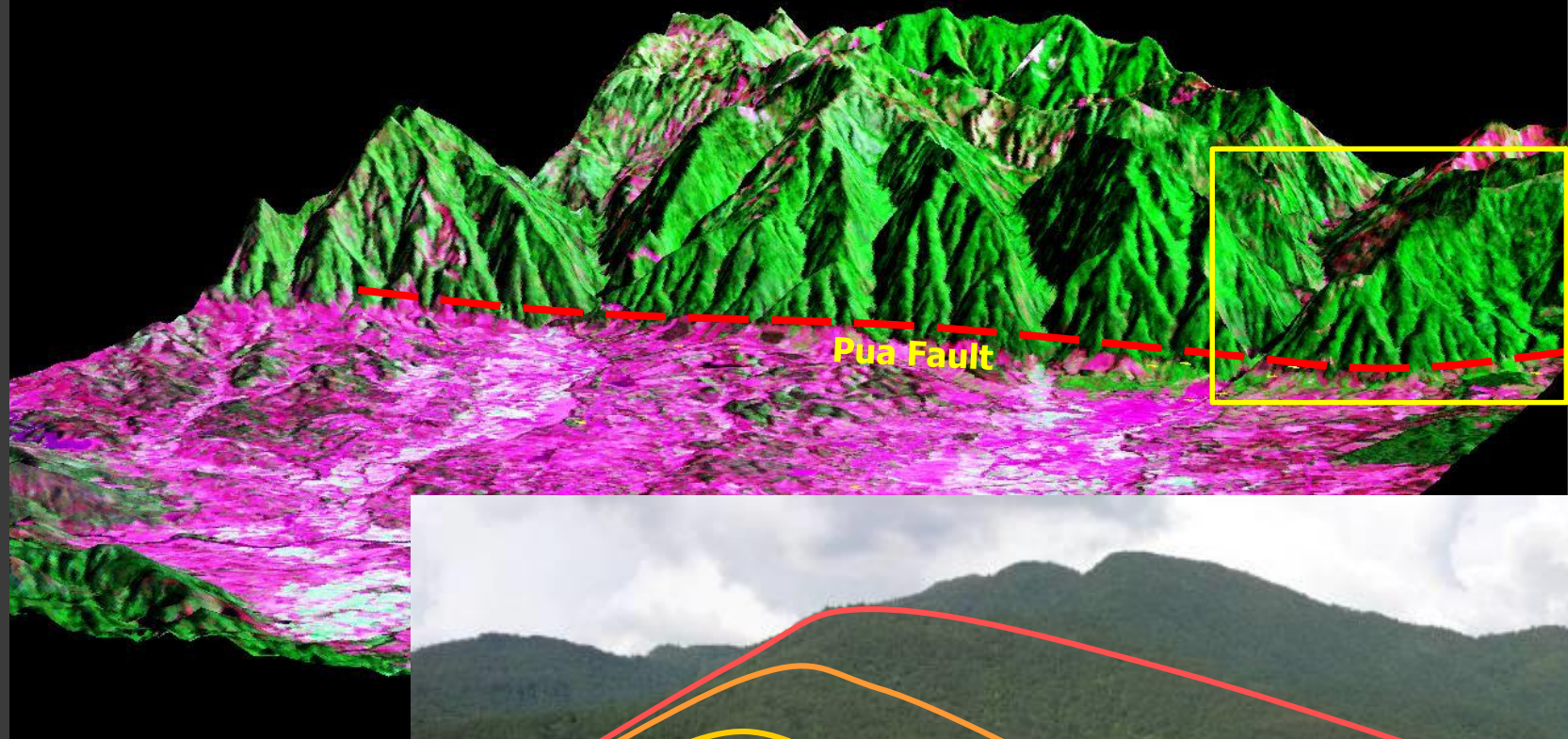
**Status:** Progressive in Thai side  
Observe in Malaysian side



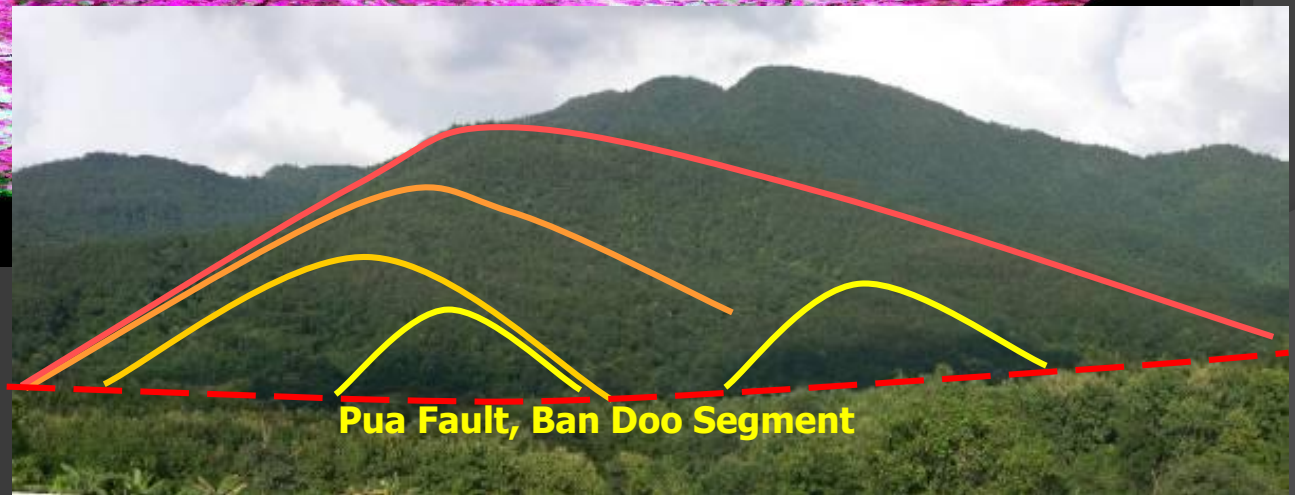
# Progress report of geohazards: case study on Active Fault in Thailand 2017



**GOOGLE EARTH**



**Pua Fault**



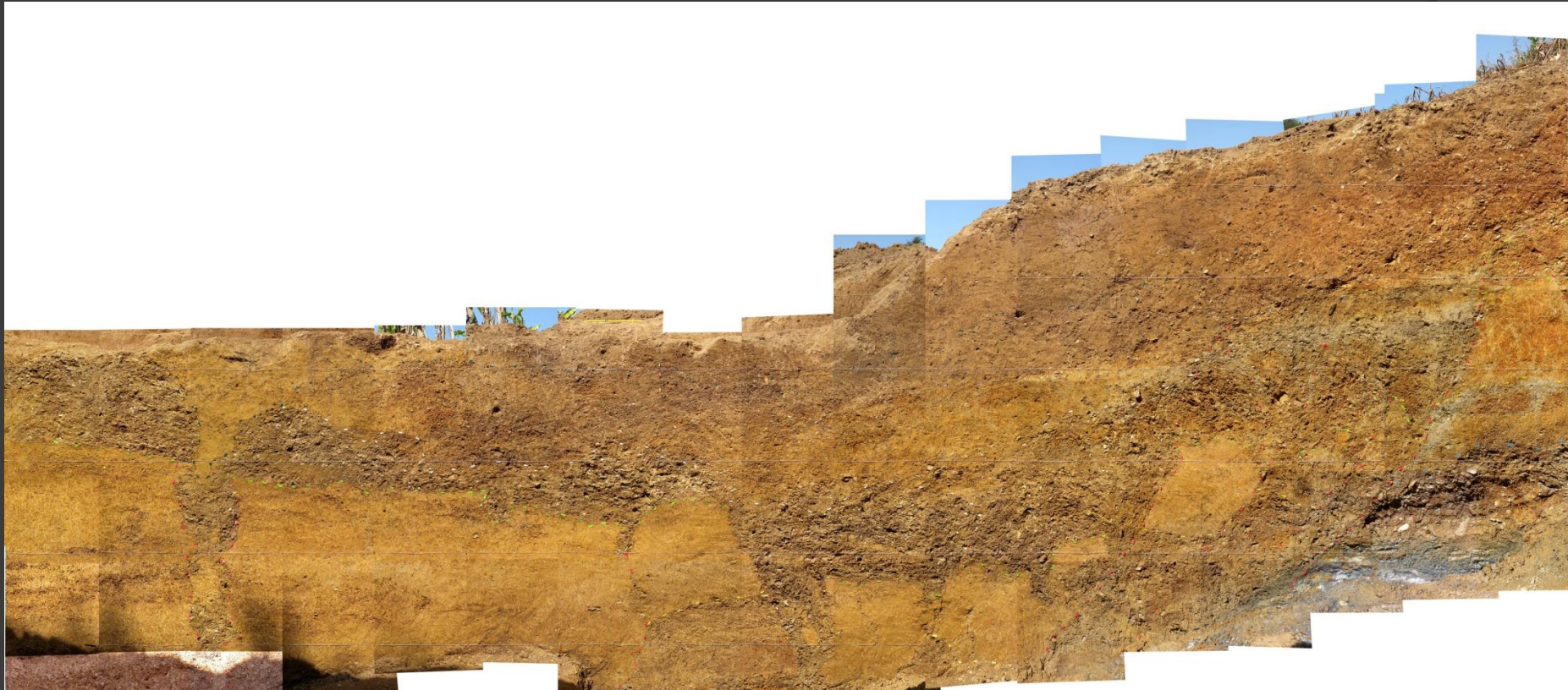
**Pua Fault, Ban Doo Segment**



# Progress report of geohazards: case study on Active Fault in Thailand 2017



## Ban Hua Nam trench, Pua area







# Progress report of geohazards: case study on Active Fault in Thailand 2017





# 5. Capacity building in Malaysia and Thailand

**Aim:** Training on Conodont in Thailand  
(March 2018)

**Status:** Postpone to Quarter 3-4 in year 2018

# 6. Information sharing and outreaching

1. **Chanchana Khamcha** : Cooperation between National Park and Local communities: Good practice from Satun Aspiring Geopark, Thailand

2017  
THE 5TH ASIA-PACIFIC GEOPARKS NETWORK SYMPOSIUM  
CONFERENCE PROGRAMME  
Sept. 18th — 23rd, 2017  
ZHIJINDONG CAVE UGG-CHINA

Tuesday Sept. 19th p.m.	14:15-14:30	Akinobu Ishimatsu	SUSTAINABLE TOURISM DEVELOPMENT BASED ON ASO UNESCO GLOBAL GEOPARK	He Qingcheng & Hiroko Tongue	
	14:30-14:45	Zhen Shuai	MANAGEMENT AND DEVELOPMENT OF A GEOPARK COVERING INTER-PROVINCIAL ADMINISTRATIVE DISTRICTS- LEIQIONG UNESCO GLOBAL GEOPARK		
	14:45-15:00	Dhiti Tul Yatid	THE "EXPLODING FROM THE INSIDE OF THE COMMUNITY" APPROACH TOWARD SUSTAINABLE DEVELOPMENT IN KANCHANABURI, THAILAND		
	15:00-15:15	Kelly Chen	ORGANIC FARMING: BRINGING TOGETHER LOCAL FARMERS AND LEIQIONG UNESCO GLOBAL GEOPARK FOR MUTUAL BENEFIT		
	15:15-15:30	Dang Ngoc Dung	THE MODEL OF MANAGEMENT AND SUSTAINABLE DEVELOPMENT OF LY SON GEOPARK WITH PARTICIPATION OF ENTERPRISES	He Qingcheng & Hiroko Tongue	
	15:30-15:45	Tea Break			
	15:45-16:00	Ning Mengmeng	THE PROMOTION OF HIGH-END TOURISM BY MOUNT KUNLUN UNESCO GLOBAL GEOPARK		
	16:00-16:15	Tommy Leung, Barbara Chan	"A FRIEND IN NEED IS A FRIEND INDEED" - LIONS NATURE EDUCATION FOUNDATION, A SUPPORTING PARTNER OF HONG KONG UNESCO GLOBAL GEOPARK		
	16:15-16:30	Gu Shangyi	PROMOTING SUSTAINABLE SOCIO-ECONOMIC DEVELOPMENT: A CASE STUDY IN ZHIJINDONG GLOBAL GEOPARK		
	16:30-16:45	Qu Jimzhong	ON STONE TRANSPORTATION FROM ANCIENT UNDERGROUND QUARRIES AT CHANGYUDDONGSIAN		
16:45-17:00	Ton Ngoc Bao	TOURISM-A SUSTAINABLE WAY OF PRESERVING DAKNONG' S VALUES AND CULTURE	He Qingcheng & Hiroko Tongue		
17:00-17:15	Lu Qingfei	RURAL TOURISM DEVELOPMENT IN YANDANGSHAN UNESCO GLOBAL GEOPARK OF CHINA			
	<b>Date</b>	<b>Time</b>	<b>Speaker</b>	<b>Topic</b>	<b>Host</b>
Wednesday Sept. 20th a.m.	09:00-09:15	Dyah Erowati	SYNERGIZING GEOPARK DEVELOPMENT PROGRAMS WITH REGIONAL TOURISM AND REGIONAL PLANNING	Zhang Shiping & Nickolas Zouros	
	09:15-09:30	Zhang Shiping	GLOBAL SIGNIFICANCE OF GEOLOGICAL AND CULTURAL LANDSCAPES OF ANJIAN MOUNT GEOPARK		
	09:30-09:45	Chanchana Khamcha	COOPERATION BETWEEN NATIONAL PARK AND LOCAL COMMUNITIES: GOOD PRACTICE FROM SATUN ASPIRING GEOPARK, THAILAND		
	09:45-10:00	Si Yongchao	MEDICAL VALUES ON MINERAL ENVIRONMENT UNDER SPECIAL VOLCANIC AND GEOLOGICAL CONDITIONS IN WUDALIANCHI UNESCO GLOBAL GEOPARK		





# 6. Information sharing and outreaching

2. **Apsorn Sardsud** : Satun Aspiring Geopark, Thailand: From Paleontological study connecting to Geopark and Geotourism

Date	Time	Speaker	Topic	Host
Wednesday Sept. 20th P.M	15:00-15:15	Setsuya Nakada	GGNAP/IGN WORKING GROUP ON VOLCANIC AREAS	
	15:15-15:30	Chen Bin	BALANCE BETWEEN GEO-HERITAGE SAFEGUARDING AND ECONOMIC DEVELOPMENT—A CASE STUDY OF THE CONSERVATION AND GOVERNANCE PROJECT OF ERHAI LAKE OF DALI	
	15:30-15:45		Tea Break	
	15:45-16:00	Apsorn Sardsud	SATUN ASPIRING GEOPARK, THAILAND: FROM PALEONTOLOGICAL STUDY CONNECTING TO GEOPARK AND GEOTOURISM	Han Jinfang & Jiyang
	16:00-16:15	Zeng Chenxin	RESEARCH ON GEOLOGICAL HERITAGE AND GEOTOURISM OF TONGREN	
	16:15-16:30		GEOPARK HELPS WITH THE ALL-FOR-ONE TOURISM— TAKE YAONING UNESCO GLOBAL GEOPARK AS AN EXAMPLE	
	16:30-16:45	Jagoda Woloszyn, Kamang Yeung	BUILDING A FRAMEWORK FOR COOPERATION THROUGH DEEPENING THE UNDERSTANDING BETWEEN CHINESE AND JAPANESE GEOPARKS	
16:45-17:00	Li Jiangfeng	IMPACT ON THE REGIONAL ECONOMIC DEVELOPMENT OF GEOTOURISM IN HUANGGANG DABIESHAN GEOPARK		
Friday Sept. 22nd A.M	09:00-09:15	Liang Shiyong	CHARACTERISTICS OF DANXIA LANDFORM IN TAINING UNESCO GLOBAL GEOPARK	
	09:15-09:30	Zhang Qing	A RESEARCH ON THE DEVELOPMENT OF GEOTOURISM OF THE DALI MT. CANGSHAN GEOPARK BASED ON RMP ANALYSIS	
	09:30-09:45	Liu Zhanshen	PRESENT SITUATION AND STRATEGY ON GEOLOGICAL ICHNITE PROTECTION OF JINGPOHU GLOBAL GEOPARK	Zhao Zhizhong & Kana Furusawa
	09:45-10:00	Wang Lulin	A NEW MEMBER OF THE GGN—ARXAN UNESCO GLOBAL GEOPARK	
	10:00-10:15	Zheng Yuanyuan	ACTIVITIES & EVENTS OF CHINESE GEOPARKS NETWORK IN 2016-2017	
	10:15-10:30	Zeng Guangge	SCIENTIFIC CONSERVATION ABOUT THE IMPORTANT GEOLOGICAL SITES OF GEOPARK— TAKE YAONING UNESCO GLOBAL GEOPARK AS AN EXAMPLE	
	10:30-10:45		Tea Break	
	10:45-11:00	Roro Retno Wulan	COMMUNICATION MANAGEMENT IN CILETUH GEOPARK, SUKABUMI REGION, INDONESIA	Zhao Zhizhong & Kana Furusawa
11:00-11:15	Zou Fenghui	STUDY ON THE CHARACTERISTICS OF GEOLOGICAL RELICS AND TOURISM CULTURE IN HUANGGANG DABIESHAN NATURAL GEOPARK OF HUBEI, CHINA		





# 7. Working Group and Committee meeting



Malaysia-Thailand Working Group Meeting No 2/2017 at Royal Hotel, Penang, Malaysia at 15<sup>th</sup> August 2017  
(Mr. Mohd Ariff bin Omar and Mr. Montri Luengingkasoot)



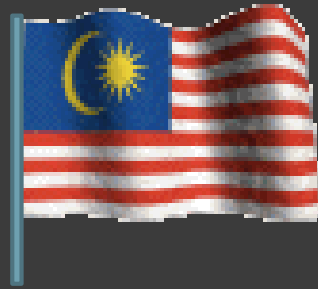


# 7. Working Group and Committee meeting



Fourteenth MT-JGSC at Royal Hotel, Penang, Malaysia at 16<sup>th</sup> August 2017 and Post-Meeting Joint Field excursion 17<sup>th</sup> – 19<sup>th</sup> August 2017 (Mr. Shahar Effendi bin Abdullah Azizi & Dr.Somma Techawan)





***Terima Kasih***

***khob-kun-krab.***