



**KAMARAJ IAS ACADEMY**  
Only IAS Academy by Grandson of "Perunthalaivar Kamarajar"

# Nuclear Power plants in India

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**Why is in news?** North India's first Nuclear Plant is coming up in Haryana in the town of Gorakhpur

North India's first Nuclear Plant is coming up in Haryana in the town of Gorakhpur, which is about 150 km north of the national capital of New Delhi.

Nuclear energy is an important component of the country's energy mix and is being pursued along with other sources of energy in an optimal manner.

It is a **clean, environment friendly** base load source of power available 24X7.

It also has huge potential which can **ensure long term energy security** of the country in a sustainable manner.

Nuclear energy is the **fifth-largest source of electricity for India** which contributes about 3% of the total electricity generation in the country.

India has **over 22 nuclear reactors in 7 power plants across the country** which produces 6780 MW of nuclear power. In addition, one reactor, Kakrapar Atomic Power Project (KAPP-3) has also been connected to the grid in January- 2021.

18 reactors are Pressurised Heavy Water Reactors (PHWRs) and 4 are Light Water Reactors (LWRs).

The **world's first thorium-based nuclear plant, "Bhavni,"** using Uranium-233, is being **set up at Kalpakkam** in Tamil Nadu.

This plant will be entirely indigenous and will be the first of its kind. The **experimental thorium plant "Kamini"** already exists in Kalpakkam.

In India, some nuclear reactors are kept under "IAEA (International Atomic Energy Agency) safeguards".

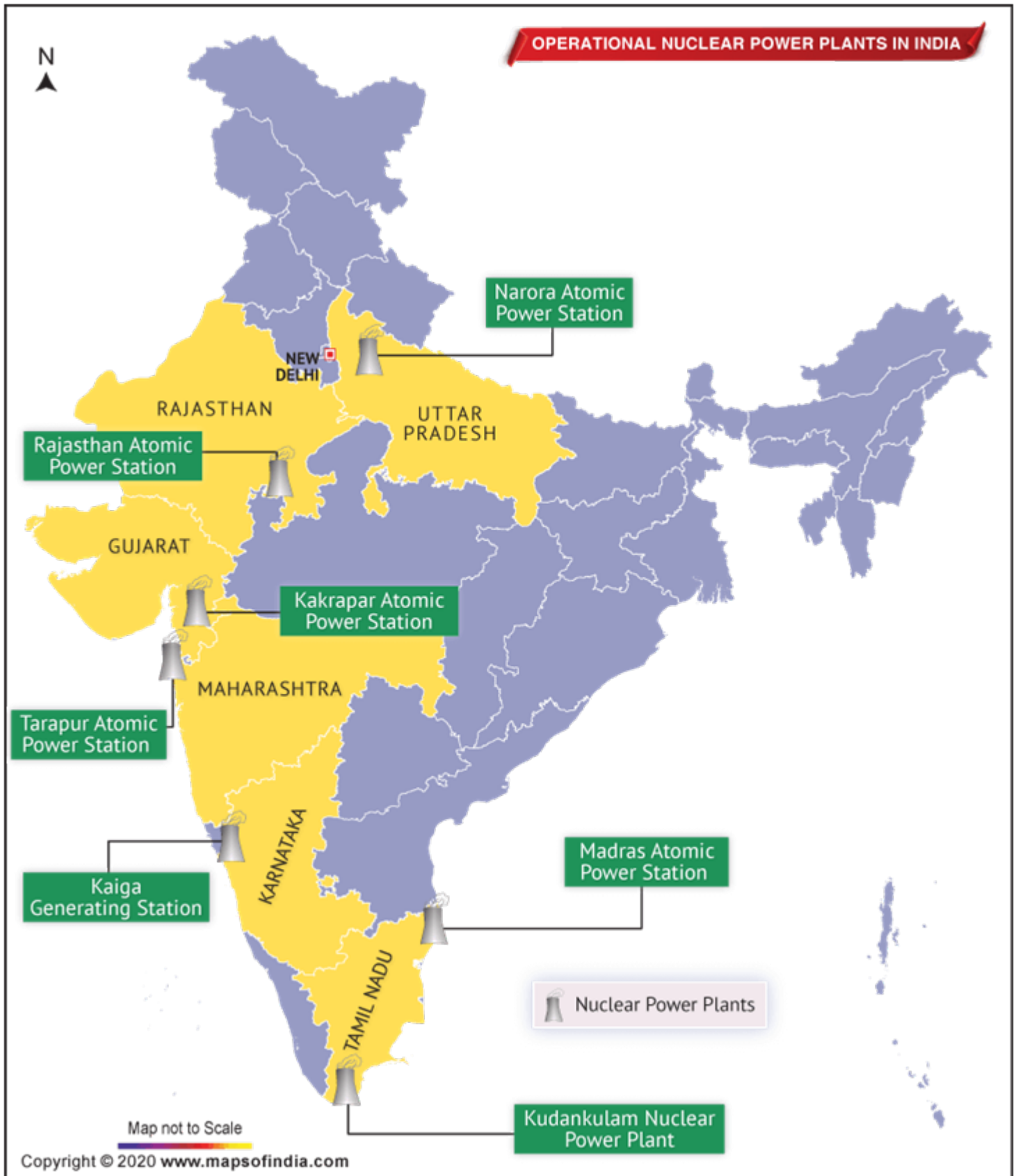
The nuclear facilities are kept under IAEA safeguards if the source of Uranium, which is the fissile material for a nuclear reactor, is from outside the territory of India or if the new reactor plants are established with foreign collaboration.

This is to ensure that imported uranium was not diverted for military use and to assure that the imported uranium is used to generate nuclear energy for civilian purposes.

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Plot A P.127, AF block, 6 th street, 11th Main Rd, Shanthi Colony, Anna Nagar, Chennai, Tamil Nadu 600040

Phone: **044 4353 9988 / 98403 94477** / Whatsapp : **09710729833**



### Locations of Uranium Resources:

1 Tummalapalle (Kadapa District) – Andhra Pradesh

2 Nalgonda District – Telangana

3 East Singhbhum District – Jharkhand

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4West Khasi Hills District – Meghalaya

5Udaipur District – Rajasthan

6Yadgir District – Karnataka

7Rajnandgaon (District) – Chhattisgarh

8Sonbhadra district – Uttar Pradesh

9Rudraprayag District – Uttarakhand

10Una District – Himachal Pradesh

11Gondia District – Maharashtra