China Suspends Rare Earth Exports

Prelims – *Current events of national and international importance.*

Mains (GS I) – *Distribution of key natural resources across the world.*

Why in news?

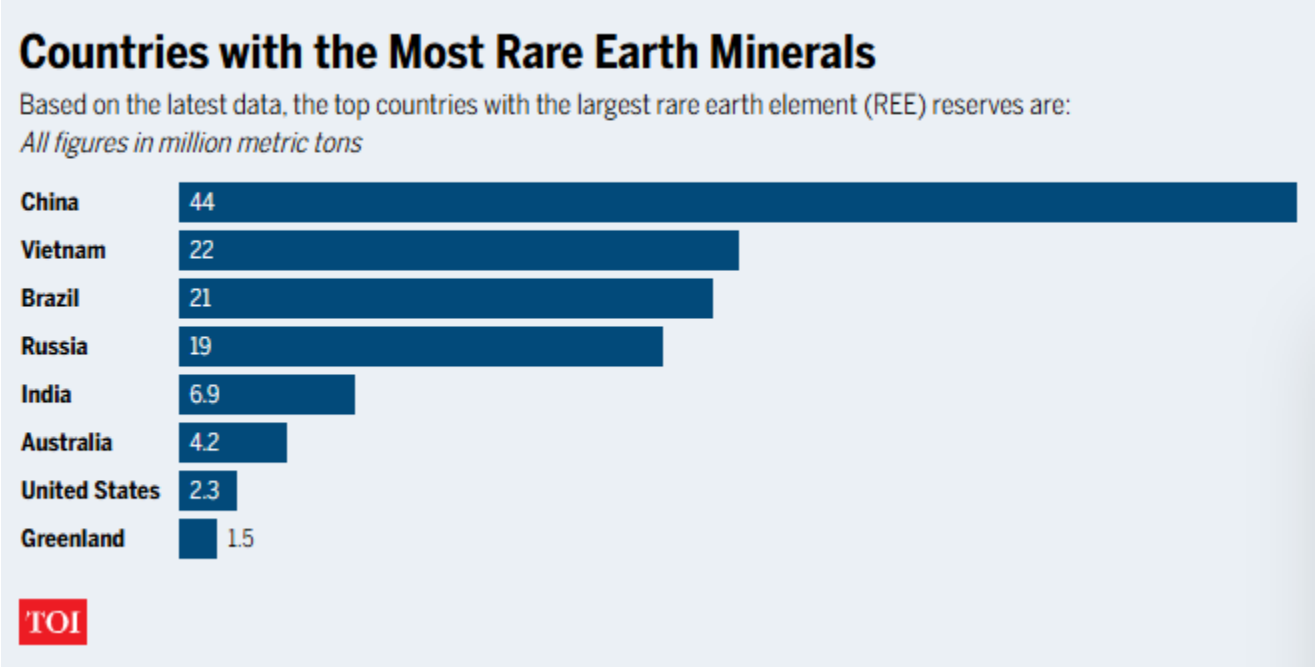
Recently, China has suspended the export of key rare earth metals and magnets as a part of China's retaliation for US tariff increase.

- **Rare Earth Elements (REEs)** – They are a set of ***17 silvery-white soft heavy metals***.
- It is also called **rare earth oxides**.
- The 17 rare earth elements are,

Atomic Number	Element	Symbol
21	Scandium**	Sc
39	Yttrium	Y
57	Lanthanum	La
58	Cerium	Ce
59	Praseodymium	Pr
60	Neodymium	Nd
61	Promethium*	Pm
62	Samarium	Sm
63	Europium	Eu
64	Gadolinium	Gd
65	Terbium	Tb
66	Dysprosium	Dy
67	Holmium	Ho
68	Erbium	Er
69	Thulium	Tm
70	Ytterbium	Yb
71	Lutetium	Lu

- Scandium and yttrium are not part of the lanthanide family, but they are included because they *occur in the same mineral deposits* as the lanthanides and *have similar chemical properties*.
- All Rare earth elements are ***considered metals***.
- **Properties** – Malleable with *high melting and boiling points*.

- They exhibit both *strong magnetic and luminescent properties* due to their unique electronic structure.
- **Significance** – Rare earth metals are vital in advanced electronics, defence and medical equipment's and renewable energy.
- They are critical in green technologies, *to support net zero carbon emissions goals.*
- **Resource distribution** – China has the largest reserves and production, followed by countries like Brazil, Vietnam, and Russia.
- China *account for 90% of global production* and it also controls refining technologies related to rare earth elements.



- **Suspension on export** – The Chinese government ordered restrictions on the export of key rare earth metals, *which are refined entirely in China*, as well as rare earth magnets.
- Key heavy rare earth metals which that are covered under restriction are samarium, gadolinium, terbium, dysprosium, lutetium, scandium and yttrium.
- **Retaliation on US** – This suspension was in response to reciprocal tariffs imposed by US which led to trade war between the world's two largest economies.
- It is primarily aimed to prevent supplies from reaching certain companies, including American military contractors.
- **New regulatory system** – The metals, and special magnets made with them, can now be shipped out of China only with special export licenses.
- The licensing regime for other countries is yet to set up by China which, effectively halts shipments.
- **Impact of Rare earth element export suspension** –It is likely to *trigger a global supply crunch* especially affecting major REE-consuming countries like the US, Japan, Vietnam, and Germany.
- It could affect the production of Electric vehicles, defence equipment and advanced electronics.
- India has limited impact due to relatively low domestic consumption but it still relies heavily on China for Rare Earth metals with 65% of imports are from China.

References

1. The New York Times| China Halts Metal Exports
2. Rare Elements Resources| Rare Earth Elements

