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### 1. Why India will continue to rely on coal for foreseeable future

#### Introduction

With coal use set to be a key topic during the ongoing COP28 summit, India said it would continue to rely on coal for electricity generation for the foreseeable future, even as it rapidly expanded its renewable energy sources.

However, it stands in stark contrast to the country's ambitious plans of achieving net-zero — it has promised to meet 50% of its electricity requirements from renewable energy sources by 2030, and 100% by 2070.

#### So, why is India so heavily dependent on coal?

The power demand in India is surging. In 2022, the requirement grew about 8%. The primary reason for this increase is higher economic activity. Industrial and commercial activity are among the biggest consumers of energy in the country. Homes account for a fourth of India's power use and agriculture for more than a sixth in recent years.

Moreover, India will witness the largest energy demand growth of any country or region in the world over the next 30 years, according to the latest World Energy Outlook by the International Energy Agency (IEA). It also added that the country's requirement for electricity for running household air conditioners is estimated to expand nine-fold by 2050 and will exceed total power consumption in the whole of Africa today.

#### Coal, the only fix

The staggering levels of power demand have become a formidable challenge for India. As a result, it has doubled down on its coal production. It spiked from 778 million tons in 2021-22 to 893 million tons in 2022-23, a 14% growth, according to the coal ministry. India has also set a target of 1.31 billion tonnes of coal production for 2024-25 and aims to increase it to 1.5 billion tons by 2030.

#### But why is coal so essential to India's plan to meet the growing power demand?

Because coal is the only viable option for the country right now. There are four reasons for this.

First, although India has been trying to push up its renewable share of power generation in recent years, it's nowhere near meeting the requirement. Currently, out of the total energy produced in the country, only 22% of it comes from renewable sources. Fossil fuels, mainly coal, still provide 75% of India's power supply.

Second, renewables aren't a reliable source of power generation. Energy sources like solar and wind are variable as they rely on natural factors like sunlight, wind and water availability. To ensure a steady supply, India has to heavily invest in battery storage — it needs more than 60 GW of battery storage to fully utilise the potential of its 2030 renewables goal.

Third, hydropower, a key renewable energy source for India, has its own complexities. Numerous hydropower projects are under construction or in the planning stages in the Himalayan region, including in Arunachal Pradesh and Sikkim. But they have come under fire as the projects have caused ecological damage and raised concerns about the potential conflicts over water resources in the area.

Fourth, the country's plans to generate energy with the help of nuclear power plants have not really taken off. During 2021-22, the plants produced about 3.15% of the total electricity generated in India.

### **What's next**

India aims to reach 450 GW of renewable installed capacity by 2030, more than three times the current capacity of about 135 GW. However, given the constraints regarding renewable energy, it will continue to fall back on coal-generated electricity.

In fact, Union Minister of Power and New and Renewable Energy, R K Singh, said "As per the targets we have set for 2030, the fossil fuel capacity (in electricity generation) would come down from the current about 60% to about 35%. This is the phase-down. If you are talking in absolute terms, the numbers (installed capacity of coal) will go up because our demand (for electricity) is going up (between now and 2030). In percentage terms (as a share of overall production), it will come down".

Relevance: GS Prelims & Mains Paper III; Economics

Source: The Indian Express

## **2. What the World Malaria Report says about India**

### **Introduction**

The recently released World Malaria Report, recently released by the World Health Organization (WHO), shows that the number of cases and deaths due to the mosquito-borne infection India have continued to decline. With an estimated 33.8 lakh cases and

5,511 deaths, India saw a decline of 30 per cent in malaria incidence and 34 per cent in mortality in 2022, compared to the previous year.

### **Behind India's success story**

A focus on providing primary healthcare to the remotest areas, surveillance that is now being backed by digital data, and better handling of extreme weather events such as cyclones have been key to India's success as per experts.

Good preventive practices, use of effective tools to keep the mosquito population in check, use of point of care tests for quick diagnosis, and good management of the malaria cases have been key to reducing cases and deaths due to malaria over the years.

#### **4 TAKEAWAYS FROM THE REPORT**

- India saw a 30% decline in malaria cases and 34% decline in deaths in 2022 as compared to the previous year
- Globally there were 5 million additional malaria cases in 2022 as compared to the previous year, totalling to 249 million
- Of the 5 million additional cases, the highest 2.1 million was from Pakistan that had a flood in 2022
- India accounted for 1.4% of total malaria cases in the world

### **Climate change and malaria**

The malaria parasite and mosquito are both extremely sensitive to temperature, humidity, and rainfall, leaving experts worried about expanding reach of the disease. The report says that climate change can not only directly increase geographies for malaria spread, but also indirectly affect the impact of the disease by reducing access to healthcare facilities and timely treatment.

### **Example of Pakistan**

Almost half of the five million additional malaria cases reported globally in 2022 — 2.1 million — were from Pakistan that witnessed an extreme flood. The report said that the standing water after the floods became ideal breeding ground for mosquitoes and led to a five-fold increase in malaria cases in the country. With increasing frequency of such extreme weather events, the annual report for the first time focused on climate change and malaria.

### **Challenges ahead for India**

While India is doing well when it comes to malaria, issues such as resistance may derail it from its target of elimination by 2030.

Another challenge is vivax malaria, which accounts for over 40 per cent of malaria cases in India. The vivax plasmodium is known to hide in the liver and cause recurrent

infections. To treat, a 14-day course of therapy has to be taken. Experts say the challenge with that is many do not complete the treatment and stop taking the drug once they feel better.

Relevance: GS Prelims

Source: The Indian Express and The Hindu

### **3. Vaishali and Praggnanandhaa, first brother-sister duo to become Grandmasters**

Why in news?

Indian chess player Vaishali Rameshbabu became a Grandmaster by crossing 2,500 International Chess Federation (FIDE) ranking points. She is only the third Indian woman player to achieve the title, besides Koneru Humpy and Harika Dronavalli.

With this development, Vaishali and her younger brother, Rameshbabu Praggnanandhaa, have become the first-ever Grandmaster brother-sister duo in history.

#### **A Grandmaster**

Grandmaster is the highest title or ranking that a chess player can achieve. The Grandmaster title — and other chess titles — are awarded by the International Chess Federation, FIDE (acronym for its French name *Fédération Internationale des Échecs*), the Lausanne-Switzerland-based governing body of the international game.

The title is the badge of the game's super-elite, a recognition of the greatest chess talent on the planet, which has been tested and proven against a peer group of other similarly talented players in the world's toughest competitions.

#### **Other (lesser) titles**

Besides Grandmaster, the Qualification Commission of FIDE recognises and awards seven other titles: International Master (IM), FIDE Master (FM), Candidate Master (CM), Woman Grandmaster (WGM), Woman International Master (WIM), Woman FIDE Master (WFM), and Woman Candidate Master (WCM).

#### **Titles are for life**

All the titles, including that of Grandmaster, are valid for life, unless a player is stripped of the title for a proven offence such as cheating.

Relevance: GS Prelims

Source: Indian Express and The Hindu