

Prelim Bits 19-11-2021 | UPSC Daily Current Affairs

Tight Oil

Cairn Oil & Gas has partnered with US-based Halliburton to start shale exploration in the Lower Barmer Hill formation, Western Rajasthan.

- Tight oil (also known as shale oil, shale-hosted oil or light tight oil) is **light-gravity crude oil** found in petroleum-bearing shale or tight sandstone formations of low permeability.
 - Tight oil is different from oil shale, which contains kerogen.
- Tight oil is found in **smaller batches**, and **deeper** than conventional crude deposits.
- Its extraction requires creation of fractures in oil and gas rich shale to release hydrocarbons through a process called **hydraulic fracking**.
 - Hydraulic fracking requires massive amount of water.
 - As the shale fluid from fracking may penetrate aquifers leading to methane poisoning of groundwater, the groundwater in the areas adjacent to shale production sites would be contaminated.
- Also, the construction of horizontal wells with multi-fracturing completions is one of the most effective methods for recovering tight oil.
- Tight oil is processed into gasoline, diesel, and jet fuels.
- To know more about shale gas and its extraction, [click here](#).

Russia and the US are among the largest shale oil producers of the world, with a surge in shale oil production in the US having turned the country from an importer of crude to a net exporter in 2019.

Prospects of shale oil exploration in India

- Currently, there is no large-scale commercial production of shale oil and gas in India.
- In 2013, state-owned ONGC had started exploration and, by the end of FY21, ONGC's assessment found prospects of shale oil at the Cambay basin (Gujarat) and the Krishna Godavari basin (Andhra Pradesh).
- But, the quantity of oil flow observed in these basins did not indicate 'commerciality'.

Reference

1. <https://indianexpress.com/article/explained/shale-oil-exploration-potential-explained-7630082/>
2. <https://www.britannica.com/topic/tight-oil>
3. <https://www.ucsusa.org/resources/what-tight-oil>

Supreme Court on RERA Act 2016

The Supreme Court (SC) upheld the jurisdiction of the Real Estate (Regulation & Development) Act, 2016, or RERA, in two different matters.

- **Aimed at protecting homebuyers**, the court
 1. Brings a major relief for the homebuyers,
 2. Speeds up the resolution process, and
 3. Makes it difficult for state governments to dilute the law's intent.
- The Supreme Court affirmed that the RERA Act, 2016 is **retroactive** in character.
- It said that RERA Act is applicable to projects that were ongoing and for whom completion certificates weren't obtained at the time of enactment of law, in effect interpreting that the law.
- The Act will also apply after getting the ongoing projects and future projects registered under Section 3 to prospectively follow the mandate of the Act.
- However, the projects already completed or to which the completion certificate has been granted prior to enactment of RERA aren't affected in any manner covered by the law.
- **Genuine Appeals** - The real estate developers must deposit at least 30% or the full amount of the penalty (as the case may be) ordered by the regulator, before they challenge any RERA order under Section 43(5).
- This is expected to ensure that only genuine appeals are filed and homebuyers' interests are protected.
- **Recovering the homebuyers' investment** - This comes under Section 40(1) of the Act.
- The court has ruled against the contention of the builders that under Section 40(1), homebuyers are only entitled to recover interest or penalty as arrears of land.
- It said that the amount invested by the allottees, with interest as quantified by the regulatory authority or adjudicating officer becomes recoverable (by law) as arrears of land revenue from the builders.
- To know more about the RERA Act, [click here](#).

Reference

1. <https://indianexpress.com/article/explained/how-sc-verdict-on-real-estate-act-benefits-homebuyers-7630185/>
2. https://www.business-standard.com/article/current-affairs/sc-verdict-to-protect-homebuyers-make-realtors-toe-the-line-121111801298_1.html

BRICS Innovation Action 2021-24

The BRICS Innovation Action 2021-24, which has been prepared in India's leadership, was agreed by all BRICS countries at the 13th BRICS S&T Committee Meeting hosted by India.

- The Innovation Action plan would be one key deliverable of the upcoming BRICS S&T and Innovation Ministerial, which is to be hosted by Department of Science and Technology (DST), India.
 - The Ministerial comprises of Ministers for Science, Technology, And Innovation in Brazil, Russia, India, China, and South Africa.
- The Action plan will provide an overarching vision and advice on institutional and financial frameworks for major BRICS S&T and innovation programmes and initiatives.

Reference

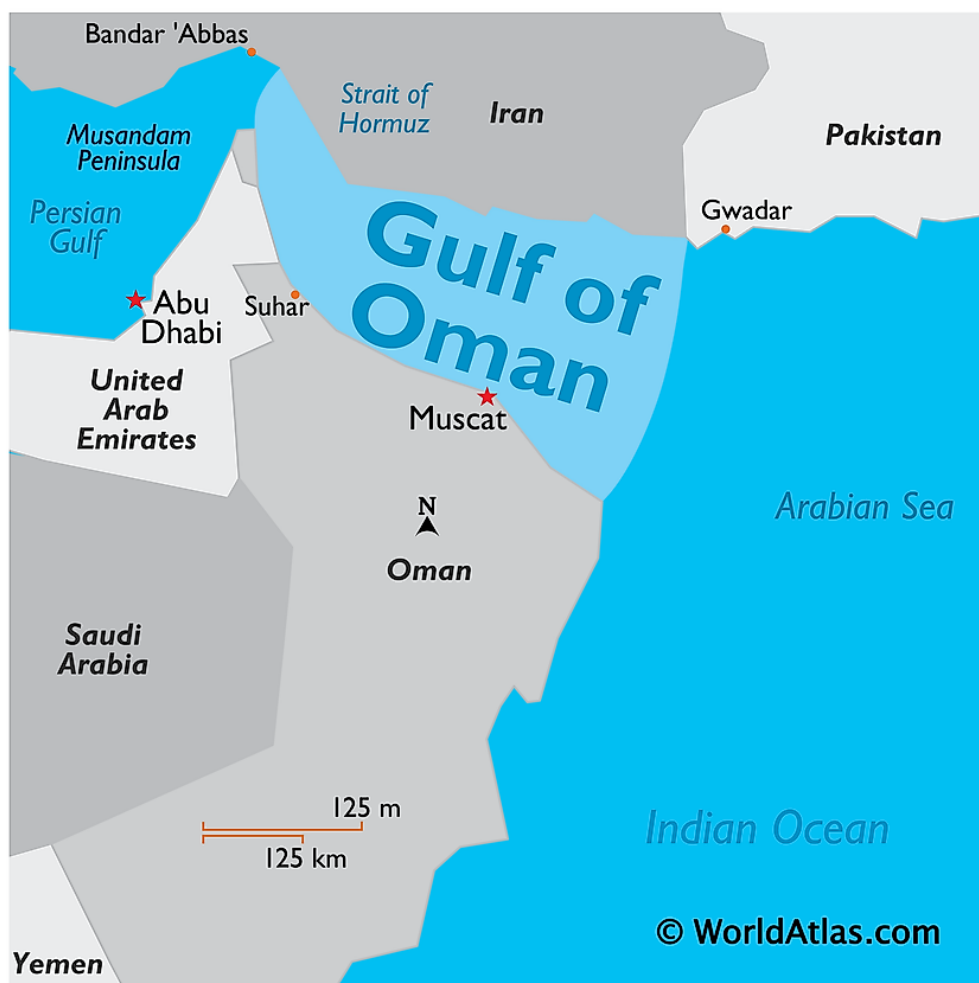
1. <https://pib.gov.in/PressReleasePage.aspx?PRID=1772968>
2. <https://dst.gov.in/brics-innovation-action-2021-24-prepared-indias-leadership-agreed-all-concerned-countries-key>
3. https://www.business-standard.com/article/international/nations-agree-to-prepare-brics-innovation-action-2021-24-12301298_1.html

Operation Sankalp

As part of Operation Sankalp, INS Trikand is currently deployed by the Indian Navy in the Persian Gulf and Gulf of Oman.

INS Trikand is a state-of-the-art guided missile stealth frigate. It is part of the Western Fleet that operates under the Flag Officer Commanding-in-Chief, Western Naval Command (Mumbai.)

- Indian Navy's effort to maintain a frontline ship in the region to ensure safe and secure movement of trade instill confidence in the maritime community and contribute to regional maritime security.
- Operation Sankalp was started in 2019 after there were explosions in oil tanker ships in the Gulf of Oman amid tensions between Iran and the US
- Since then, an Indian Navy ship with an integral helicopter embarked has been continuously deployed in the north-west Arabian Sea, Gulf of Oman and Persian Gulf.
- **Need** - Operation Sankalp ensure safety of India's Mercantile Marine in the Persian Gulf and the Gulf of Oman.
- India is dependent for about 85% of its demand for oil on imports.
- So, this operation will help India in building a strategic bilateral relationship and enhancing maritime security in the region.



Reference

1. <https://pib.gov.in/PressReleasePage.aspx?PRID=1772995>
2. <https://www.thehindu.com/news/national/operation-sankalp-sixteen-indian-flagged-vessels-provided-safe-passage-everyday/article35322499.ece>

EW Suite Shakti

The 1st Shakti Advanced Electronic Warfare system Shakti has been installed on-board INS Visakhapatnam and is being installed in INS Vikrant.

- Advanced Electronic Warfare (EW) System 'Shakti' has been designed and developed by the Defence Electronics Research Laboratory (DLRL) of Defence Research and Development Organisation (DRDO).
 - They are under production at Bharat Electronics Ltd (BEL).
- Shakti is an **Integrated Radar EW System** for Capital Warships of the Indian Navy
- Shakti will intercept, detect, classify, identify and jam **conventional & modern Radars** with
 - Electronic Support Measure (ESM) System and integrated Radar Finger Printing System (RFPS) covering B to K frequency band and
 - Electronic Counter Measure (ECM) System covering H to K frequency band.
- It will provide an electronic layer of defence against modern radars and anti-ship missiles to ensure electronic dominance and survivability in the maritime battlefield.

Reference

1. <https://pib.gov.in/PressReleasePage.aspx?PRID=1773020>
2. <https://www.drdo.gov.in/sites/default/files/inline-files/dlrl-1.pdf>

