

MINERAL RESOURCES OF INDIA: IRON ORE

Course: B.A-II, Generic Elective (GE)

Semester: IV

Paper Code: GEOG GE404

Paper Name: Geography of India

Faculty Member Name: Aishwarya Raj

(Department Of Geography)

E-mail: rajaishwarya0117@gmail.com



INTRODUCTION :

- India has fairly abundant resource of iron ore. Iron ore is the most important mineral on which the economy of a country depends . India has the largest reserve of iron ore in Asia .
- Iron is not found in the pure form in the earth crust , matter it is often found mixed with lime ,magnesium ,phosphorous ,Silica , sulphur and copper.



- ❖ An iron ore known as haematite (Fe_2O_3) occurs abundantly in the country . Its reserves account for about two-third of the total iron ore reserves in India .
- ❖ The two main types of iron ore found in our country are haematite(Fe_2O_3) and Magnetite(Fe_3O_4) .It has great demand in international market due to its superior quality .
- ❖ About 95 % of the total reserves of iron ore is located in the states of Orissa ,Jharkhand ,Chhattisgarh ,Karnataka ,Goa ,Andhra Pradesh and Tamil Nadu .

TYPES OF IRON ORE

```
graph TD; A[TYPES OF IRON ORE] --> B[Haematite]; A --> C[magnetite]; A --> D[limonite]; A --> E[siderite];
```

Haematite

magnetite

limonite

siderite

I. HAEMATITE ORE (RED-OCBRE):

This ore is called 'OXIDE OF IRON' .Its metallic content varies between 60 to 70 percent.

- It is a massive ,hard , compact and **lumpy ore** with reddish or coral-red in colour .
- It is found in the Dharwarian rocks .
- The main deposits of haematite ore are in Jharkhand, Orissa , Chhattisgarh ,Madhya Pradesh ,Karnataka , Goa , Maharashtra and Andhra Pradesh .

(II) MAGNETITE :

The magnetite ore is known as “black ore”.

The metal content of magnetite varies 60 to 65 percent .The ore is either igneous or metamorphic .

It is mainly found in Karnataka ,Andhra Pradesh,Tamil Nadu and Kerala states.

(III) LIMONITE :

Limonite ore is yellowish in colour and is known as the 'hydrated iron-oxide' .

- It is inferior and contains 5 to 50 percent of metal .
- It is found in the iron-stone shales of the Damuda series in Raniganj coal fields (W.B), Mirzapur district of U.P. , Garhwal region of Uttarakhand and the Kangra valley of Himachal Pradesh .
- (Damuda series- lower Gondwana)

(IV) SIDERITE:

It is called as 'Iron Carbonate'.

- Its iron content varies between 10 to 40 percent .
- It is an inferior variety of iron ore and not economically extractable at most of the places .

IRON RESERVES IN INDIA :

- The total reserves of all types of iron ore in the country are 25,500 million tonnes , out of which 14630 million tonnes is of good quality(India 2010).

- **PRODUCTION :** **Odisha** is the leading producer of iron ore contributing about 40 % of the total production .

State	Percentage of all India production(2011-12)
-------	---

- | | |
|-------------------|-------|
| 1. Odisha | 40.06 |
| 2. Goa | 19.95 |
| 3. Chhattisgarh | 18.21 |
| 4. Jharkhand | 11.32 |
| 5. Karnataka | 7.88 |
| 6. Andhra Pradesh | 1.02 |
| 7. Maharashtra | 0.88 |
| 8. Others | 0.68 |

Total	100%
-------	------

DISTRIBUTION OF IRON ORE IN INDIA :

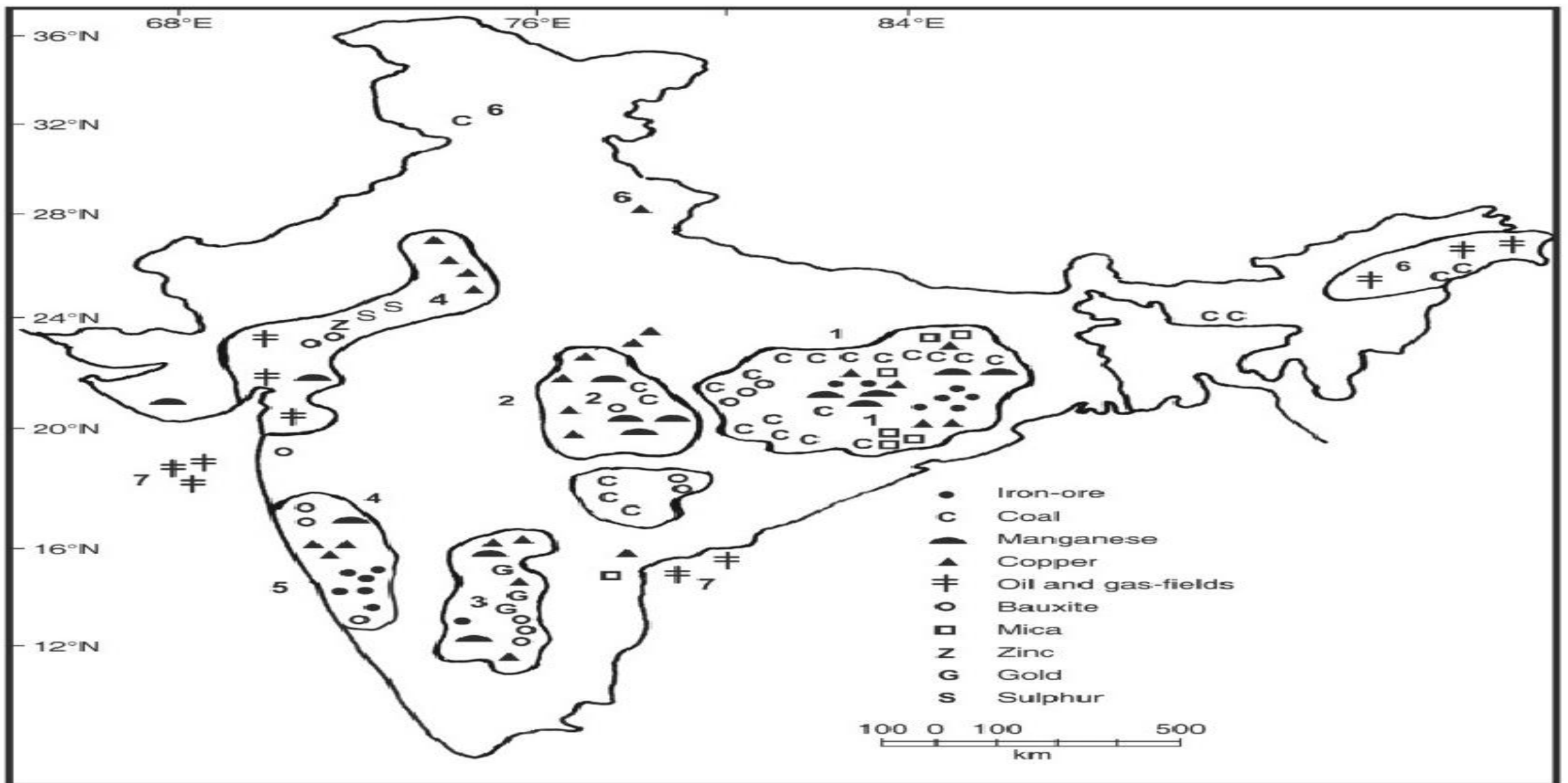


Fig. 7.1 Mineral Belts

ORISSA:

- Orissa contributes to about 40 % of the total production of iron ore in the country .(2011-12)
- The most important iron ore deposits are found at Mayurbhanj(Badampahar) ,Tomka range in Cuttak ,Sambalpur and Hirapur Hills of Koraput district .

(i) **BADAMPAHAR** : It is situated in the Mayurbhanj district of Orissa .

- Badampahar has rich deposits of iron ore .
- It has 30 million tonnes of iron ore .
- Iron ore from Badampahar is send to Bokaro , Durgapur , Jamshedpur and Raurkela .

(ii) BONAI GARH RANGE :

It is situated in the district of Sundergarh . It is one of the most important iron ore bearing range .

- Iron ore of haematite category is supplied to Bokaro , Durgapur , Jamshedpur and Raurkela .

(iii) MAYURBHANJ :

- It is well known for the iron ore deposits of haematite type: The metal content is more than 65 %.
- Iron ore from Mayurbhanj mines is sent to the iron steel plants of Bokaro , Durgapur , Jamshedpur and Raurkela .

GOA:

- Goa is the second largest producer of iron ore in India .
- Goa produces about 20% of the total iron ore of the country though it has about 11% of the total reserves of iron ore .
- The iron ore of the north Goa is superior quality .there are about 315 mines in north,central and south Goa.
- The mines are worked by open caste method and brought to Mamagao port . The mines of Goa are mechanised and thus efficient mining of iron ore is possible despite having inferior quality of Iron Ore.
- The iron ore is exported mainly to Japan and Iran .

CHHATTISGARH :

This state has about 20% of the total iron ore deposits of the country and produced 18.2 % iron ore in 2011-12.

- Bailadila in the Bastar district and Dalli Rajhara in the Durg district are the main iron ore producing regions .
- The iron ore belongs to the haematite and magnetite categories in which the metal content varies between 60 to 70 percent .
- The Bailadila mine is the largest mechanized mine in India .

i) DALLI RAJHARA : It lies in Durg district of Chhattisgarh state The iron ore is supplied to the Hindustan Steel Plant at Bhilai .

- (ii) BAILADILA: It is situated in the Bastar district of Chhattisgarh state .It is known for the rich deposits iron ore of the haematite category .
- The ore is mostly exported to Japan through the seaport of Vishakhapatnam .

JHARKHAND :

Jharkhand has 25% of the iron ore reserves and accounts for about 12% of the total production of iron ore of the country . It has best quality iron ore of the country. The iron belt of Jharkhand extend for about 50 km .

Mining of iron ore was first of all started at Singbhum in 1904 .

- The most famous mines are Noamandi ,Daltenganj .
- Iron ore is also found at Dhanbad ,Hazaribagh ,Ranchi and Santhal Parganas.

KARNATAKA-

- Karnataka was once the leading producer of iron ore which accounts for about one-fourth of the total iron ore production of the country but in 2011-12 it became 5th largest producer in country.
- The high grade deposits belonging to the haematite and magnetite categories are found in Chikmagalur district .
- The other important iron ore producing districts of Karnataka are Chitradurga ,Dharwar ,North Kannad Shimoga ,Bellary ,and Tumkur .

I. BABABUDAN HILLS:

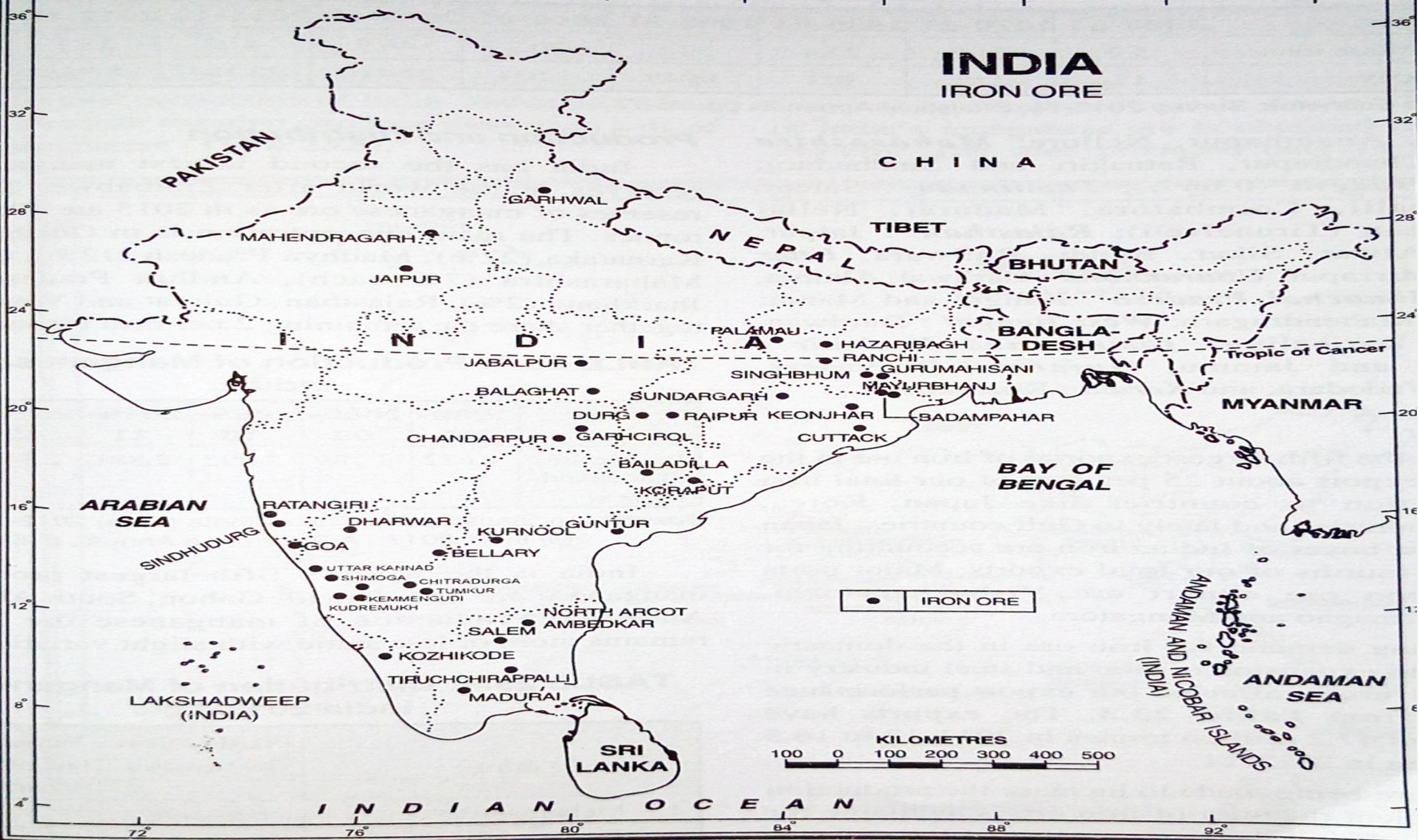
This area of iron ore deposit lie in Chikmanglur district of Karnataka ,it stretches over 22 km in length 20 km in width .

- They are rich in haematite deposits with ferrous content of 60 to 65 percent .
- The iron ore is mainly exported to Iran through the port of Mangalore .

(II) KUDERMUKH DEPOSITS :

- ❖ The Kudermukh iron ore deposits lie in the Chikmagalur district of Karnataka.
- ❖ They contain iron ore of magnetite category with a metal content of 50 to 65 % .
- ❖ The Kudermukh deposits were developed under an export agreement with Iran and the iron ore is exported through the sea-port of Mangalore .

INDIA IRON ORE



OTHER STATES :

- Iron ore in small quantities is also mined in Maharashtra ,Tamil Nadu. ,A.P., Rajasthan etc .
- **EXPORT:** India is the fifth largest exporter of iron ore in the world . About 55% of our total iron ore production is exported to Japan,South Korea,West European countries ,Iran ,United Arab Emirates and other Gulf countries .

- India exported 47.2 million tonnes in 2011-12 which declined to about 16.5 million tonnes of iron ore in the year 2013-14.
- Most of the export is made through the ports of Vishakapatnam ,Paradwip ,Marmagao and Manglore .

CONCLUSION:

- Important mineral resource.
- Uneven distribution.
- Efforts are being made to mechanize the mines.
- Efforts are being made to Increase the production of good quality iron ore.
- It plays important role in foreign exchange ,which is necessary for economic development of the nation.

REFERENCES:

- Hussain, M. (2009). *Geography of India*, 2E. Tata McGraw Hills Publication.
- *India People and Economy*, NCERT
- Khullar, D.R. (2018) *Geography of India, Noida, Uttar Pradesh: Kalyani Publishers.*