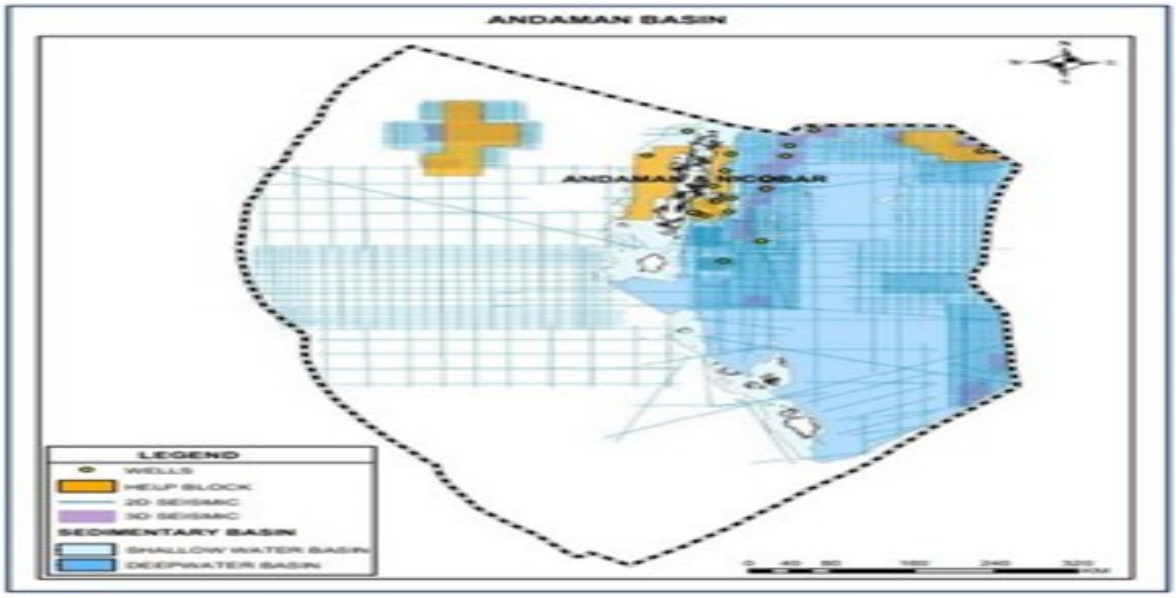
Prospect of Energy Exploration at Andaman

***Mains syllabus**: GS-III- Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment. Infrastructure: Energy, Ports, Roads, Airports, Railways etc.*

Why in news?

Recently the Union Minister for Petroleum Hardeep Singh Puri said that it is a “matter of time” before a Guyana-like oil basin is discovered in the Andaman Sea.

Why is Andaman Nicobar basin significant for oil exploration?



- **Gas and Condensate Availability** - The region is a string of gas and condensate discoveries in the adjacent basins along North Sumatra (Indonesia) and Irrawaddy-Margui (Myanmar).
- **Hydrocarbon Reserves** – The region has Excellent potential for large hydrocarbon accumulations.
- **Unexplored Regions** - The Andaman Basin, comprised of a major chunk of unapprised (unexplored)area of the offshore sedimentary basins of India.
- **Presence of Oil and Gas** - mud volcanoes bearing indications of the presence of oil and gas from the outcrops of the Baratang formations of the Middle and South Andaman.

Andaman and Nicobar Islands
• **Formation** - Andaman and Nicobar Islands were formed due to collision between Indian Plate and Burma Minor Plate • **Three main islands** - The Andaman Islands are divided into three main islands i.e. North, Middle, and South. • **Ten Degree Channel** - The Great Andaman group of islands in the north is separated by the Ten Degree Channel from the Nicobar group • **Duncan passage** – It separates Little Andaman from South Andaman.

What aids the exploration of the survey?

- **Deep Andaman Offshore Survey** – The Andaman Basin, measuring 2.25 lakh square kilometre comprised of a major chunk of sedimentary basins of India.
- **National Data Repository in 2023** – It is an integrated data repository of Exploration & Production data of the Indian sedimentary basins.
- **Hydrocarbon Exploration and Licensing Policy (HELP)** –This policy provided the real fillip in intensifying investment and exploration activity in the basin.
- **Open Acreages Licensing Policy (OALP)** – Through this Oil companies can select blocks of their choice.
- **Uniform Licensing Network** – The HELP covers all hydrocarbons (i.e. Conventional and Unconventional hydrocarbons) under a single licensing framework.

What are the challenges involved in exploration?

- **Higher Investments -** The inter-connected production and processing sites are more expensive to build than onshore shale.
- **Price fluctuation** - Fluctuating prices of oil might contribute unfavourably to the ambitions in the Andaman Nicobar basin.
- **Delay in commercialization** - After exploring a basin commercial production take several years to successfully happen.
- **Operational costs -** Offshore oil and natural gas production is much more expensive than onshore, or land-based productions.
- **Lack of data** -The report by the Standing Committee on Petroleum and Natural Gas reveal the data about the wells in the basin was scanty with data coverage being moderate to sparse.
- **'No-Go' zone** -The area was not thoroughly explored because most was barred from drilling and production is banned.

What lies ahead?

- The change in approach, alongside a bigger Guyana-like discovery could help Indian economy scale up from being a $5-7 trillion economy to a $20 trillion economy.
- It is of immense importance to explore new energy options to ensure energy security of India.

Reference

The Hindu| Energy exploration in Andaman