



REPUBLIC OF THE UNION OF MYANMAR
MINISTRY OF NATURAL RESOURCES AND ENVIRONMENTAL CONSERVATION
DEPARTMENT OF GEOLOGICAL SURVEY AND MINERAL EXPLORATION



Workshop on Deep Seabed Resources and the Blue Economy for ASEAN & BIMSTEC Countries

Strengthening National Capacities for Coastal and Seabed Mineral Development- Myanmar's Experiences

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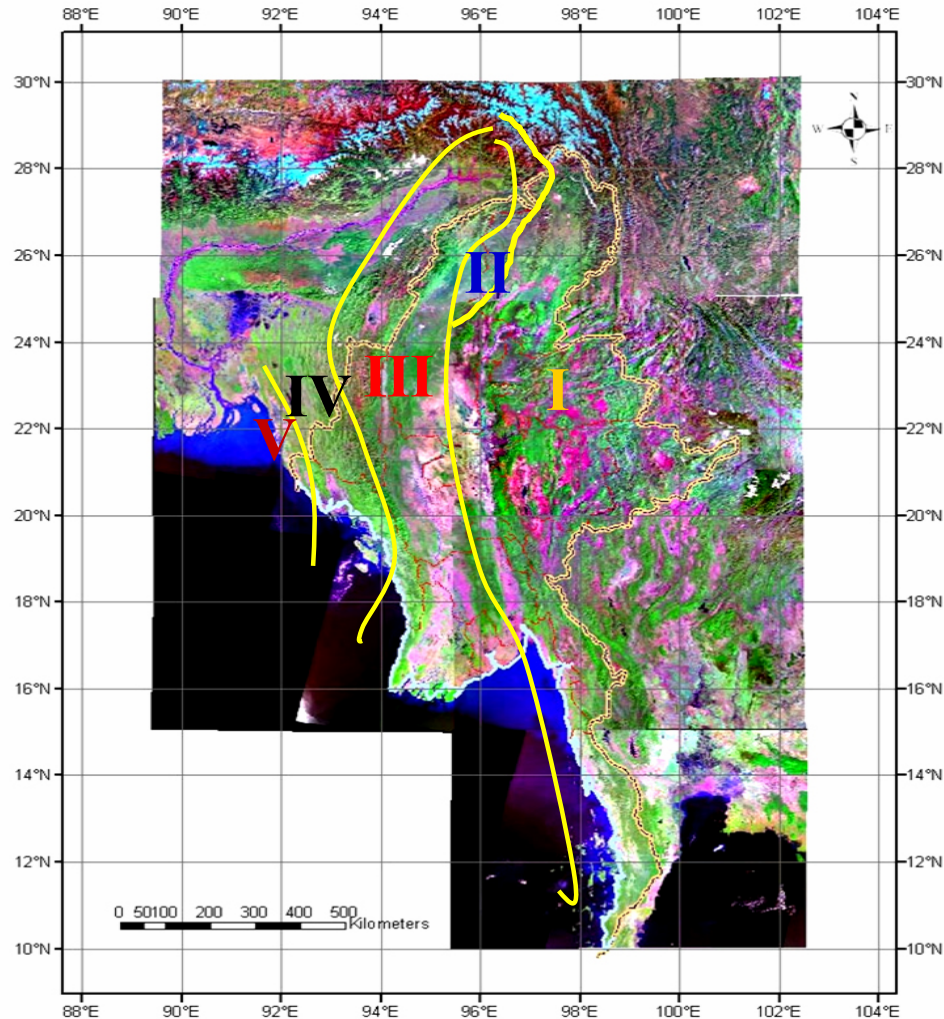
Department of Geological Survey and Mineral Exploration

Ministry of Natural Resources and Environmental Conservation

Introduction	Geology & Mineral Resources of Myanmar	Mineral Occurrences of Coastal and Islands	Cooperation	Conclusion
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- Myanmar has relatively rich in mineral resources compare to its country size and possesses long geological history.
- For future mineral resource management in Myanmar, it is necessary to study not only in land but also along the coastal and in seabed which is important for future reserve of national mineral resources.
- **The DGSE, MONREC** has few experience on seabed mineral exploration which needs the advanced techniques, technical knowhow and knowledge.
- We will try to implement the data collection for potential of seabed mineralization with international organization in the near future!

MORPHO - TECTONIC BELTS OF MYANMAR



From East to West

- I. The Eastern Highlands**
- II. Upper Irrawady Province (Tagaung- Myitkyina Belt)**
- III. The Central Lowlands**
- IV. The Western Ranges**
- V. The Arakan Coastal Belt**

Introduction

Geology & Mineral Resources of Myanmar

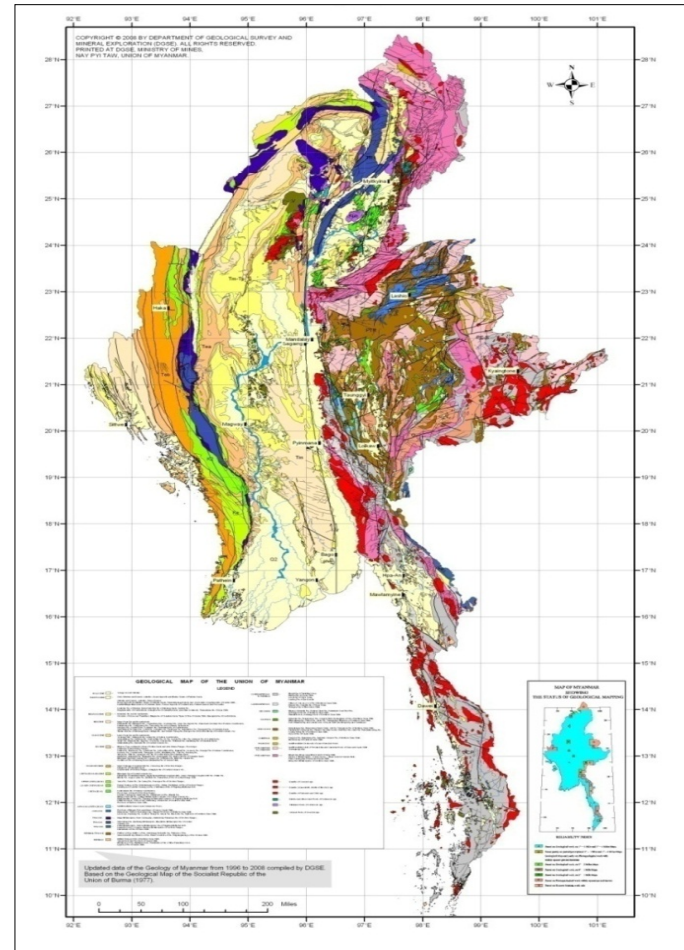
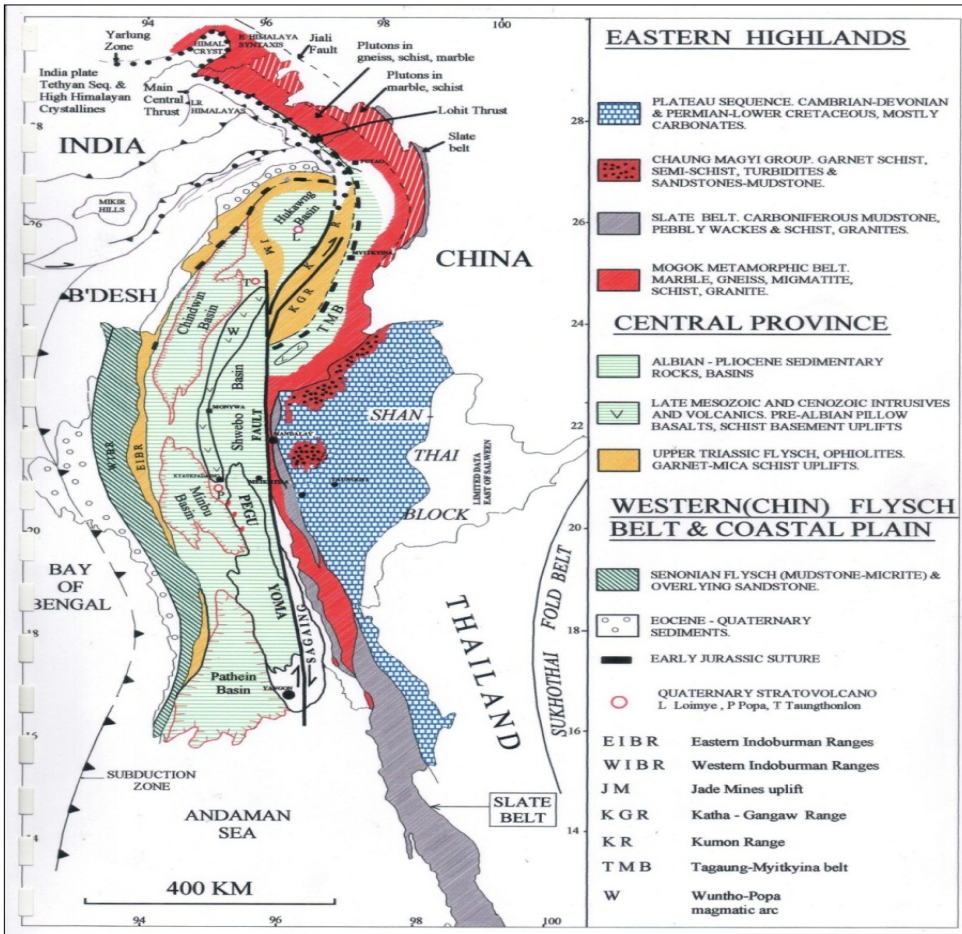
Mineral Occurrences of Costal and Islands

Cooperation

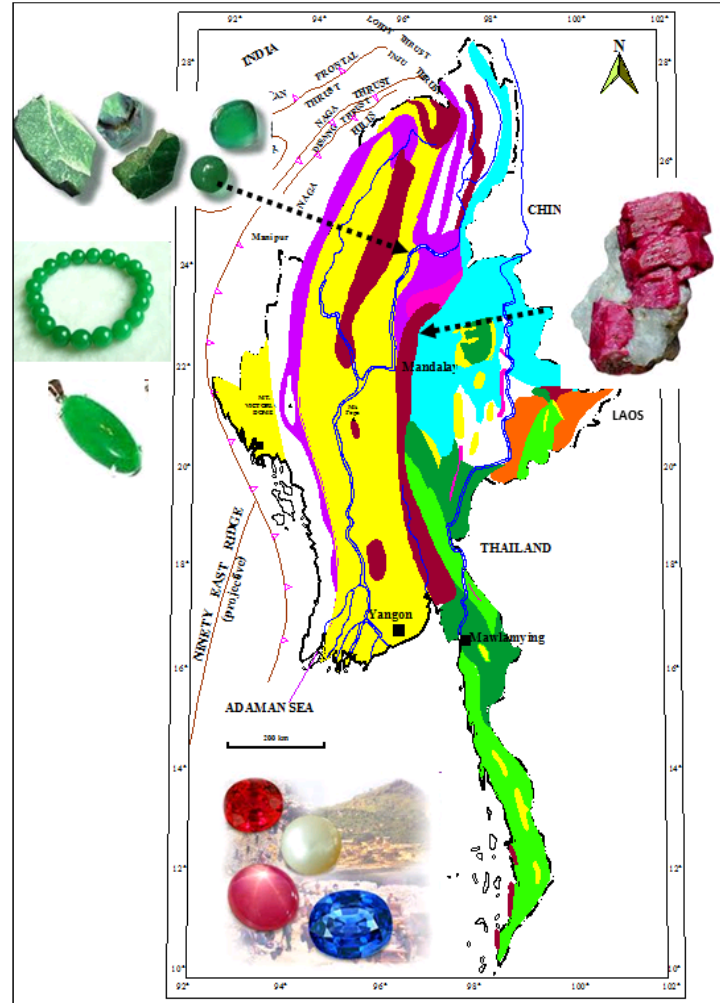
Conclusion

THE PRINCIPAL GEOLOGICAL FEATURES OF MYANMAR

GEOLOGICAL MAP OF MYANMAR (2008)



MINERAL BELTS OF MYANMAR

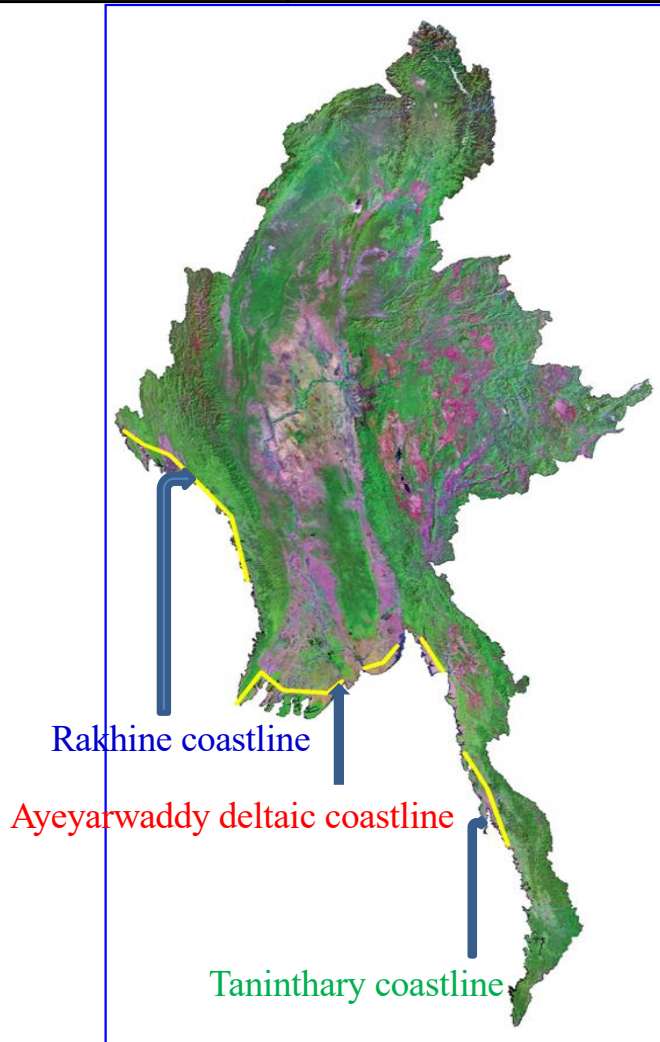


INDEX

- Tin- Tungsten Belt
- Antimony Belt
- Lead – Zinc – Silver-
Copper Belt
- Gold- Copper- Iron Belt
- Nickel- Chromite- Iron-Copper-
Gold- Platinum & Jade Belt
- Iron – Manganese Belt
- Oil- Gas and Coal Belt
- The Precious Stone Belt

STATUS OF RESOURCES

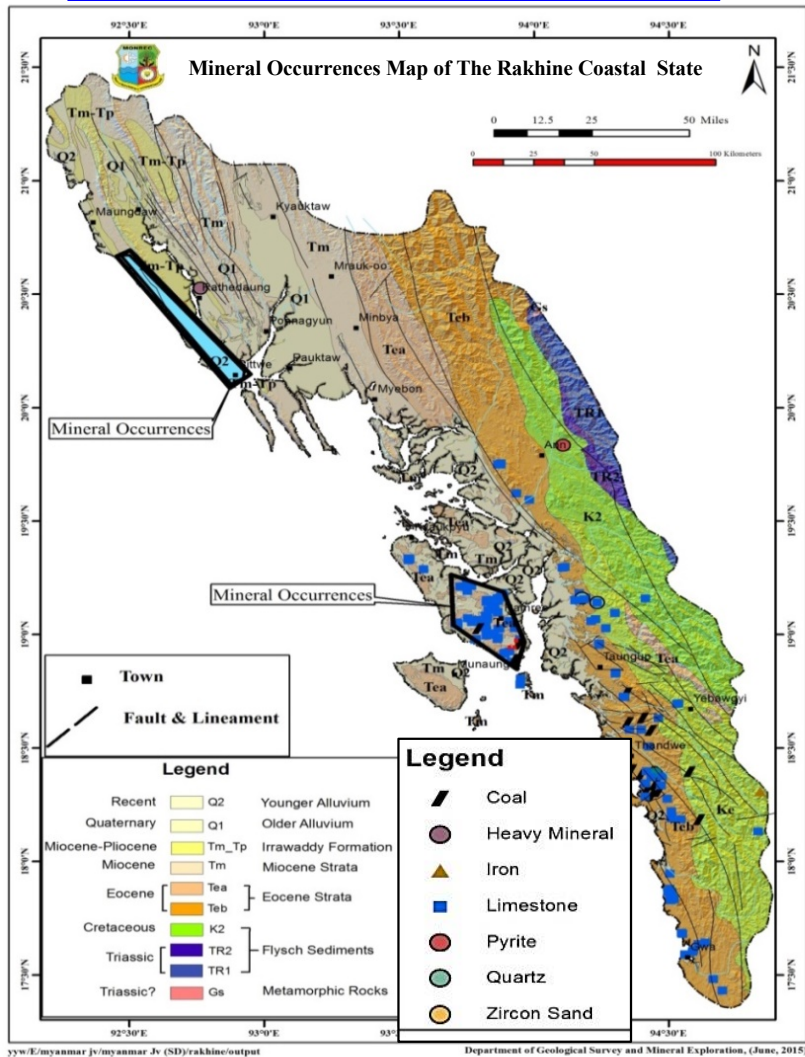
General Category	Minerals
Very Rich	Jade, Ruby, Sapphire, Limestone
Rich	Cu, Pb, Zn, Sn, WO ₃ , Au, Coal, Barite
Fairly Rich	Sb, Ag, Ni, Gypsum, Oil & gas
Poor	Cr, Mn, PGM, Radioactive Minerals, Diamond, Fertilizer Minerals, Fluorite, Bauxite, Mercury, Kaolin, Feldspar, Quartz, Bentonite, Mica



Myanmar coastal area is divided into three parts.

1. Rakhine coastal area
2. Ayeyarwady deltaic coastal area
3. Tanintharyi coastal area.

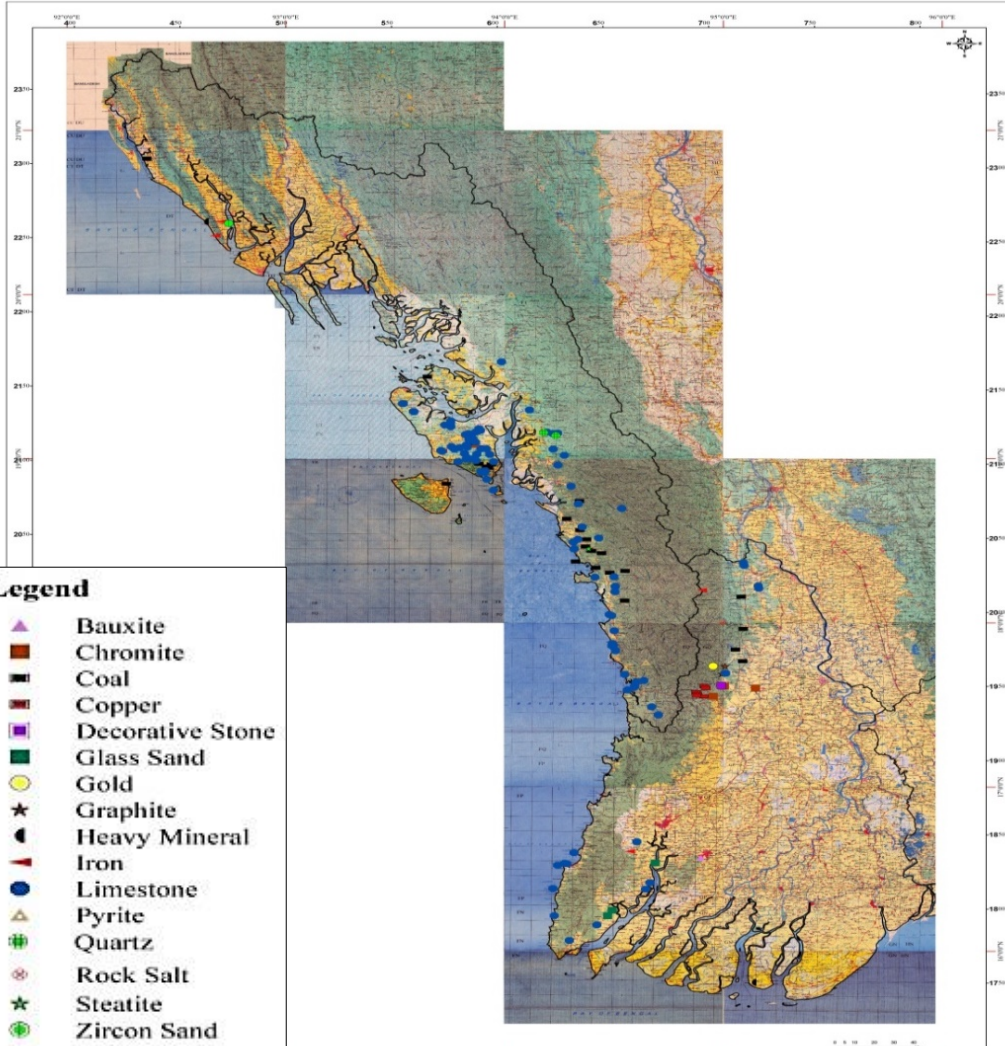
The total length of coastline is **2216 km**.



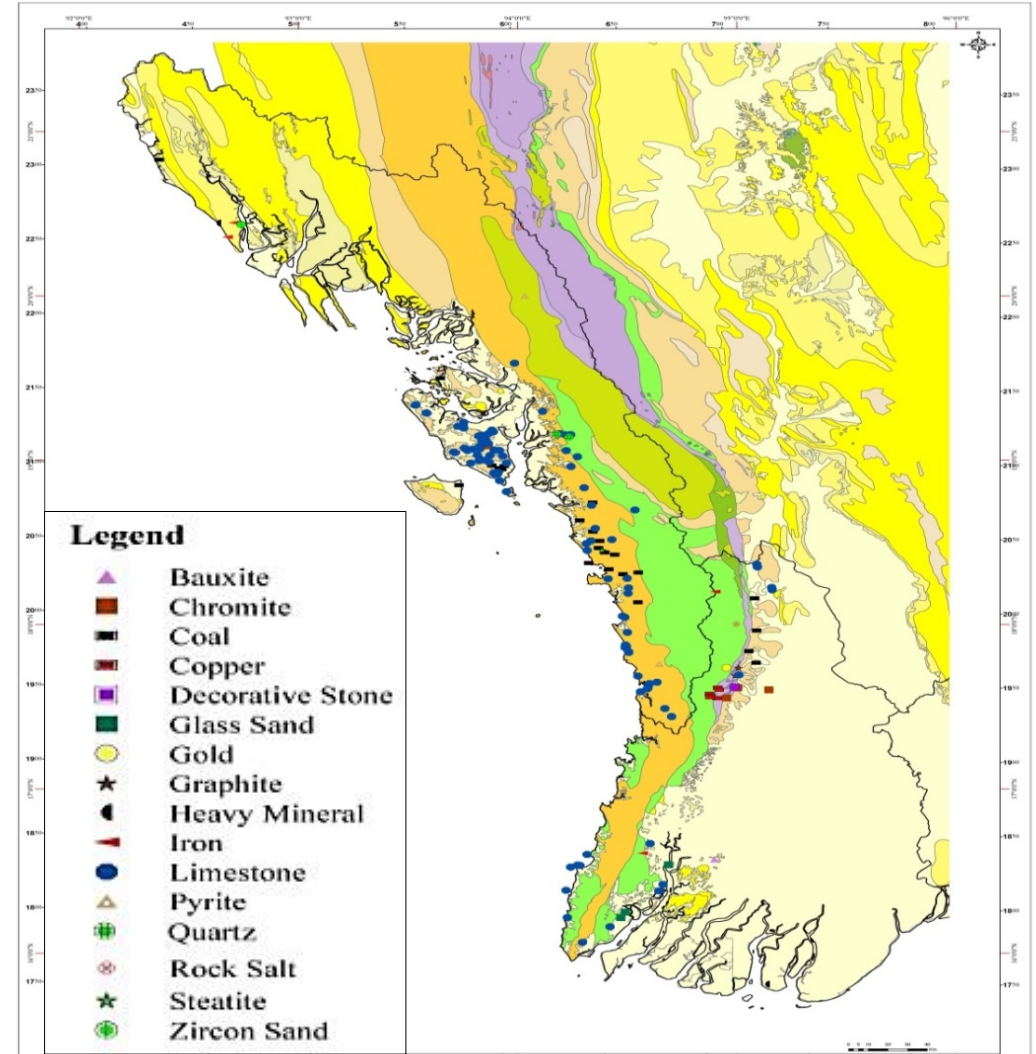
RAKHINE COASTAL AREA

- ❖ Rakhine coastline include Morphotectonic unit of Rakhine coastal belt.
- ❖ The length of coastline - 443 mile (708.8 km)
- ❖ Locally overthrust Miocene folded
- ❖ Sediments with mud volcanoes and locally **exotic Limestone**
- ❖ High potential of oil and gas.

MINERAL OCCURRENCE MAPS OF RAKHINE STATE AND AYEYARWADDY REGION



MINERAL OCCURRENCE MAPS OF RAKHINE STATE AND AYEYARWADDY REGION



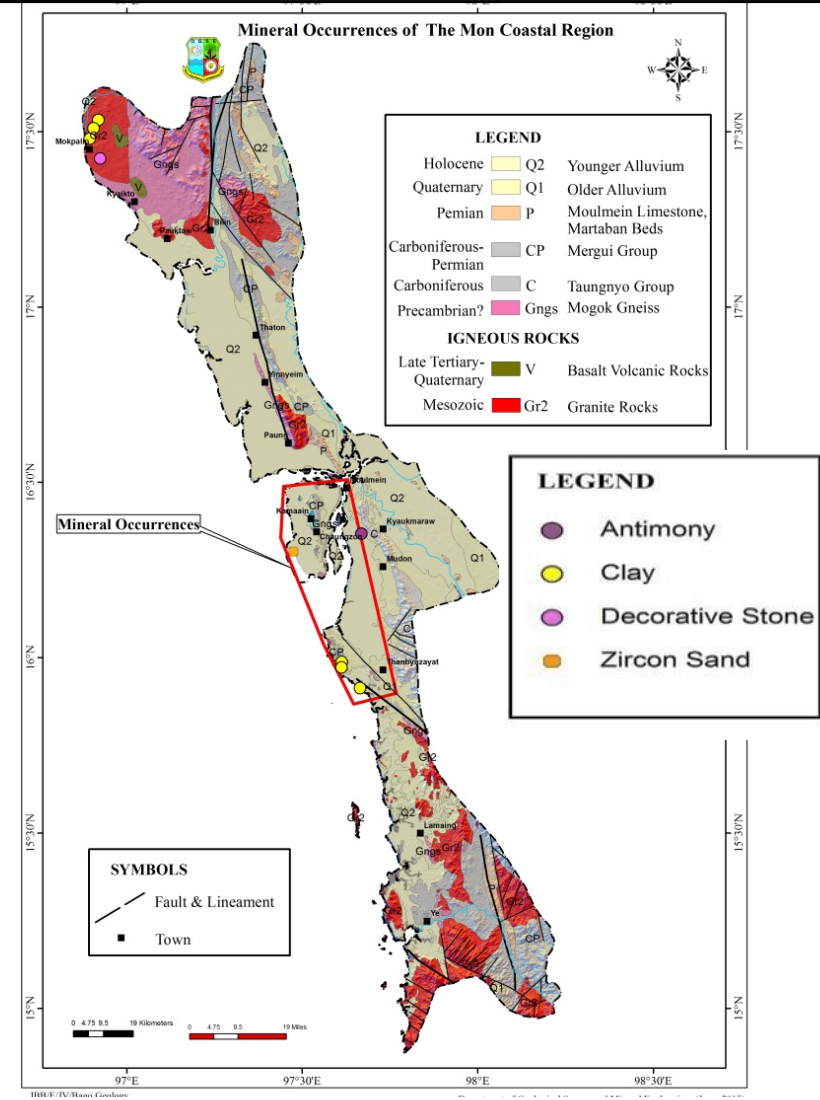
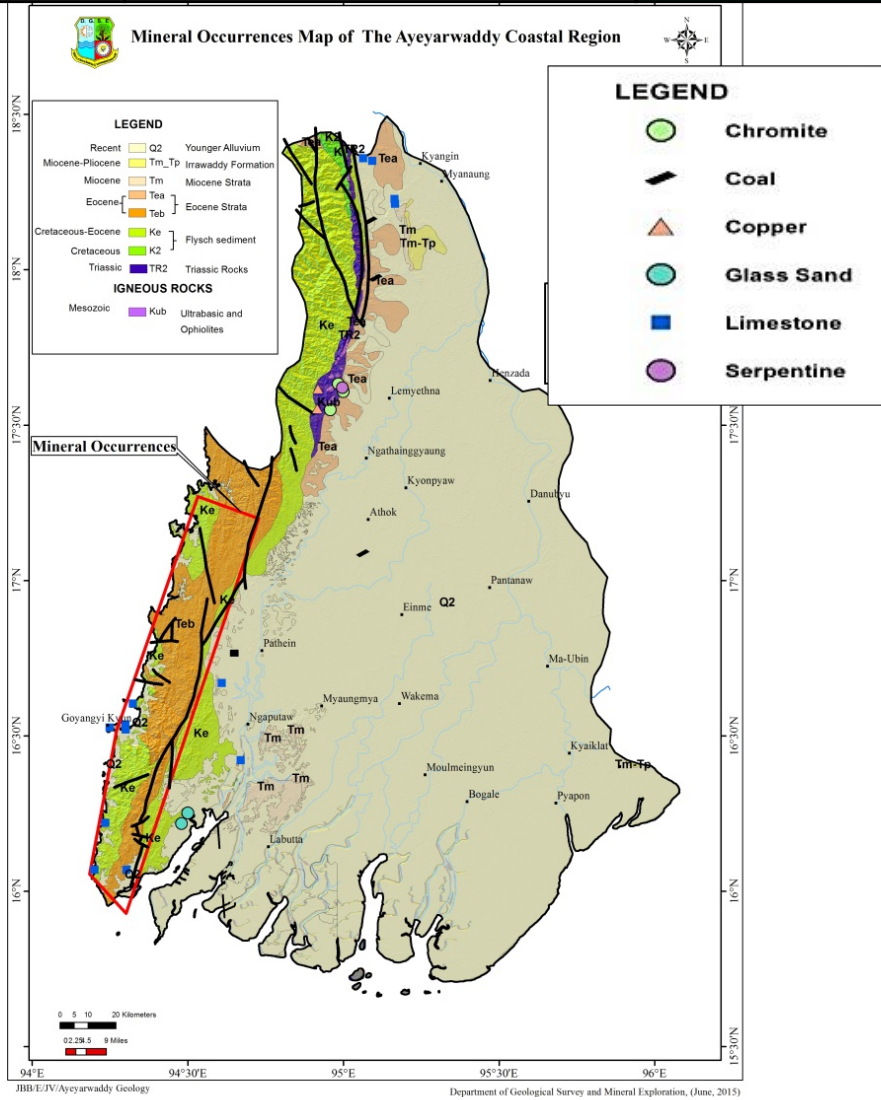
Introduction

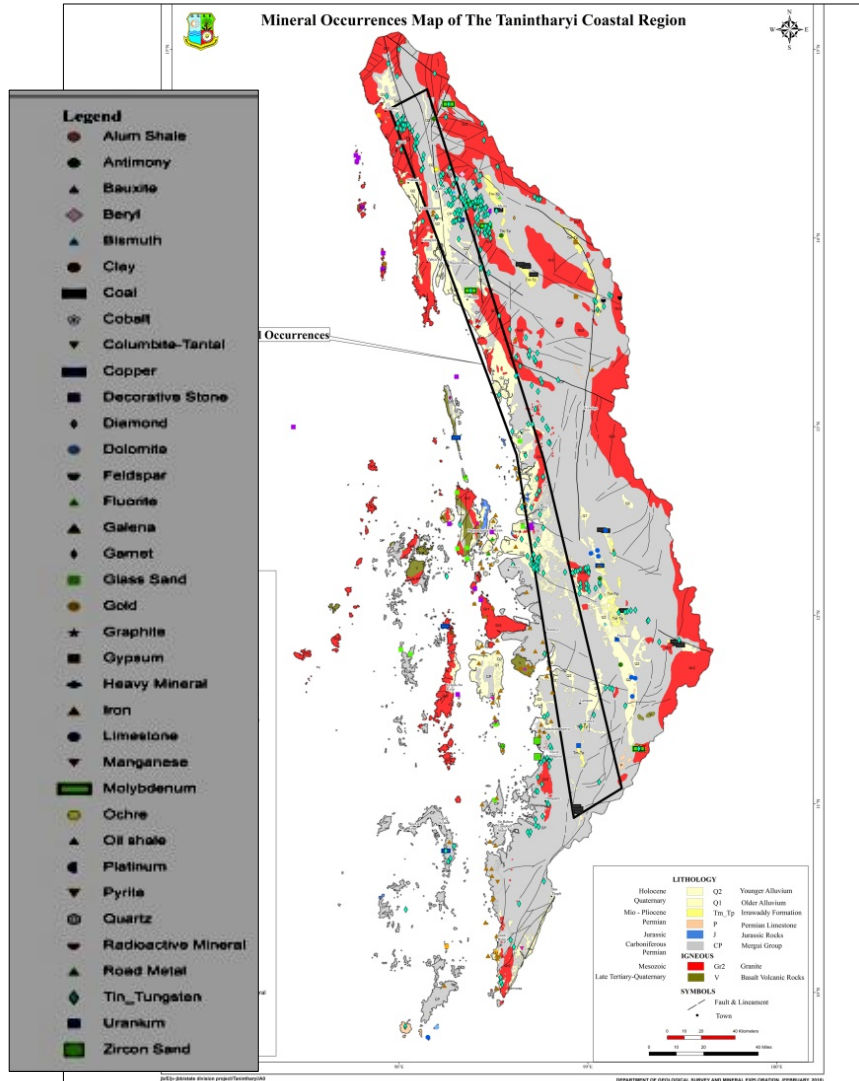
Geology & Mineral Resources of Myanmar

Mineral Occurrences of Coastal and Islands

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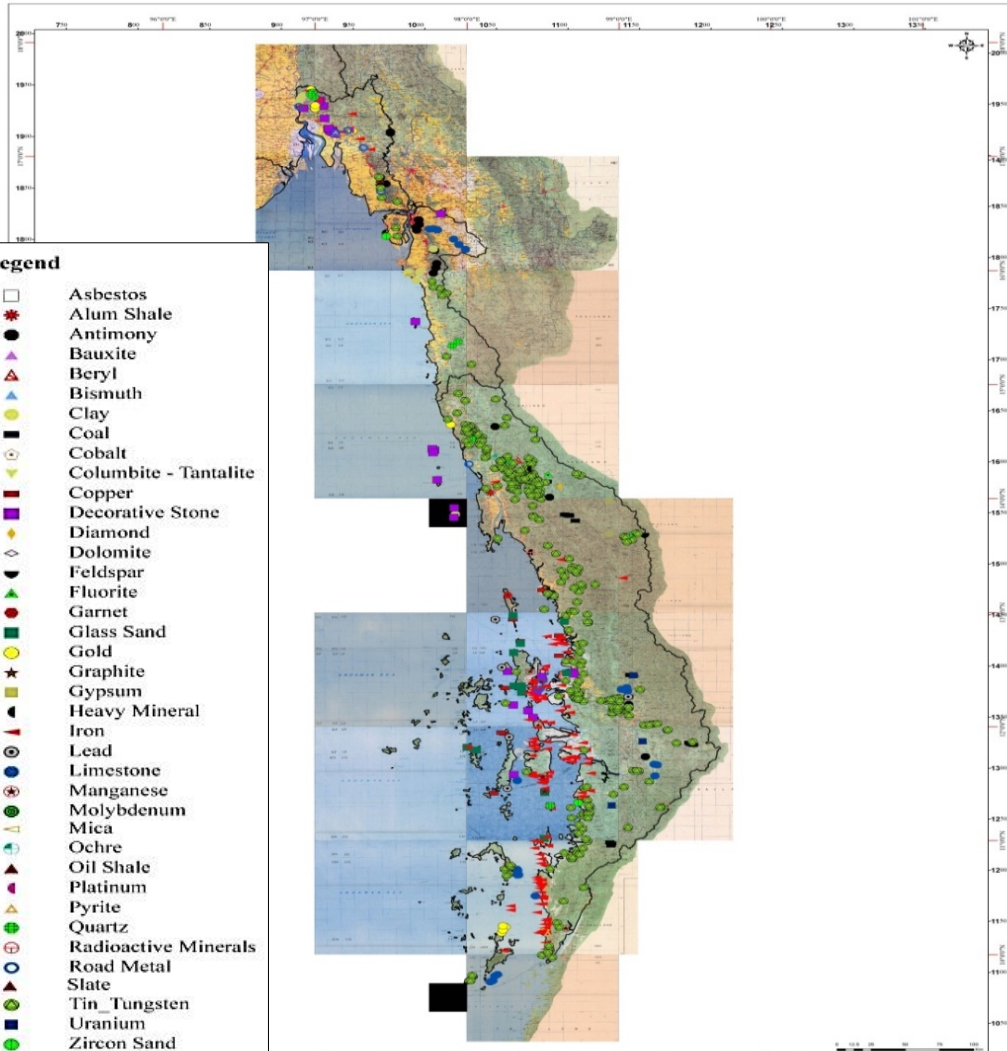




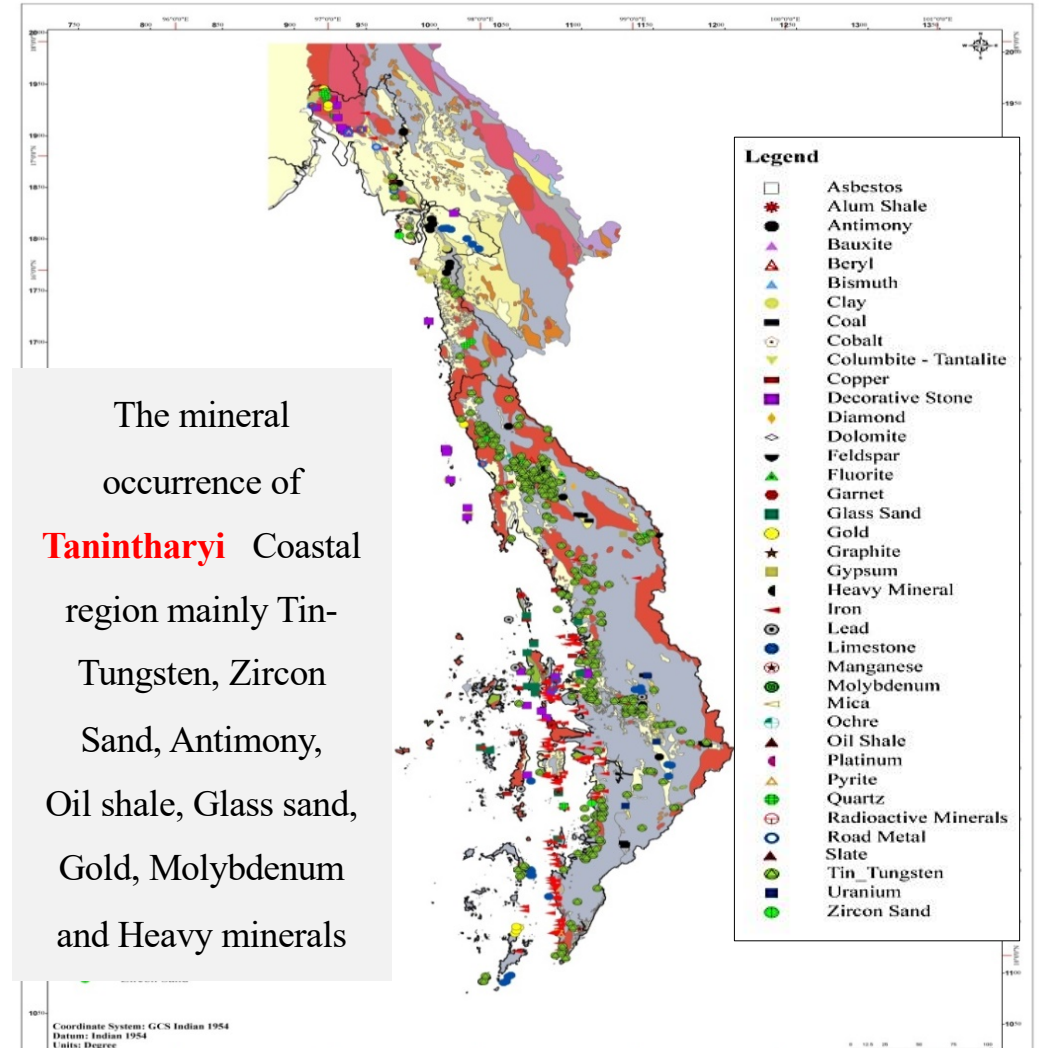
Mineral Resource in Coastal area

- Exploration of Tin and Tungsten in offshore of Tanintharyi Coastal area from 1978 to 1986 .
- Production of Tin and Tungsten in island of Tanintharyi Coastal area.
- Production of salt in Ayeyarwaddy delta, Coastal area.

MINERAL OCCURRENCE MAPS OF MON STATE AND TANINTHARYI REGION

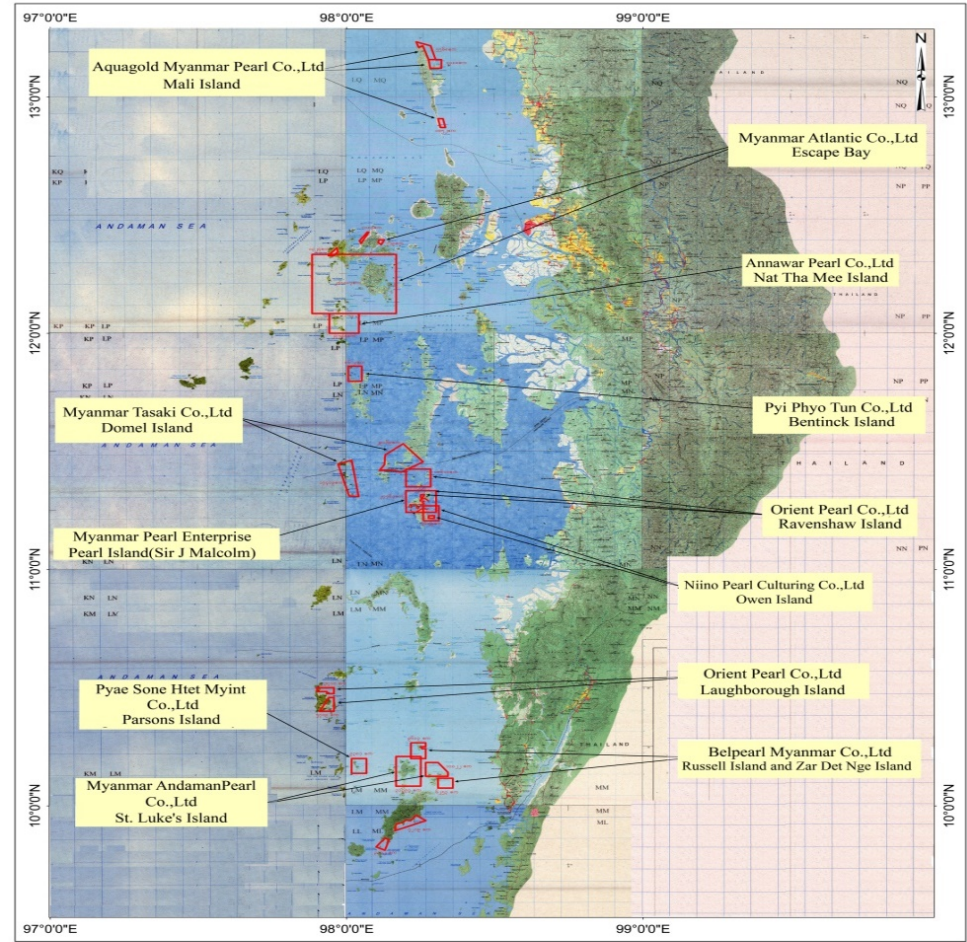


MINERAL OCCURRENCE MAPS OF MON STATE AND TANINTHARYI REGION



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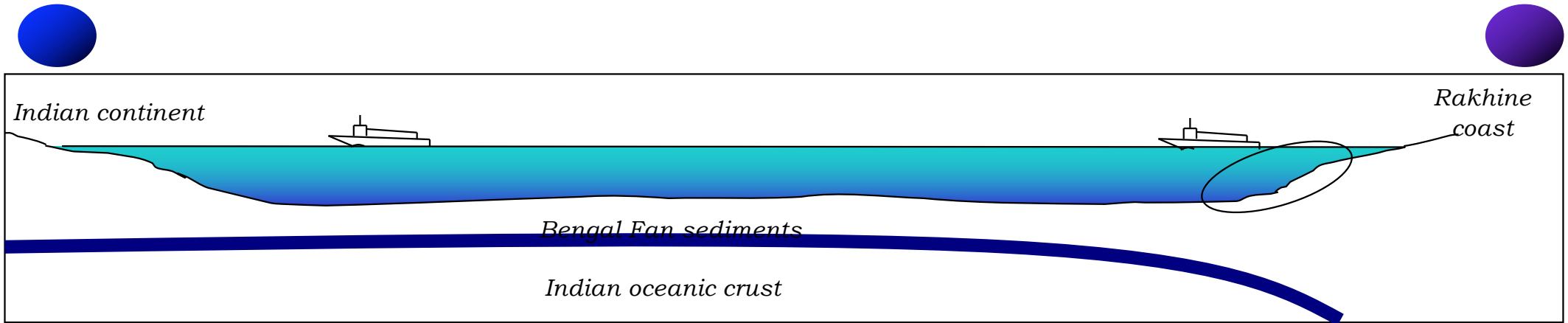
**MYANMAR PEARL ENTERPRISE
LOCATION MAP OF PEARL COMPANY BLOCKS**



Coordinate System: GCS MMD2000
Datum: Everest Adj 1937
Units: Degree



➤ **Myanmar Pearl Enterprise**
Location Map of Pearl
Company Blocks



- Research Works and Collaborations
 - ❖ Geology of the Rakhine continental shelf
 - ❖ Sedimentology of the Bengal delta and submarine fan
 - ❖ Tectonic evolution of the Rakhine accretionary wedge
 - ❖ Tectonic evolution of the Bay of Bengal & India Ocean
 - ❖ Training and workshop on Marine Geology by CCOP, China (Coordinating Committee for Geosciences Programmers in East and Southeast Asia)
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Relationship of International Geosciences Research

- 1. CCOP (Coordinating Committee for Geosciences Programmers in East and Southeast Asia)**
- 2. Cooperation with China Geological Survey (CGS)**
3. KIGAM (Korea Institute of Geoscience and Mineral Resources)
4. Cooperation with JOGMEC (Japan Oil, Gas and Metal Corporation)
5. Department of Mineral Resource (DMR), Thailand
6. Geological Survey of Japan (GSJ-AIST)
7. Japan International Corporation Agency (JICA)

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- ❖ Myanmar is endowed with a variety of minerals and completed long geological history of **Precambrian to Tertiary age**.
- ❖ The MONREC, **DGSE** would like to invite the cooperation with international Geosciences Organizations for **seabed mineral exploration** which needs the advanced techniques, technical knowhow and knowledge.
- ❖ Survey and Exploration of possible occurrence on Mn, Co, Cu, and Ni nodules and REE in seabed of Myanmar.
- ❖ Survey on potential of seabed mineralization with international organization in the near future will provide the future reserve for mineral resource management and sustainable development in mining sector of Myanmar.

THANK YOU FOR YOUR ATTENTION!