



**REPORT OF THE TWENTIETH MALAYSIA-THAILAND BORDER
JOINT GEOLOGICAL SURVEY COMMITTEE (MT-JGSC) MEETING
23RD AUGUST 2023
SEES EA RESORT, SATUN, THAILAND**

INTRODUCTION

1. The Twentieth Malaysia-Thailand Border Joint Geological Survey Committee (MT-JGSC) Meeting was held on 23rd August 2023 at Seesea Resort, Satun, Thailand. The Meeting was attended by delegates from Malaysia and Thailand. The list of delegates appears as per **ANNEX A**.

OPENING REMARKS

Welcoming speech by Head of Delegation from Thailand and Malaysia

2. Dr. Oranuj Lorphensri, Director General, Department of Mineral Resources, Head of Thai Delegation delivered her speech which appears as per **ANNEX B**.
3. Dr. Abdullah bin Sulaiman, Director, Planning and Management Section, Department of Mineral and Geoscience, Head of Malaysian Delegation delivered his speech which appears as per **ANNEX C**.

ASSUMPTION OF CHAIRMANSHIP

4. Dr. Oranuj Lorphensri, Director General, DMR and Dr. Abdullah bin Sulaiman, Director, Planning and Management Section, JMG assumed the duty of Chairmanship for the Meeting.

APPOINTMENT OF RAPPORTEURS

5. Dr. Sasiwimol Nawawitphisit and Mr. Jakrapun Khamboonruang, Thai delegates and Mr. Farid bin Zainudin and Assoc. Prof. Dr. Meor Hakif bin Amir Hassan were appointed as rapporteurs for the meeting.

ADOPTION OF AGENDA

6. The Meeting considered and adopted the Agenda, which appears as per **ANNEX D**.

PRESENTATION ON PROGRESS REPORT ON ACTIVITIES OF THE MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY IN 2023 BY THE MALAYSIAN AND THAI WORKING GROUP LEADER REPRESENTING THE MALAYSIA-THAILAND WORKING GROUP.

7. Mr. Mat Niza bin Abdul Rahman, Malaysian Working Group Leader, and Dr. Doungrutai Saesaengseerung, Thai Working Group Leader, presented the progress report on activities of the Malaysia-Thailand Border Joint Geological Survey in 2023. The slides of the presentation appear in **ANNEX E**.

JOINT PRESENTATION BY THE MALAYSIAN AND THAI WORKING GROUP MEMBERS

8. Mr. Farid bin Zainudin, Malaysian Working Group Member and Prof. Dr. Punya Charusiri, Thai Working Group Member presented the brief reports of the Compilation of Malaysia-Thailand metallogenic maps including strategic minerals (REE) on Malaysian side and Thai side respectively.

CONFIRMATION OF POINTS OF DISCUSSION OF THE 19th MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY COMMITTEE (MT-JGSC) MEETING HELD VIRTUALLY, 15th AUGUST 2022.

9. The meeting considered and confirmed the points of discussion of the 19th Malaysia-Thailand Border Joint Geological Survey Committee (MT-JGSC) Meeting.

POINTS OF DISCUSSION

10. The meeting revised the activities of the work plan (the year 2022-2026) as appear in **ANNEX F**.
11. The meeting confirmed that the compilation of Malaysia-Thailand metallogenic maps including strategic minerals (REE) is carried out in the year 2020-2024 and final report will be completed in 2024.
12. The meeting confirmed that the case study on REE in Malaysia and Thailand will be carried out in 2025-2026.
13. The meeting confirmed that the geoheritage mapping and geopark development in Malaysia and Thailand is carried out in 2023-2025. The Malaysian and Thai Working Group will share their activities on Geoheritage Mapping and Geopark Development in both countries. Joint report editing will be carried out in 2025.

14. The meeting confirmed that the case study on sustainable development of Geopark and impacts in Malaysia and Thailand will be carried out in 2026.
15. The meeting confirmed that the Stratigraphic Correlation and Fossil Assemblages between the Chuping Formation and the Khao Rub Chang Formation is carried out in 2023-2025. Joint report editing will be carried out in 2025.
16. The meeting confirmed that granite characteristics along the Malaysia-Thailand border will be carried out in 2026.
17. The meeting confirmed that the case study on Geological Hazard: Debris Flow has been carried out in the year 2022-2024 and final report will be completed in 2024.
18. The meeting confirmed that the case study on Geological Hazard: Coastal erosion will be carried out in 2025-2026.
19. The meeting confirmed capacity buildings will be carried out as follows:
 - Training on Foraminifera will be held in 2024 hosted by Thailand (Online).
 - Training on Dinosaur Study will be held in September 2024 hosted by JMG Malaysia. The Thailand resource person will be invited to conduct the training. The actual date and venue will be confirmed later.
 - Training Gemology (practical) in Thailand, September 2024.
 - Training on REE survey in Thailand in 2025 (invite 1-2 experts from Malaysia).
 - Training on igneous petrography & petrology hosted by Malaysia in 2025 (Online).
20. The meeting took note the information sharing and outreaching:
 - GEOTHAI National Conference in Thailand (Online), 5th -7th September 2023
 - National Geoscience Conference in Putrajaya, Malaysia, 7th -10th November 2023
 - Regional Geoheritage Conference (RGC) in Indonesia (depends on host)
 - 10th GGN Conference in Morocco, 7th -9th September 2023
 - CCOP Thematic Session in Phang-nga, Thailand, 1st November 2023
 - GEOTHAI National Conference in Thailand (2024-2026)
 - National Geoscience Conference in Malaysia (2024-2026)
 - 18th GEOSEA 2024 Conference in Khon Kaen, Thailand (20th -23rd February 2024)

21. The meeting confirmed that the Development of Database on Geological Resources along the Malaysia-Thailand border (geology, minerals, geosites/fossil sites and geohazards) is ongoing using the webGIS/GSi platform which has been developed under the initiative of CCOP from the year 2022-2026. The meeting agreed that Malaysia and Thailand will use the same portal and both working groups will elaborate in detail about the data added on to the database and report it to the Committee.
22. The meeting agreed that the Malaysia-Thailand Border Joint Geological Survey Working Group Meeting will be held online in March every year, beginning in 2024 and hosted alternately by Malaysia and Thailand.
23. The meeting confirmed that the upcoming 38th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting will be hosted by Thailand (Online), 14th March 2024.
24. The meeting confirmed joint report editing will be carried out online by separating into 2 working groups in May:
 - Metallogenic map (hosted by Malaysia side, 2nd week of May 2024)
 - Debris flow (hosted by Thai side, 3rd week of May 2024)
25. The meeting confirmed that the upcoming 39th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting and 21st Committee Meeting will be held in Kangar, Perlis, Malaysia in August 2024. The actual date and venue will be confirmed later.

CONSIDERATION AND ENDORSEMENT OF THE REVISED WORK PLAN FOR THE YEAR 2022-2026 AGREED DURING THE 37th MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY WORKING GROUP MEETING

26. The meeting considered and approved the activities of the Malaysia- Thailand Joint Border Geological Survey Proposed Work Plan 2022-2026 as appeared in **ANNEX F**.

DATE AND VENUE OF THE ONCOMING 38th MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY WORKING GROUP MEETING.

27. The meeting agreed that the 38th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting will be held online hosted by Thailand, 14th March 2024.

DATE AND VENUE OF THE 39th MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY WORKING GROUP MEETING AND 21st MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY COMMITTEE MEETING.

28. The meeting agreed that the 39th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting and 21st Malaysia-Thailand Border Joint Geological Survey Committee Meeting will be held in Kangar, Perlis, Malaysia in August 2024. The actual date will be confirmed later.

OTHER MATTERS

The meeting agreed that the Carbon capture and storage (CCS) issues will be discussed further in the 38th Working Group Meeting and will be added in revised work plan.

CONCLUDING REMARKS

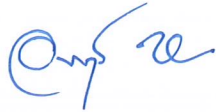
The concluding remarks was delivered by Dr. Abdullah bin Sulaiman, the Head of Malaysian Delegation (ANNEX G).

CLOSING REMARKS

The closing remarks was delivered by Dr. Oranuj Lorphenstri, the Head of Thai Delegation (ANNEX H).

COMPLETION OF THE MEETING

The meeting completed and adjourned at 4.30 p.m (Thai time).



Dr. Oranuj Lorphensri
For the Department of Mineral Resources
Ministry of Natural Resources and
Environment, Thailand.
23rd August 2023



Dr. Abdullah bin Sulaiman
For the Department of Mineral and Geoscience
Ministry of Natural Resources, Environment
and Climate Change, Malaysia.
23rd August 2023

**THE 20th MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY COMMITTEE
MEETING**

Date : 23rd August 2023
 Time : 08:30-16:30 (Thai time)
 Venue : SEA2 Meeting Room, Seesea Resort, Satun, Thailand

THAI DELEGATION

No.	Name	Position
1	Dr. Oranuj Lorphensri	Director-General of DMR (Head of Thai Delegation)
2	Mr. Suvapak Imsamut	Deputy Director-General of DMR
3	Dr. Apsorn Sardud	Director of Geological Survey Division
4	Mr. Suwith Kosuwan	Senior Expert on Mineral Resource Management
5	Dr. Dhiti Tulyatid	Senior Expert on International Cooperation
6	Prof. Emeritus Dr. Punya Charusiri	Senior Expert on Mineral Management
7	Mr. Chaiporn Siripornpibul	Senior Expert on Geo-conservation
8	Ms. Krittaya Pattamalai	Director, Mineral Resources Division
9	Mrs. Supaporn Worakanok	Director, Geological Resource Conservation and Management Division
10	Dr. Doungrutai Saesaengseerung	Geologist (Senior Professional Level) (Thai Working Group Leader)
11	Mr. Terapon Wongprayoon	Geologist (Senior Professional Level)
12	Ms. Janram Putthasem	Policy and Plan Analyst (Senior Professional Level)
13	Mr. Kitti Khaowiset	Geologist (Senior Professional Level)
14	Mr. Jirasak Charoenmit	Mineral Resources Technical Officer (Senior Professional Level)
15	Dr. Sasiwimol Nawawitphisit	Geologist (Senior Professional Level)
16	Ms. Chanchana Khamcha	Geologist (Senior Professional Level)
17	Mr. Jakrapun Khamboonruang	Scientist (Professional Level)

MALAYSIAN DELEGATION

No.	Name	Position
1.	Dr. Abdullah bin Sulaiman	Director, Planning and Management Section, JMG (Malaysian Head of Delegation)
2.	Mr. Norazmi bin Ahmad	Deputy Under Secretary, Geoscience Division, Ministry of Natural Resources, Environment and Climate Change (NRECC)
3.	Mr. Mat Niza bin Abdul Rahman	Deputy Director (Geoscience), JMG Perak State (Malaysian Working Group Leader)
4.	Mr. Farid bin Zainudin	Senior Assistant Director, JMG Perak State
5.	Assoc. Prof Dr. Meor Hakif bin Amir Hassan	Associate Professor, Department of Geology, University of Malaya (UM)

OPENING CEREMONY

WELCOMING SPEECH BY

DR. ORANUJ LORPHENSRI

Director General of DMR, Thai Head of Delegation

20th MT-JGSC Meeting

Wednesday, 23rd August 2023, 09.00 am

SEA2 Meeting Room, Seesea Resort, Satun, Thailand

- **Mr. Abdullah bin Sulaiman** (อับดุลลา บิน สุไรมาน)
Director, Planning and Management, Department of Mineral and Geoscience Malaysia (JMG)
- **Mr. Norazmi bin Ahmad**
Deputy Under Secretary, Geoscience Division, Ministry of Natural Resources, Environment and Climate Change (NRECC)
- **Mr. Mat Niza bin Abdul Rahman**, (มัท นิสา อับดุล รามัน)
Deputy Director (Geoscience), JMG Perak State, Head of Malaysian Working Group Leader
- **Mr. Farid bin Zainudin** (ฟาริด บิน ไชนูดิน)
Senior Assistant Director, JMG Perak State
- **Assoc.Prof Dr. Meor Hakif bin Amir Hassan** (เหมี่ยว ฮากิฟ บิน อะแม ฮัสซัน)
Associate Professor, Department of Geology, University of Malaya (UM)
- **Mr. Suvapak Imsamut** (สุวภาคย์ อิมสมุทร)
Deputy Director General, Department of Mineral Resources (DMR)
- **Mr. Suwith Kosuwan** (สุวิทย์ โคสุวรรณ)
Senior Expert on Mineral Resource Management, DMR

➤ **Ms. Apsorn Sardsud (อัปสร สอาดสุด)**

Director of Geological Survey Division, DMR

➤ **All Malaysia-Thailand Border Joint Geological Survey Committee and Working Group Members**

➤ **Distinguished Delegates, Ladies and Gentlemen,**

สวัสดีค่ะ, Selamat pagi (เชลามัท ปากี), Good morning,

On behalf of the Thai Delegation from the Department of Mineral Resources, Ministry of Natural Resources and Environment, Thailand, I extend our heartfelt appreciation to the Department of Mineral and Geoscience Malaysia, Ministry of Natural Resources, Environment and Climate Change, for graciously hosting the 36th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting from March 6th to 10th, 2023, in Sungai Petani, Kedah, Malaysia. This in-person meeting marks our first reunion after more than three years due to the COVID-19 situation. It is truly a pleasure to reunite with our Malaysian friends and express our gratitude for your continued cooperation.

- Distinguished guests,

- Over the past two decades, our enduring collaboration within the Malaysia-Thailand Border Joint Geological Survey Project has strengthened our bond and enriched our knowledge in geosciences. Through shared experiences, we have co-authored numerous reports and maps that have significantly contributed to the socioeconomic development of our nations. By integrating geological insights, we have positively impacted local communities through initiatives focused

on geoheritages, geotourism, geoparks, geohazard mitigation, and geoscience education, all of which contribute to substantial advancements.

- As we are well aware, we consistently report our collaborative achievements to the Thailand-Malaysia Joint Commission for Bilateral Cooperation (JC), with a special emphasis on the 14th Meeting of the Joint Commission for Bilateral Cooperation held in Bangkok on August 9th - 10th, 2022. I extend my sincere congratulations to the diligent Working Groups from both countries for their unwavering efforts in accomplishing the activities outlined in the Malaysia-Thailand Border Joint Geological Survey Committee's approved work plan.

- Distinguished attendees,

- I would like to extend my profound gratitude to the Ministry of Natural Resources, Environment and Climate Change, Malaysia, for their continuous and unwavering support to the Malaysia-Thailand Border Joint Geological Survey Project. This collaboration stands as a testament to the strong geological partnership between our two nations.

- In our pursuit of sustainable development and recognition of the pressing climate change issue, it is imperative that we align our efforts intending to achieve net-zero emissions. By integrating our geological expertise into our strategies, we can significantly contribute to environmental preservation and the mitigation of the impacts of climate change.

- Lastly, I wholeheartedly anticipate a productive and successful 20th MT-JGSC Meeting today. I trust that the scheduled activities

conducted by both Working Groups will proceed seamlessly. May this meeting yield fruitful outcomes that contribute to our shared objectives.

- Before concluding, I kindly request my esteemed colleagues in this gathering to introduce themselves.

Terima Kasih (ทอริมา กาช), **Khob Khun Ka (ขอบคุณคะ)**,

Thank you

**SPEECH BY
DR. ABDULLAH BIN SULAIMAN
DIRECTOR,
PLANNING AND MANAGEMENT SECTION,
DEPARTMENT OF MINERAL AND GEOSCIENCE MALAYSIA
HEAD OF THE MALAYSIAN DELEGATION**

**AT THE OPENING CEREMONY
OF THE 20th MALAYSIA-THAILAND BORDER
JOINT GEOLOGICAL SURVEY COMMITTEE MEETING**

**Wednesday, 23rd August, 2023
Seesea Resort, Langu, Satun Province, Thailand**

- **The Honorable Dr. Oranuj Lorphensri,**
Director General, DMR Thailand
- **Mr. Suvapak Imsamut**
Deputy Director-General of DMR
- **Dr. Apsorn Sardud**
Director of Geological Survey Division
- **Mr. Suwith Kosuwan**
Senior Expert on Mineral Resource Management
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Director, Geological Resource Conservation and Management Division
- **Mr. Norazmi bin Ahmad**
Deputy Under Secretary, Geoscience Division, Ministry of Natural Resources,
Environment and Climate Change (NRECC)

- **Mr. Mat Niza bin Abdul Rahman**
Deputy Director (Geoscience), JMG Perak State, Head of Malaysian Working Group Leader
- Senior officers of both Department of Mineral Resources Thailand (DMR) and Department of Mineral and Geoscience Malaysia (JMG), and
- All Malaysia-Thailand Border Joint Geological Survey Committee Members

Distinguished guests, ladies and gentlemen

السَّلَامُ عَلَيْكُمْ وَرَحْمَةُ اللَّهِ

to all Muslim delegates, and a very Good Morning to all of you.

First and foremost, on behalf of the Malaysian Delegation, I would like to take this opportunity to express our sincere gratitude and appreciation to the organizer for inviting us to the beautiful beach of Satun Province for the 20th MT-JGSC Meeting as well as for their hospitality and excellent arrangement.

I would like to take this opportunity to seek apologies on behalf of Mr. Zamri bin Ramli, Director General, Department of Mineral and Geoscience Malaysia, especially from Dr. Oranuj Lorphensri, Director General, Department of Mineral Resources Thailand, as he is not be able to attend this meeting because he has some emergency matters that he has to attend himself personally. He understands that his absence may have caused inconvenience to the host and he is truly sorry. Last Saturday evening, when I was on the way to Kedah State to attend an event related to Jerai Geopark, my DG suddenly send text message to me asking me to represent him in this meeting.

As agreed upon in the Terms of Reference (TOR) of our collaborative geological survey project, Malaysia and Thailand will host the annual Steering Committee Meeting on a rotational basis. The 19th MT-JGSC Meeting was hosted virtually by Malaysia last year, and this year is Thailand turn once again to be the host for the 20th MT-JGSC Meeting physically after about three years we have no chance to meet due to the outbreak of pandemic COVID-19. As you may remember, our last MT-JGSC Meeting held physically was in 2019, in Cameron Highlands, Malaysia, before the outbreak of pandemic COVID-19 in early 2020.

Distinguished guests, ladies and gentlemen,

I am very impressed indeed to see that both the Malaysia and Thailand Working Groups have worked systematically and managed to resolved the geological correlation of rock units as well as identify the geological resources in the Malaysia-Thailand border area. Lately, I have been informed that both the Malaysia and Thailand Working Groups are also work closely on the aspects of Geological Heritage and Geological Hazards. I am very glad that the projects have progressed as scheduled.

I do hope that this Meeting will serve as a platform to strengthen our good relationship between the two neighboring countries, at the same time exchange of new ideas on matters related to geology and mineral resources especially along the Malaysia-Thailand border area. Since we are now working on geoheritage and geohazards, our cooperation is not limited only along the border areas, but also extended to the other areas in both countries.

Distinguished guests, ladies and gentlemen,

It is indeed a real pleasure to see the congregation of geoscientists from the Department of Mineral and Geoscience Malaysia (JMG) and the Department of Mineral Resources Thailand (DMR) once again to discuss and deliberate issues related to geological aspects along the common border of both countries. As we are all aware, this year we have four joint projects namely:

1. Compilation of Malaysia-Thailand metallogenic maps including strategic minerals (REE)
2. Geoheritage mapping and geopark development in Malaysia and Thailand
3. Stratigraphic correlation and fossil assemblages between Chuping Formation and the Khao Rub Chang Formation
4. Case study on Geological Hazard: Debris Flow

Out of four, one report needs to be completed next year, that is Compilation of Malaysia-Thailand metallogenic maps including strategic minerals (REE). Malaysian PICs Mr. Farid bin Zainudin and his counterpart from Thailand will discuss in details how to complete this report and to make sure the report can be submitted to the Main Committee during the 21st MT-JGSC Meeting next year.

I have been informed that the other three ongoing projects are progressing well, and scheduled to be completed in 2025. I am sure, with the hard working and dedicated Working Group members, the project will be completed as scheduled.

Distinguished guests, ladies and gentlemen,

I sincerely hope that the 20th MT-JGSC Meeting will proceed well in a cordial atmosphere. I do also hope that all technical activities as well as the preparation of technical reports for the projects that had been agreed during the last meeting will be conducted and completed by the Working Groups from both countries as scheduled.

I would like to express my sincere gratitude and appreciation once again to the Department of Mineral Resources Thailand for organizing this meeting, and for all the arrangements you have afforded us before, during and after the meeting, as well as the field excursion that will be carried out tomorrow after this meeting.

As Malaysia will be the host for the 21st MT-JGSC Meeting in the year 2024, I would like to take this opportunity to welcome all of you to the Malaysia next year.

Last but not least, I do believe that both parties have been working very hard in collecting new data in the field despite limited fund and man-power to ensure the success of our joint project. May we give a big hand to show our appreciation to all our dedicated Malaysia-Thailand Working Group members.

Before I end up my speech, let me introduce my colleagues;

1. Mr. Norazmi bin Ahmad
Deputy Under Secretary, Geoscience Division, Ministry of Natural Resources, Environment and Climate Change (NRECC)
2. Mr. Mat Niza bin Abdul Rahman,

Deputy Director (Geoscience), JMG Perak State, cum Malaysian Working Group Leader

3. Mr. Farid bin Zainudin,
Senior Assistant Director, JMG Perak State Office
4. Associate Professor Meor Hakif bin Amir Hassan,
Associate Professor, Department of Geology, University of Malaya (UM)

Finally, I am confident that this meeting will provide a cordial platform for fruitful discussions and outcomes leading to the successful implementation of our joint border geological survey activities in the future.

With that, my speech is concluded.

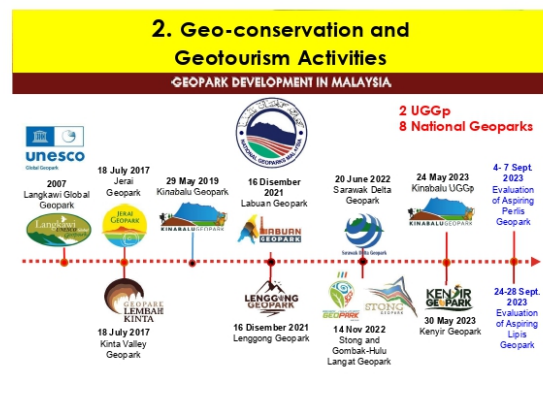
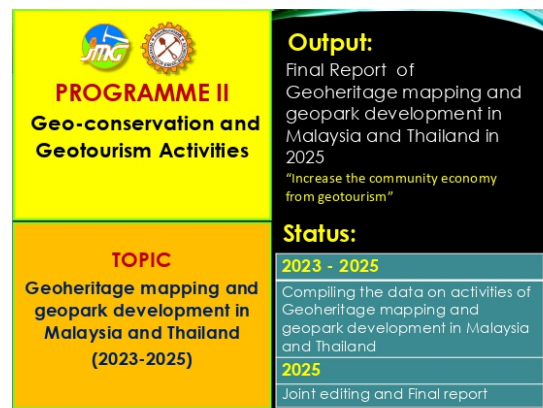
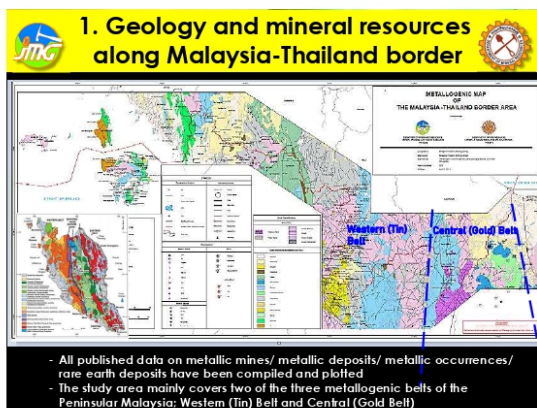
TERIMA KASIH, KHOB KHUN KRAB AND THANK YOU VERY MUCH.

**THE 20th MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY
COMMITTEE (MT-JGSC) MEETING**

AGENDA:

- ITEM 1 Assumption of Chairmanship
- ITEM 2 Adoption of Agenda
- ITEM 3 Confirmation of Points of Discussion of the 19th MT-JGSC Meeting
- ITEM 4 Consideration and endorsement of the revised Work Plan for the year 2022-2026 agreed during the 37th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting
- Proposed revised Work Plan for the year 2022-2026
- ITEM 5 Announcement of the date and venue of the oncoming 38th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting to be hosted by DMR Thailand in March 2024
- ITEM 6 Announcement of the date and venue of the oncoming 39th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting and 21st MT-JGSC Meeting to be held in Malaysia, August 2024
- ITEM 7 Other matters

The slides of the presentation by Mr. Mat Niza bin Abdul Rahman, Malaysian Working Group Leader, and Dr. Doungrutai Saesaengseerung, Thai Working Group Leader, presented the progress report on activities of the Malaysia-Thailand Border Joint Geological Survey in 2023.



2. Geo-conservation and Geotourism Activities

GEPARK DEVELOPMENT IN MALAYSIA

Target as



unesco
Global Geopark






Sarawak Delta Geopark
Sarawak Delta Geopark as
UNESCO Global Geopark



Lengong Geopark as UNESCO Global Geopark

PROGRAMME III

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

TOPIC

Stratigraphic correlation and fossil assemblages between Chuping Formation and the Khao Rub Chang Formation (2023-2025)

Output:

Final Report of stratigraphic correlation in 2025
"Develop academic knowledge"



Status:


2023
Literature review on lithology and fossil assemblages/ field checking

2023-2024
*Field Checking & laboratory analysis

2025
Joint editing and Final report

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

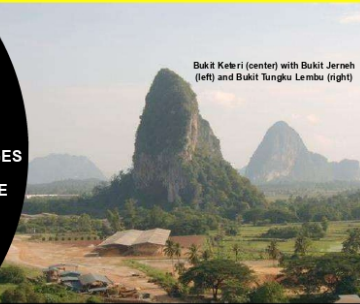





Bukit Kelerri (center) with Bukit Jerneh (left) and Bukit Tungku Lembu (right)


STRATIGRAPHIC CORRELATION AND FOSSIL ASSEMBLAGES BETWEEN CHUPING FORMATION AND THE KHAO RUB CHANG FORMATION



THE 57th MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY WORKING GROUP MEETING
22nd Aug 2023
Suebs Road, Beshi Province, Thailand




2. DISTRIBUTION (Perlis)

- In Perlis, Chuping Formation forms approximately N-S trending limestone hills to the west of the railway line in central Perlis.
- It is represented by Bukit Temiang, Bukit Tungku Lembu, Bukit Chondong, Bukit Wang Pisang, Bukit Manek, Bukit Chabang, and Bukit Mata Ayer.
- The northernmost hill is Bukit Mata Ayer on the Malaysia-Thailand border, and the southernmost hill is Bukit Chuping located in the Beseri area, 22 km to the south.






Chuping Formation exposed at CIMACO quarry, Bukit Chuping

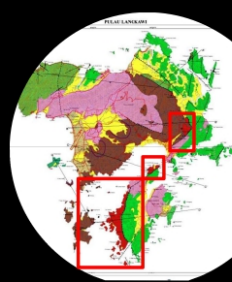
The Panji Member of the Chuping Formation exposed at Gowder Estate, Chuping



Bukit Kelerri (center) with Bukit Jerneh (left) and Bukit Tungku Lembu (right)

2. DISTRIBUTION (Langkawi)

- The Chuping Formation is exposed at Kisap area in the eastern part of Pulau Langkawi and in the western and northern sides of Pulau Dayang Bunting.
- It also forms the small islands to the west and southwest of Pulau Dayang Bunting including Pulau Singa Kechil, Pulau Jong, Pulau Gubang Darat and Pulau Gubang Laut.
- The most prominent topography formed by the Chuping Formation is the shape of lying down pregnant maiden at Pulau Dayang Bunting from where it got the name










Chuping Formation at Pulau Buntar

Layang Bunting Lake is a freshwater limestone karst on the southern of the Chuping Formation at Pulau Dayang Bunting



Topography on the shape of a pregnant lady on the east of Pulau Dayang Bunting

PROGRAMME IV

Study on geological hazard

TOPIC

Case study on geological Hazard in Debris Flow (2022-2024)

Output:

Final Report of case study on geological Hazard in Debris Flow
"Reduce hazard risks of the people"

Status:

2023-2024
Malaysia :
Thailand:
Progress : Technical Survey and report writing

2024
Final report

4. Study on geological hazards

THAI SIDE:
DEBRIS FLOW AT KHLONG NARAI WATERFALL, NAMTOK PHILLO NATIONAL PARK, CHANBURI, THAILAND

MALAYSIAN SIDE:
PROGRESS REPORT ON DEBRIS FLOW CASE STUDY IN GUNUNG JERAI, KEDAH, MALAYSIA

CASE STUDY ON GEOLOGICAL HAZARD: DEBRIS FLOW
2022-2024

Malaysian side

PROGRESS REPORT ON DEBRIS FLOW CASE STUDY IN GUNUNG JERAI, KEDAH

By
The Malaysia-Thailand Working Group

Mr. Mohammed Syahrizel Bin Zakaria

Damage Due to Debris Flow

suspension bridge at Titi Hayun damaged

Damage to the resort area in Batu Hampar

Slope and road damaged

Chalet Salak Denai, Batu Hampar was destroyed by debris.

Follow-up Mitigation Actions after Debris Flow Event

Installation of a debris flow vibration sensor system at Titi Hayun

Installation of a debris flow vibration sensor system at Titi Hayun

Follow-up Mitigation Actions after Debris Flow Event

Sabo Dam construction works at Titi Hayun

Installation of debris flow early warning system (EWS) at Titi Hayun

Various series of Community Based Disaster Risk Management (CBDRM) programs

Progress on Activities of the Malaysia-Thailand Border Joint Geological Survey (MT-JGS) in 2023

Thailand side

Programme	MALAYSIA-THAILAND JOINT BORDER GEOLOGICAL SURVEY PROPOSED WORK PLAN 2021-2025				
	Year 2021 (2024)	Year 2022 (2025)	Year 2023 (2026)	Year 2024 (2027)	Year 2025 (2028)
1. Capacity building	Completion of Malaysia-Thailand border	Completion of Malaysia-Thailand border	Completion of Malaysia-Thailand border	Completion of Malaysia-Thailand border	Completion of Malaysia-Thailand border
2. Cooperation and Geo-Information Activities	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border
3. Capacity building	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border
4. Information sharing and networking	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border
5. Development of database on geological resources along the Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border
6. Working Group Meeting and Consensus Meeting	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border	Completion of geological site proposal for protection along Malaysia-Thailand border

Output:
Final Report and map of Compilation of Malaysia-Thailand metallogenic maps including strategic minerals (REE)

STATUS:
2021 - 2023
Compiling the data on in Malaysia and Thailand
2024
Joint editing and Final report

1. Geology and mineral resources along Malaysia-Thailand border

METALLOGENIC MAP OF THE MALAYSIA-THAILAND BORDER AREA

- All published data on metallic mines/ metallic deposits/ metallic occurrences/ rare earth deposits have been compiled and plotted
- The study area mainly covers two of the three metallogenic belts of the Peninsular Malaysia: Western (Tin) Belt and Central (Gold Belt)

Topic: Compilation of Malaysia - Thailand metallogenic maps including strategic minerals (REE) 2021-2024

Introduction

The outcome maps are based on mineral data from the long-termed compilation of Sithithaworn (1999)'s DMR report

Suture zone in southern Thailand can be defined by low K, U, and Th contents in airborne radiometric survey data

U Th Ternary map

Regional gravity data can help to define tectonic units of Thailand

(Milsom, 2011)

Gravity anomaly map of Thailand (DMR, 2022)

Metallogenic provinces of Thailand

Need more detailed work on this matter.

PROGRAMME II
Geo-conservation and Geotourism Activities

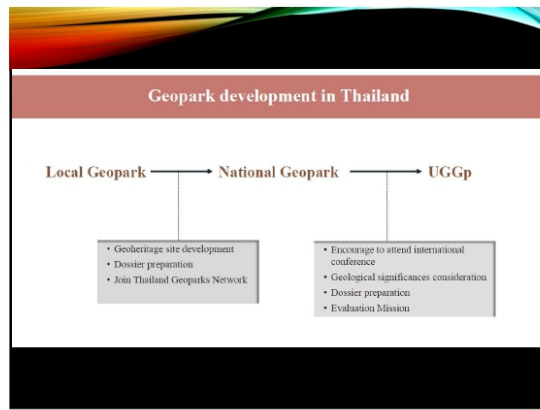
Output:
Final Report of Geoheritage mapping and geopark development in Malaysia and Thailand in 2025
"Increase the community economy from geotourism"

TOPIC
Geoheritage mapping and geopark development in Malaysia and Thailand (2023-2025)

Status:
2023 - 2025
Compiling the data on activities of Geoheritage mapping and geopark development in Malaysia and Thailand
2025
Joint editing and Final report

Map of Geological Site in Thailand (1,616 sites)

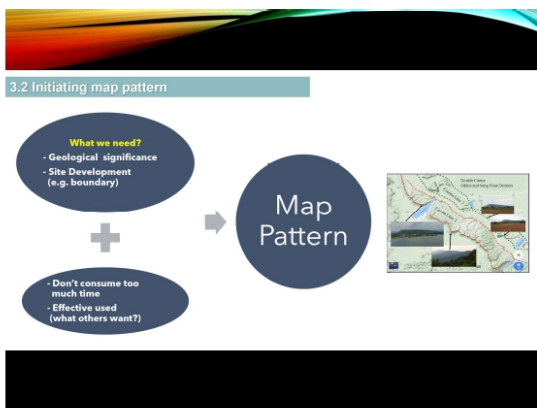
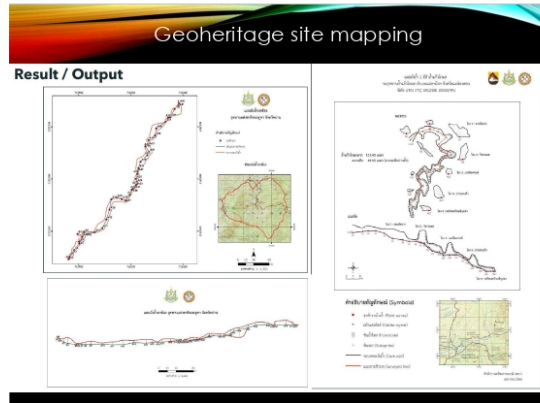
Map of Geoheritage Site in Thailand (291 sites)



Present and future Work

3.1 Geoheritage and Geosite Mapping

- Cave mapping
- 11 cave systems with 2D and 3D survey



What others want

3.3 work plan 2024

- At least 20 geoheritage sites
- 10 geoparks and potential area

PROGRAMME III

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

TOPIC

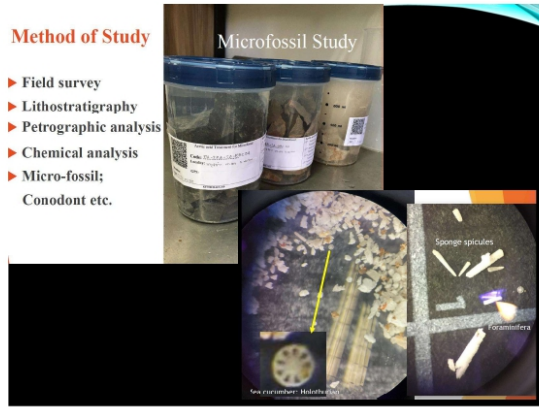
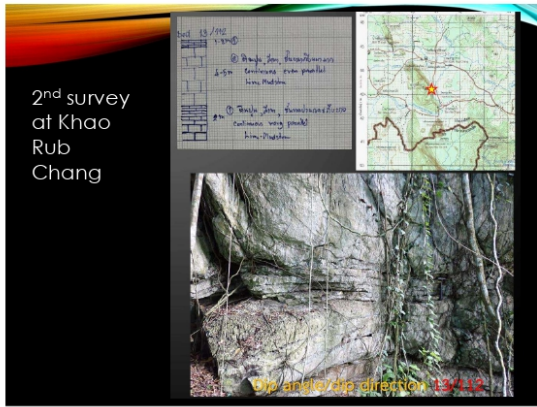
Stratigraphic correlation and fossil assemblages between Chupung Formation and the Khao Rub Chang Formation (2023-2025)

Output:

Final Report of stratigraphic correlation in 2025
Develop academic knowledge

Status:

2023	Literature review on lithology and fossil assemblages/ field checking
2023-2024	*Field Checking & laboratory analysis
2025	Joint editing and Final report



Chemical analysis

By WD-XRF DMR

Element	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%
SiO ₂	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CaO	55.31	55.31	55.31	55.31	55.31	55.31	55.31	55.31	55.31	55.31	55.31	55.31	55.31	55.31	55.31	55.31	55.31	55.31
MgO	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
SiO ₂	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
CaO	53.23	53.23	53.23	53.23	53.23	53.23	53.23	53.23	53.23	53.23	53.23	53.23	53.23	53.23	53.23	53.23	53.23	53.23
MgO	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41

Cox and others (1977)

Sample	CaO%	CaCO ₃ %	Rock
KRC 01-2	55.34	98.75	Limestone
KRC 4-1	31.25	55.76	Dolomitic limestone
KRC 4-2	31.40	56.03	Dolomitic limestone

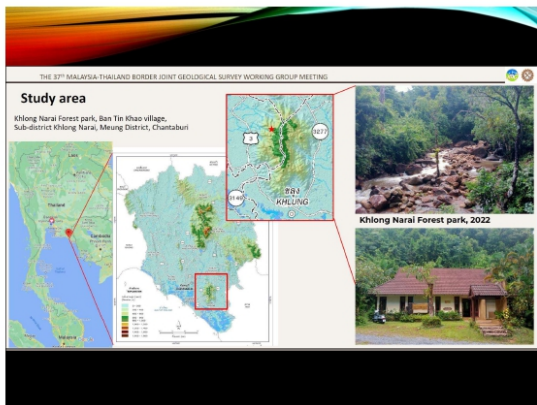
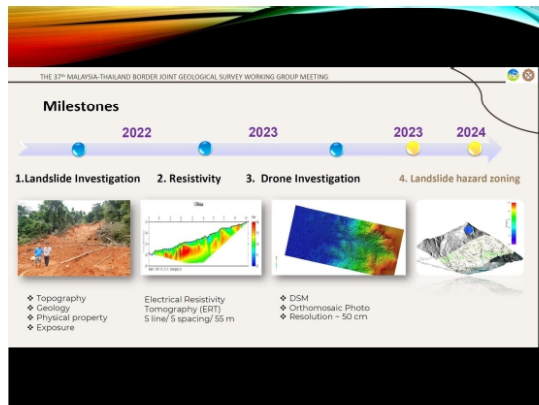


PROGRAMME IV
Study on geological hazard

Output:
Final Report of case study on geological Hazard in Debris Flow
"Reduce hazard risks of the people"

Status:
2023-2024
Malaysia :
Thailand:
Progress : Technical Survey and report writing
2024
Final report

TOPIC
Case study on geological Hazard in Debris Flow (2022-2024)



THE 3RD MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY WORKING GROUP MEETING

Debris flow simulation by RAMMS

RAMMS: Rapid Mass Movement Simulation

Source's area
Thickness & Volume
Mass properties

VIBL Institute for Snow and Avalanche Research SLF

Simulation result

THE 3RD MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY WORKING GROUP MEETING

Comparison between Voellmy-Fluid model and Yield stress

Flow characteristics	Voellmy-Fluid Model	Yield Stress Model
Maximum velocity (m/s)	18.70	16.97
Maximum flow height (m)	24.38	18.12

THE 3RD MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY WORKING GROUP MEETING

Future works

Debris flow prone area evaluation (same flowing path) → Debris flow susceptibility map

Thickness and Volume of flowing mass estimation → Field investigation/Empirical equations

Debris flow simulation

PROGRAMME V
Capacity building in Malaysia and Thailand

Output:
Number of Capacity building activity in 2023
"Human Resource Development"

Status:

Training on REE determination in geological samples
• Physically in Ipoh, Perak, Malaysia

Training on Palynology
• Virtually hosted by Malaysia

Training on Geoheritage Mapping
• virtually hosted by Malaysia

Training on Remote Sensing
• virtually hosted by Thailand

TOPICS

- Training on REE determination in geological samples
- Training on Palynology
- Training on Geoheritage Mapping
- Training on Remote Sensing

THE 3RD MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY WORKING GROUP MEETING

TRAINING ON REE DETERMINATION IN GEOLOGICAL SAMPLES

- at Geochemistry Laboratory, Technical Services Division, JMG, Ipoh
- 29th January to 4th February 2023
- 15 Malaysian and 2 Thai participants
- Rare earth elements determination in geological samples using Laser Ablation-Inductively Couple Plasma Mass Spectrometry (LA-ICPMS)
- Application of LA-ICPMS for zircon dating
- Application of LA-ICPMS for isotope ratio

Thai participants:
1. Mr. Wiroch Kayonha
2. Ms. Dusadee Ruamsanith

Scientists from Mineral Resources Analysis and Identification Division, DMR

THE 3RD MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY COMMITTEE (MT-JGSC)

TRAINING ON PALYNOLOGY

Training on PALYNOLOGY

- virtually hosted by Malaysia
- 8th May 2023
- 127 Malaysian & 6 Thai participants

Malaysia time	Title	Resource Person
08:30-09:00	Registration	
09:00-09:30	Opening ceremony	
09:30-10:30	Introduction to Palynology	Dr. Kamaludin bin Hassan
10:30-11:30	Introduction to Palaeopalynology	Asst. Prof. Dr. Wongkiet Phucharnrat
11:30-12:30	The use of Palynology in Geology - case study: 1. Late Quaternary coastal depositional environments 2. Holocene sea level changes	Dr. Kamaludin bin Hassan
12:30-14:30	Afternoon break	
14:30-15:30	Late Oligocene to Miocene palynoflora, U basin, Thailand.	Asst. Prof. Dr. Wongkiet Phucharnrat

Dr. Kamaludin bin Hassan, Mineral Resources Dept., COOP Technical Secretariat (KCCP15)

Asst. Prof. Dr. Wongkiet Phucharnrat, Forensic Science Program, Faculty of Science, Prince of Songkla University, Hat Yai, Songkhro, Thailand

THE 3RD MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY COMMITTEE (MT-JGSC)

TRAINING ON GEOHERITAGE MAPPING

- virtually hosted by Malaysia
- 6th - 9th June 2023
- 97 Malaysian & 24 Thai participants

Date: 6th June 2023 (Tuesday)
Host: Department of Mineral and Geoscience Malaysia (JMG)
Link: <https://meet.google.com/yjk-qwhq-oby>

Lecture 1: Dr. ChF Aziz Ali - From Goodiversity to Geoheritage

Lecture 2: Dr. Dana Badang - Geoheritage Diversity and Research Approach

Lecture 3: Dr. Tamot Ujjah - Geoheritage Mapping Techniques

Lecture 4: Dr. Norbert Simon - Virtual field excursion at geoheritage sites

DMR Special Talk #7
Malaysia-Thailand
Border Joint Geological Survey Committee (MT-JGSC)

TRAINING ON REMOTE SENSING

- virtually hosted by DMR Thailand
- 15th June 2023
- Malaysian & Thai participants > 200 participants

Participants: Mr. Sakde Khondok, Mr. Jini Khawwast, Ms. Wanida Bongkatt, Dr. Wiseshat Wisangwis, Ms. Satchithip Kulkarni, Ms. Saranya Sumantharanth

Thursday 15th June 2023 | 08.30-16.00, BKK Time
DMR Meeting Room, 1st Floor, Petch Building and
zoom ID: 8316926659

Organizer: Department of Mineral Resources, Thailand

DEPARTMENT OF MINERAL RESOURCES NEWS

Exchange of Knowledge between Malaysia and Thailand on Remote Sensing

On 13th June 2023, the Department of Mineral Resources, Thailand (DMR) had successfully organized the virtual Training on Remote Sensing. Mr. Sussapha Phrasakul, Deputy Director General of DMR, had officially opened the training programme. The training was organized as a platform for knowledge exchange on the application of remote sensing in the field of mineral and geoscience between Malaysia and Thailand, organized under the Malaysia-Thailand Border Joint Geospatial Survey Project. The opening ceremony was also attended by Mr. Sornratana Sri-udomwong, Deputy Director General of the Department of Minerals and Geoscience Malaysia (DMG) together with the executives from both sides.

The training programme had been attended by more than 300 participants from both countries. Six speakers from DMR had shared their knowledge and experiences on remote sensing in various Remote Sensing for Geospatial Mapping, Satellite Remote Sensing, Map of Change for Process, Remote Sensing Application for Air Quality and Hazardous Waste, Remote Sensing for Geospatial Mapping, Fundamentals of Airborne Geospatial Acquisition and Basics of Synthetic Aperture Radar (SAR).

PROGRAMME VI
Information sharing and outreaching

- Asia Pacific Geoparks Network Symposium in Thailand
- National Geoscience Conference (NGC) in Malaysia
- GEOSEA Regional Congress 2022 in Malaysia

Output: -
"Public awareness"

Status:
2022
The 7th Asia Pacific Geoparks Network Symposium
Date: 4th-11th September 2022
Venue: Satun UGGp, Thailand

34th National Geoscience Conference (NGC) will be organized parallel with the 17th GEOSEA Regional Congress 2022
Date: 17th - 21st October 2022
Venue: Langkawi, Malaysia

6. Information sharing and outreaching

Satun UNESCO Global Geopark Festival changed to

THE 7th ASIA PACIFIC GEOPARKS NETWORK (APGN) SYMPOSIUM.

4-11 September 2022
Satun UNESCO Global Geopark
Satun Province, Thailand

Session Topics

- 1 | SDGs in Geoparks
- 2 | Geohazard Mitigation in Geoparks
- 3 | Biodiversity and Geoparks
- 4 | Geoparks: "Sustainable Tourism"
- 5 | Geoparks: "Education and Interpretation"
- 6 | Local Wisdom and Cultural Heritage in Geoparks
- 7 | Aspiring Geoparks

Official Language: English

Tentative Programme

Date	08:30-09:30	09:30-10:30	10:30-11:30	11:30-12:30	12:30-13:30	13:30-14:30	14:30-15:30	15:30-16:30	16:30-17:30	17:30-18:30	
4 Sep 2022	Pre-Excursion (TBC)										
5 Sep 2022	UNESCO Global Geoparks Council Meeting (UGGp)					UNESCO Global Geoparks Council Meeting (UGGp)					Dinner
6 Sep 2022	APGN Advisory Committee Meeting (AC)					APGN Executive Meeting (EM) + APGN Co-ordinating Committee (CC)					Ice Breaking
7 Sep 2022	Opening Ceremony	APGN Conference (Keynote Exhibition / Geofair)			Lunch	APGN Conference / Exhibition / Geofair			14:30-15:30 APGN Welcome Dinner	Welcome Dinner	
8 Sep 2022	APGN Conference / Exhibition / Geofair					APGN Conference / Exhibition / Geofair					Dinner
9 Sep 2022	Mid - Excursion					Mid - Excursion					Gala Dinner
10 Sep 2022	APGN Conference / Exhibition / Geofair					Closing Ceremony Exhibition / Geofair					Dinner
11 Sep 2022	Post - Excursion (TBC)										

Activities

- Meeting**
 - ▶ UGGp Council Meeting
 - ▶ APGN AC Meeting
 - ▶ APGN OC Meeting
 - ▶ GGN Executive Board Meeting
 - ▶ Discussion on natural hazards projects in UGGPs with Japan, Malaysia, Indonesia and Thailand
 - ▶ Discussion on transnational UGGp between Langkawi UGGp & Satun UGGp
- Conference**
 - ▶ Geo-fair (UGGp & TGN Fair)
- Poster Exhibition**
- Intangible Heritage Exhibition**
- Excursion**
- Satun UGGp Festival**

Activities on the 7th Asia Pacific Geoparks Network Symposium

6. Information sharing and outreaching

- 17th GEOSEA 2022
- 34th National Geoscience Conference 2022
- Series 2022 International Conference of Sustainable Earth resources Engineering 2022

Date: 17th -21st October 2022

- 6th Regional Course on UNESCO Global Geopark

Date: 21st - 23rd October 2022
Venue: Langkawi, Malaysia

GEOLOGY OF THAILAND CONFERENCE (GEOETHAI 2023)
September 5-7, 2023
Department of Mineral Resources, Bangkok, Thailand & Online

GEOETHAI 2023 NATIONAL CONFERENCE

Continuing knowledge of Thai geology towards Sustainable Development

- Virtually (Free registration)
- September 5-7, 2023

Organizer: Department of Mineral Resources
Co-Organizer: [Logos of partner institutions]

GEOTHAI 2023

Continuing legacy of the geology border database development

The GEOTHAI 2023 has three outcomes as follows:

1. Best Resources for the Society
2. Best Environment for Society
3. Best Education for Society

Geology Conferences

Participants address an early proposal to contribute to the GEOTHAI 2023 conference by submitting their research papers, abstracts, posters, presentations, and posters. The conference committee will evaluate the proposals and select the abstracts and posters to be presented at the conference.

Abstract or extended abstracts

The abstracts should be submitted to the GEOTHAI 2023 Secretariat by 15th August 2023. The abstracts should be submitted in PDF format and should be submitted to the GEOTHAI 2023 Secretariat by 15th August 2023. The abstracts should be submitted in PDF format and should be submitted to the GEOTHAI 2023 Secretariat by 15th August 2023.

Poster sessions

The poster sessions will be held on 15th and 16th August 2023. The poster sessions will be held on 15th and 16th August 2023. The poster sessions will be held on 15th and 16th August 2023.

Final and Final Research Presentations

The final and final research presentations will be held on 15th and 16th August 2023. The final and final research presentations will be held on 15th and 16th August 2023.

Abstract or extended abstracts

The abstracts should be submitted to the GEOTHAI 2023 Secretariat by 15th August 2023. The abstracts should be submitted in PDF format and should be submitted to the GEOTHAI 2023 Secretariat by 15th August 2023.

Poster sessions

The poster sessions will be held on 15th and 16th August 2023. The poster sessions will be held on 15th and 16th August 2023.

Final and Final Research Presentations

The final and final research presentations will be held on 15th and 16th August 2023. The final and final research presentations will be held on 15th and 16th August 2023.

The abstract, extended abstracts, and posters that will be selected in the following selection process will be published in the GEOTHAI 2023 Proceedings. You can submit them via email to the GEOTHAI 2023 Secretariat.

SUBMITTING MILESTONES

Abstract/Extended Abstract Submission Deadline	August 15, 2023
Poster Submission Deadline	August 15, 2023
Conference Dates	September 15-16, 2023

Geothai2023

PROGRAMME VII

Development of database on geological resources along the Malaysia-Thailand border

TOPIC
Development of database on:

- a. geology
- b. minerals
- c. geosites/fossil sites
- d. Geohazards

Output:
Development of database on geological resources along the Malaysia-Thailand border in webGIS/Gsi platform

Status:

2019
Database Preparation

2020-2022... ongoing
Developed data under the initiative of CCOP (webGIS/ Gsi platform)

- Geological correlate layer/Granite layer
- Fossil and Miscellaneous Layer
- Minerals Layer
- Geological Structures Layer
- Strike and Dip Layer
- Geosites

Malaysia-Thailand Border Joint Geological Survey Portal

CCOP Geoinformation Sharing Infrastructure for East and Southeast Asia (GSI)

The portal displays several layers of geological data:

- Geology Correlation Layer
- Minerals Layer
- Fossil and Miscellaneous Layer
- Geological Structures Layer
- Strike and Dip Layer

PROGRAMME VIII

Working Group Meeting and Committee Meeting

TOPIC

- 35th WG meeting and 19th MT-JGSC meeting – online hosted by Malaysia
- 36th WG meeting in Malaysia
- 37th WG Meeting and 20th MT-JGSC Meeting in Thailand

Output:
Report of the Meeting /work plan/ Technical Reports

Status:

2022

- 35th WG meeting on 9th Aug. 2022 (online) hosted by JMG Malaysia
- 19th MT-JGSC meeting on 13th Aug. 2022 (online) hosted by JMG Malaysia

2023

- 36th WG Meeting on 7th March 2023
- 37th WG Meeting & 20th MT-JGSC Meeting, 21st -25th August 2023 in Satun, Thailand

8. Working Group and Committee meeting

The 35th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting via Video Conference on 9th August 2022 hosted by JMG Malaysia

Chairperson: Mr. Aze mi bin Haji Eki
Co-Chairpersons: Dr. Aporn Sardud

8. Working Group and Committee meeting

The 35th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting via Video Conference on 9th August 2022 hosted by JMG Malaysia

8. Working Group and Committee meeting

The 35th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting via Video Conference on 9th August 2022 hosted by JMG Malaysia

Thai WG in Bangkok
Malaysian WG in Ipoh

8. Working Group and Committee meeting

The 36th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting on 7th March 2023 at Park Avenue Hotel, Sungai Petani, Kedah, Malaysia

8. Working Group and Committee meeting

The 36th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting on 7th March 2023 at Park Avenue Hotel, Sungai Petani, Kedah, Malaysia



8. Working Group and Committee meeting

The 37th Malaysia-Thailand Border Joint Geological Survey Working Group Meeting on 22nd August 2023 at Seesae Resort, Satun, Thailand



8. Working Group and Committee meeting

THE 20th MALAYSIA-THAILAND BORDER JOINT GEOLOGICAL SURVEY COMMITTEE (MT-JGSC) MEETING, 23rd August 2023 at Seesae Resort, Satun, Thailand



Programmes	Year 2022 (2565)	Year 2023 (2566)	Year 2024 (2567)	Year 2025 (2568)	Year 2026 (2569)
1. Geology and mineral resources along Malaysia-Thailand border	Compilation of Malaysia - Thailand metallogenic maps including strategic minerals (REE)			Case study on REE in Malaysia and Thailand	
2. Geo-conservation and Geo-Tourism Activities	Compilation of geological sites potential for geotourism along Malaysia-Thailand border	Geoheritage mapping and geopark development in Malaysia and Thailand			Case study on sustainable development of Geopark and impacts in Malaysia and Thailand
3. Cooperative study and geological research in term of stratigraphy, paleontology, and sedimentology.	Stratigraphic correlation and fossil assemblages between the Timah Tasoh Formation and the Pa Samed Formation.	Stratigraphic correlation and fossil assemblages between the Chuping Formation and the Khao Rub Chang Formation			Granite characteristics along Malaysia-Thailand border
4. Study on geological hazards	Case study on Geological Hazard: Debris Flow			Case study on Geological Hazard: Coastal Erosion	
5. Capacity building	<ul style="list-style-type: none"> Training on Karst Morphology Mapping using LIDAR Technology in Bangkok, Thailand -expert from Malaysia Training on Gemology in Thailand 	<ul style="list-style-type: none"> Training on Remote Sensing in Thailand, online Training on Palynology in Malaysia, online Training on Geoheritage Mapping in Malaysia Training on REE determination in geological samples 	<ul style="list-style-type: none"> Training on Foraminifera in Thailand (Online) Training on Dinosaur in Malaysia – expert from Thailand (September) Training Gemology (practical) in Thailand 	<ul style="list-style-type: none"> Training on REE survey in Thailand (invite 1-2 experts from Malaysia) Training on igneous petrography & petrology hosted by Malaysia (Online) 	
6. Information sharing and outreaching	<ul style="list-style-type: none"> The 7th Asia Pacific Geoparks Network (APGN) Symposium in Satun, Thailand, 4th -11th September 2022 XVII GEOSEA 2022 & 34th National Geoscience Conference in Langkawi, Malaysia, 17th -21st October 2022. 	<ul style="list-style-type: none"> GEOTHAI National Conference (Online), 5th-7th September 2023 National Geoscience Conference in Putrajaya, Malaysia, 7th -10th November 2023 Regional Geoheritage Conference (RGC) in Indonesia (depends on host) 10th GGN Conference in Morocco, 7th-9th September 2023 CCOP Thematic Session in Thailand, 1st November 2023 	Presenting papers at national and international seminars/conferences <ul style="list-style-type: none"> GEOTHAI National Conference National Geoscience Conference in Malaysia 18th GEOSEA 2024 Conference in Khon Kaen, Thailand (20th - 23rd February 2024) 	Presenting papers at national and international seminars/conferences <ul style="list-style-type: none"> GEOTHAI National Conference National Geoscience Conference in Malaysia 	Presenting papers at national and international seminars/conferences <ul style="list-style-type: none"> GEOTHAI National Conference National Geoscience Conference in Malaysia
7. Development of database on geological resources along the Malaysia-Thailand border	Development of database on: a. geology b. minerals c. geosites/fossil sites d. geohazards				
8. Working Group Meeting and Committee Meeting	<ul style="list-style-type: none"> The 34th Working Group Meeting, 24th March 2022, online, hosted by Thailand Joint report editing in Malaysia, 5th -7th July 2022 The 35th Working Group Meeting, 9th August 2022, online, hosted by Malaysia The 19th Committee Meeting, online, hosted by Malaysia 	<ul style="list-style-type: none"> The 36th Working Group Meeting, 6th – 10th March 2023, Sungai Petani, Kedah, Malaysia The 37th Working Group Meeting and the 20th Committee Meeting, 21st – 25th August 2023, in Satun, Thailand 	<ul style="list-style-type: none"> The 38th Working Group Meeting hosted by Thailand (Online), 14th March 2024 Joint report editing online by separating into 2 working groups in May: -Metallogenic map (hosted by Malaysia side, 2nd week of May) -Debris flow (hosted by Thai side, 3rd week of May) The 39th Working Group Meeting in Kangar, Perlis, Malaysia in August 2024. The 21st Committee Meeting in Malaysia 	<ul style="list-style-type: none"> The 40th Working Group Meeting hosted by Malaysia (Online) Joint report editing in Thailand The 41st Working Group Meeting in Thailand The 22nd Committee Meeting in Thailand 	<ul style="list-style-type: none"> The 42nd Working Group Meeting hosted by Thailand (Online) Joint report editing in Malaysia The 43rd Working Group Meeting in Malaysia The 23rd Committee Meeting in Malaysia

CLOSING CEREMONY

CONCLUDING REMARKS

BY

DR. ABDULLAH BIN SULAIMAN

DIRECTOR,

PLANNING AND MANAGEMENT SECTION,

DEPARTMENT OF MINERAL AND GEOSCIENCE MALAYSIA

HEAD OF THE MALAYSIAN DELEGATION

AT THE CLOSING CEREMONY

OF THE 20th MALAYSIA-THAILAND BORDER

JOINT GEOLOGICAL SURVEY COMMITTEE MEETING

Wednesday, 23rd August, 2023

Seesea Resort, Langu, Satun Province, Thailand

- **The Honorable Dr. Oranuj Lorphensri,**
Director General, DMR Thailand
- Senior officers of both Department of Mineral Resources Thailand (DMR) and Department of Mineral and Geoscience Malaysia (JMG), and
- All Malaysia-Thailand Border Joint Geological Survey Committee Members

Distinguished guests, ladies and gentlemen,

السَّلَامُ عَلَيْكُمْ وَرَحْمَةُ اللَّهِ

to all the Muslim participants and a very good evening to all of you.

I am indeed honoured and delighted to have the opportunity to wrap up and to say a few words at the closing ceremony of the 20th Malaysia-Thailand Border Joint Geological Survey Committee Meeting held in Seesea Resort, Thailand in this beautiful Langu District, Satun Province, Thailand. Our meeting today has provided us an invaluable platform for very fruitful discussions and exchange of ideas among geoscientists from both countries. Besides that, we also have a productive meeting and presentations.

Presentations from both sides revealed that both the Malaysian and Thai Working Groups have conducted excellent fieldwork and report writing with strong mental and physical stamina. All geological information documented in the presentations and joint reports today will be very useful for geological professionals, not only for both countries but also for the geological fraternity around the world. The excellent relationship between our geoscientists will eventually lead to fruitful outcome for all our activities in the future.

I am indeed very impressed to note that both Malaysian and Thai Working Groups have conducted their scientific studies professionally and in a systematic manner, and so far, have managed to resolve issues on geological and stratigraphical correlation as well as geoheritages and geohazards aspects especially along the Malaysia-Thailand border area.

Distinguished guests, ladies and gentlemen,

The second objective of the Malaysia-Thailand joint project as outlined in the Terms of Reference (TOR) is to promote the use of minerals and geoscience information for economic development and the betterment of the people especially those living in the Malaysia-Thailand border area. We are now expanding our joint cooperation, not limited in the areas along the Malaysia-Thailand border. We are working closely in the field of geoheritage and geohazards in both countries. I do hope we can strengthen our good cooperation in the field of minerals and geoscience in the future.

Distinguished guests, ladies and gentlemen,

The 21st MT-JGSC meeting is scheduled to be held in Malaysia next year. Therefore, on behalf of the Malaysian Government, I have the pleasure to cordially invite all of you in advance to attend the meeting that will be held in Kangar, Perlis from to August 2024.

Finally, I would like to thank the Department of Mineral Resources Thailand once again for successfully organizing this meeting and for all the kind support you have provided us before, during and after the meeting. We look

forward to seeing all of you again at the 21st MT-JGSC Meeting which will be hosted by Malaysia next year.

TERIMA KASIH, KHOB KHUN KRAB AND THANK YOU VERY MUCH.

Closing Remarks

BY DR. ORANUJ LORPHENSRI

Director General of DMR, Head of Thai Delegation

20th MT-JGSC Meeting

Wednesday, 23rd August 2023, 16.30 hrs

SEA2 Meeting Room, Seesea Resort, Satun, Thailand

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- **Mr. Abdullah bin Sulaiman** (อับดุลลา บิน สุไลมาน)
Director, Planning and Management, Department of Mineral and Geoscience Malaysia (JMG)
 - **Mr. Suvapak Imsamut** (สุวภาคย์ อิ่มสมุทร)
Deputy Director General, Department of Mineral Resources (DMR)
 - **Mr. Suwith Kosuwan** (สุวิทย์ โคสุวรรณ)
Senior Expert on Mineral Resource Management, DMR
 - **Ms. Apsorn Sardsud** (อัปสร สอาดสุด)
Director of Geological Survey Division, DMR
 - **Mr. Mat Niza bin Abdul Rahman**, (มัท นิสา อับดุล รามัน)
Deputy Director (Geoscience), JMG Perak State, Head of Malaysian Working Group Leader
 - **Mr. Farid bin Zainudin** (ฟาริด บิน ไชนูดิน)
Senior Assistant Director, JMG Perak State
 - **Assoc.Prof Dr. Meor Hakif bin Amir Hassan** (เหมี่ยว ฮากิฟ บิน อะแม ฮัสซัน)
Associate Professor, Department of Geology, University of Malaya (UM)

➤ **All Malaysia-Thailand Border Joint Geological Survey
Committee and Working Group Members**

➤ **Distinguished Delegates, Ladies and Gentlemen,**

I commend the outstanding efforts of the Working Group, led by Mr. Mat Niza bin Abdul Rahman and Dr. Doungrutai Saesaengseerung, during the 37th Malaysia-Thailand Border Joint Geological Survey Working Group meeting on August 22, 2023.

Distinguishe attendees,

I'm truly impressed by the professional and systematic geoscience studies conducted by the Working Group. Their dedication has led to the resolution of numerous geological, stratigraphic, mineral, geo-tourism, geopark, and geohazard issues that directly impact both countries' populations. Your diligent work in maintaining a friendly atmosphere is greatly appreciated. Let's continue fostering this excellent working relationship.

Esteemed attendees,

I value the strong friendship demonstrated here. Even though this is my first time joining the Project Meeting, I'm deeply moved by the hard work of the Malaysian-Thailand Project Working Group and Committee members. Your close cooperation has been evident.

Ladies and gentlemen, please note that Khun Suwith Kosuwan, Senior Expert on Mineral Resource Management at DMR, will retire at the end of this month.

On behalf of the Malaysia-Thailand Border Joint Geological Survey Committee and Working Group, I extend my warm gratitude for your contributions to the Malaysia-Thailand Geological Cooperation project. Your work has strengthened our enduring friendship over the past decade. Let's give a resounding applause to Khun Suwith Kosuwan.

Dear attendees,

I'd like to use this moment to sincerely thank all my colleagues from JMG for your dedicated cooperation and insightful discussions on the project's technical advancements. Let's applaud them together to show our appreciation.

In closing, I wish everyone good health, happiness, and success. We eagerly anticipate your presence at the next Committee Meeting in 2024, hosted by Malaysia.

• **Terima kasih (ทศริมา กาเซ), Thank you, ขอบคุณค่ะ**