

Iron Ore Regions World+ India

By Sudarshan Gurjar

GS1 Syllabus:

- Distribution of key natural resources across the world (including South Asia and the Indian sub-continent)
- Factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India.

GS3 Syllabus:

- Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage.
- Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

Natural Resources Classification

Biotic

Abiotic

Renewable (Non-conventional): biomass, solar energy, wind energy, etc.

Non-renewable (Conventional): coal, oil, iron, etc.

Iron

Types of Iron Ore

Based on the amount of ore and iron content, iron ore is classified into various types.

Magnetite (Fe_3O_4) and Haematite (Fe_2O_3) are fine quality ores.

Limonite, siderite, etc. are inferior ores .

1. Magnetite (Fe_3O_4)

- It is black in colour and has **very high content of Iron – upto 72 per cent (best quality iron ore)**.
- Magnetite has higher iron content than hematite (60-70 per cent); therefore, its **quality is higher**.

2.Haematite (Fe₂O₃)

- Reddish ore with naturally high iron content – **60 to 70 per cent**.
- Hematite is the most abundantly available ore in India.

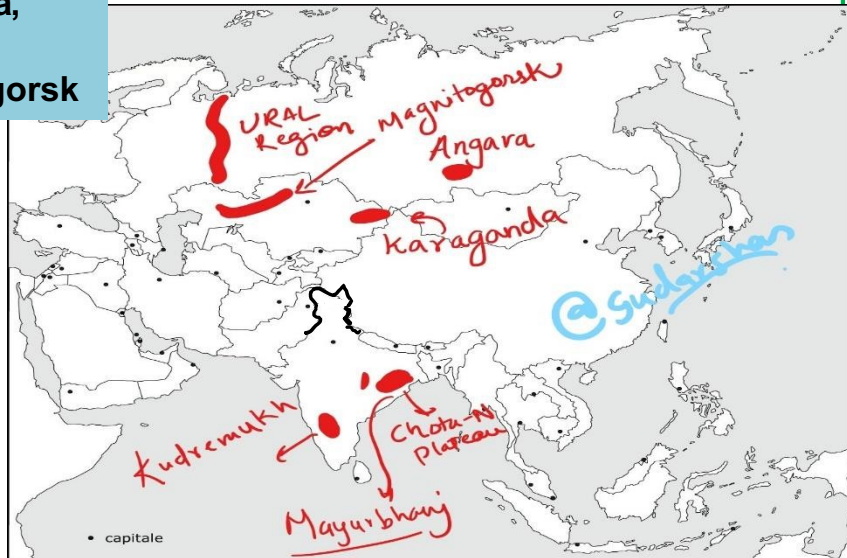
3.Limonite

- Limonite is inferior iron ore that is yellowish in colour with **40 to 60 per cent iron content**.
- Limonite mines are **open cast mines**; hence mining is **easy and cheap**.

4. Siderite (FeCO₃)

- It is **iron carbonate ore** of inferior quality with **less than 40 per cent iron content**.
- It contains many impurities and hence mining, in many places, is economically unviable.

- Iron ore in Russia, Kazakhstan: Ural region, Magnitogorsk

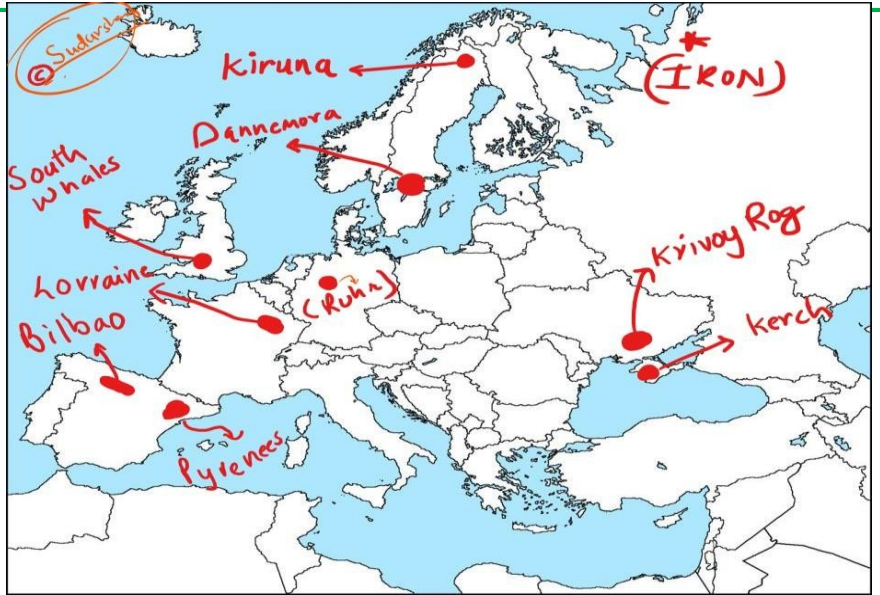


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- **Iron Ore in China: Manchuria, Sinkiang, Si-kiang, Shandog Peninsula**

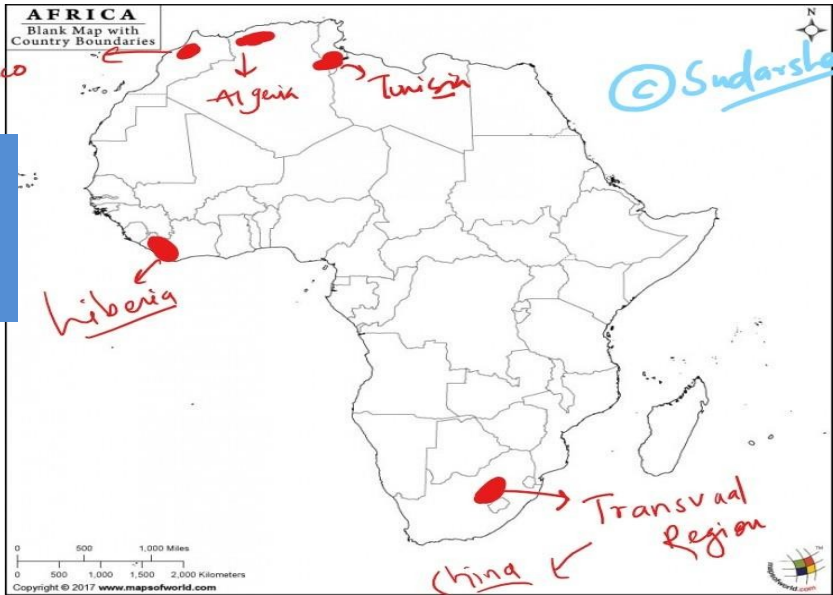


- Iron Ore in Europe:
Ruhr,
South
Wales,
Krivoy Rog,
Bilbao,
Lorraine



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- Iron ore in Africa:
Transvaal,
Liberia

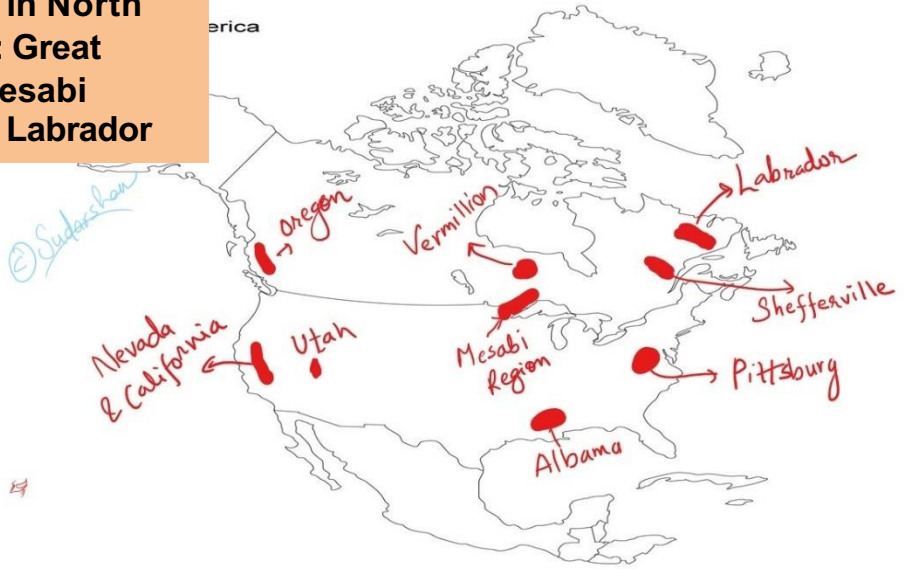


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- Iron Ore in South America: Carajas, Itabira,



- Iron Ore in North America: Great Lakes (Mesabi Region), Labrador



- Iron Ore in Australia: Pilbara Region, Koolyanobbing, Iron Duke, Iron Knob

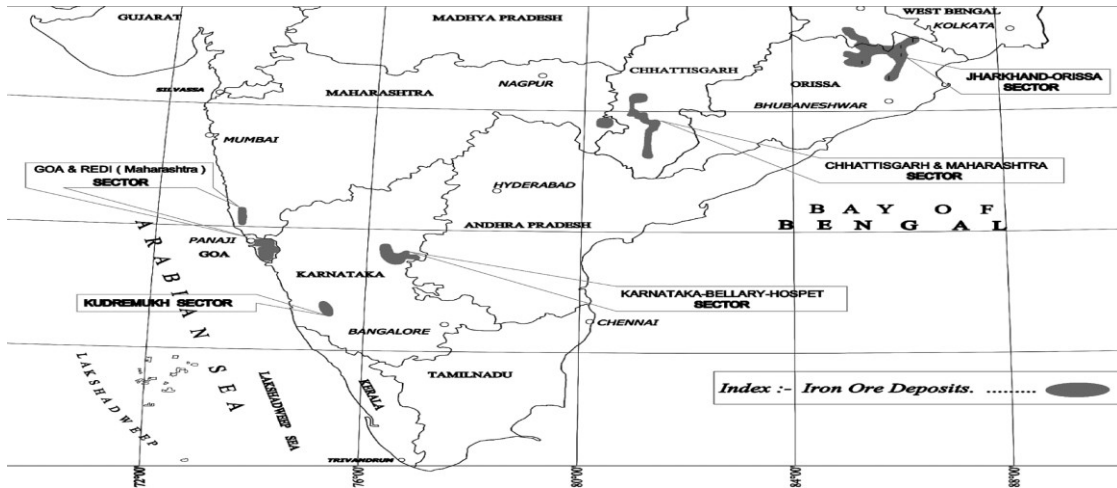


Top Iron ore producers in the world

1.China	~1300 – very high demand for iron in the region.
2.Australia	900 – most of the ore is exported to China.
3.Brazil	490 – most of the ore is exported to China.
4.India	210 (~4.7%) – Post SC ban on mining in Goa, Odisha and Karnataka in 2010, India's import of iron ore grew substantially.
5.Russia	

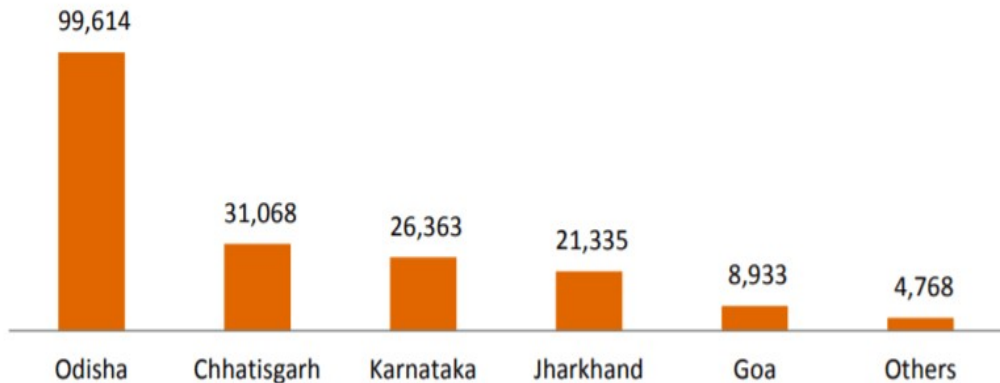
1.Largest iron ore reserves

World Total		840 billion tons
1.	Australia	240 billion tons
1.	Brazil	170 billion tons
1.	Russia	140 billion tons
1.	China	69 billion tons
1.	India	32 billion tons



Odisha	<ul style="list-style-type: none"> • The ores are rich in haematites. • India's richest haematite deposits are located in Barabil-Koira valley. • Others: Sundargarh, Mayurbhanj, Cuttack, Sambalpur, Keonjhar and Koraput.
Chhattisgarh	<ul style="list-style-type: none"> • A pipeline from the Bailadila to Vizag plant transports the ore slurry (semi-liquid mixture). • Smelting is done in Vizag (Vishakhapatnam) iron and steel factory. • Bailadila's high grade ore is exported through Vishakhapatnam to Japan (there are no iron ore reserves) and other countries.
Jharkhand	<ul style="list-style-type: none"> • First mine in Singhbhum district in 1904. • Iron ore of here is of highest quality and will last for hundreds of years. • Noamandi mines in Singhbhum are the richest. • Magnetite ores occur near Daltenganj in Palamu district.
Karnataka	<ul style="list-style-type: none"> • High grade ore deposits are those of Kemmangundi in Bababudan hills of Chikmagalur district (magnetite) and Sandur and Hospet in Bellary district (hematite). • Most of the ores are high grade haematite and magnetite.

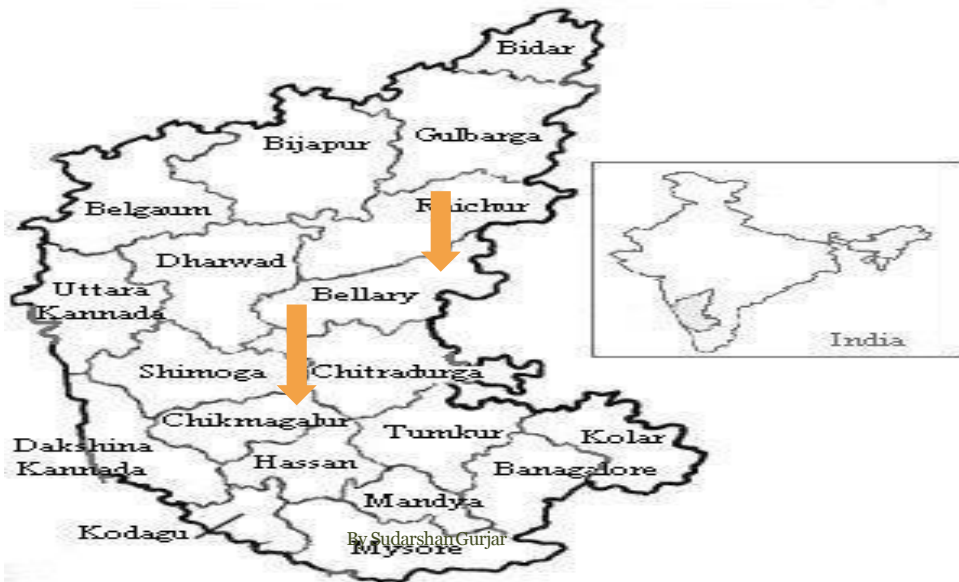
Haematite reserves	Magnetite reserves
<ol style="list-style-type: none"> 1. Odisha 33% 2. Jharkhand 26% 3. Chhattisgarh 18% <p>Rest in Andhra Pradesh, Karnataka, Goa, Assam, Bihar, Maharashtra, MP, etc.</p>	<ol style="list-style-type: none"> 1. Karnataka 73% 2. Andhra Pradesh 14% 3. Rajasthan 5% 4. TN 5%



Others include: Andhra Pradesh, Madhya Pradesh, Maharashtra and Rajasthan

Source: CMIE

KARNATAKA





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ORISSA



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MAHARASTRA MAP



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JHARKHAND



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Chhattisgarh

