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India's Falling Crude Oil & Natural Gas Production

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Why in News

According to the latest government data India's **crude oil production and natural gas output declined** in the **Financial Year (FY) 2020-2021**.

India's crude oil and natural gas production have been **falling consistently since 2011-12**.

Key Points

- **Decline in Production:**
 - **Crude Oil Production:**
Declined by 5.2% as private and public firms produced **30.5 million tonnes** in 2020-21 compared to **32.17 million tonnes** produced during the same period in 2019-2020.
 - **Natural Gas Production:**
Declined by 8.1% and in 2020-21 only **28.67 billion cubic meters** was produced compared to **31.18 billion cubic meters** in 2019-20.

- **Reason for Decline:**

- **Ageing Sources:**

Most of India's crude oil and natural gas production comes from **ageing wells that have become less productive over time.**

- **Need of Intensive Technology:**

There is **no more easy oil and gas available** in India and that producers would have to invest in extracting oil and gas using **technologically intensive means** from more **difficult fields such as ultra deepwater fields.**

- **Domination of State Owned Companies:**

Crude oil production in India is dominated by two major state-owned exploration and production companies, **Oil and Natural Gas Corporation Limited (ONGC)** and **Oil India.**

These companies are the key bidders for hydrocarbon blocks in auctions and were the only successful bidders in the fifth and latest round of auctions under the **Open Acreage Licensing Policy (OALP)** regime with ONGC bagging seven of the eleven oil and gas blocks on offer and Oil India acquiring rights for the other four.

- **Low Interest of Foreign Companies:**

India's **efforts to attract foreign energy giants** into hydrocarbon exploration and production **haven't been quite fruitful.**

- The **government has asked ONGC to boost its investments in explorations and increase tie-ups with foreign players** to provide technological support in extracting oil and gas from difficult oil and gas fields.
- The government is also **reaching out to major foreign players** to convey that the **current system of auction and regulation is much more "open and transparent"** than before.

- **Climate Change:**

Mounting pressure due to **climate change** is prompting oil and gas players to diversify into clean energy.

- **Reason for Less Private Participation:**
 - **Operationalisation Delays:**

One of the key reasons cited by experts for low private participation in India's upstream oil and gas sector are **delays in the operationalisation of hydrocarbon blocks due to delays in major clearances including environmental clearances** and approval by the regulator of field development plans.
 - **High Cess:**

Industry **players have been calling for a reduction** in the cess on domestically produced crude oil to **10% from the current 20%**.
 - **Limit on maximum Production:**

Internal maximum production levels set by oil and gas majors to address climate change had also lowered interest by oil majors to expand operations in India.
- **Impact:**
 - **Reliance on Imports:**

Low domestic production of crude oil and natural gas makes India more **reliant on imports**.

The **share of imports as a proportion of overall crude oil consumption in India has risen** from 81.8% in FY2012 to 87.6% in FY2020.
 - **Not in Favouring of India's Vision:**

Boosting oil and gas production has also been a key part of the government's **Atma Nirbhar Bharat initiative** and its **goal to boost the use of natural gas in India's primary energy mix** from the current **6.2% to 15% by 2030**.

- **Some Government Initiatives to Improve Production:**

- **Reforming Exploration & Licensing:**

In October 2020 Cabinet Committee on Economic Affairs (CCEA) approved the Policy framework on reforms in the exploration and licensing sector **for enhancing domestic exploration and production of oil and gas.**

- **National Data Repository (NDR):**

- The NDR was established by the Government in 2017 to **assimilate, preserve and upkeep the vast amount of data which could be organized and regulated for use in future exploration and development**, besides use by R&D and other educational institutions
- It is an integrated data repository of Exploration and Production (E&P) data of Indian sedimentary basins.

- Hydrocarbon Exploration and Licensing Policy (HELP):

It replaced the erstwhile **New Exploration Licensing Policy (NELP)** in **2016** and provides for a **single License for exploration and production of conventional as well as non-conventional Hydrocarbon resources;** Pricing and Marketing Freedom; reduced rate of royalty for offshore blocks.

Way Forward

- A variety of **new technologies can prolong the life of ageing oil fields** but the acquisition, testing and application of these technologies is capital-intensive. Thereby, the **fiscal framework must ensure adequate returns for producers** to deploy Enhanced Oil Recovery mechanisms.
- The current **approval processes must be simplified** with stipulated timelines for each sign-off, thereby avoiding cost escalations due to delays.
- Potential of **Unconventional Hydrocarbons (UHC)** such as Shale Oil and gas, tight oil/gas and gas hydrates **must be opened now for commercial exploitation.**

Source: IE