22/8/22

① Being Self-Sufficient in strategic minerals is critical for INDIA to achieve its green energy goals?

Introduction -

Achieving India's ambitious energy transition goals pledged by our current PM at the Cop26 in glasgow which need shift in mobility through [EV] & upscaling solar & wind power generation.

Demand of Present Scenario -

① International Energy Agency points out that more than 60% of Car sales should be EV by 2030 which is 18 times more than present scenario (2020). to achieve net 2050.

② IEA also projects that the mineral demand for EV will grow almost from 0.4 million tonnes to 11.8 MT by 2050.

③ This in turn peak battery demand for EV [lithium use] which would grow more than 100 times by 2050 Compared to (2020-21).

(4) To meet this ↑ demand, IEA believes that nearly 200 giga-~~watt~~ factories of photo batteries need to be oper every year till 2030.

(5) Similarly Nickel & copper demand will also grow at the same time as both are used in EV batteries & charging infrastructure

To overcome this constraints 630 gigawatt of solar photovoltaics & 390 gigawatt of wind by 2030 to be achieved. (4 times the present record).

India's decline in metal production —

* Though Ino a net exporter of copper it turned into a net importer in 2018-19 due to the closure of Copper (sterlite plant) which accounted to 40% of India's copper production

* In some case developed countries dump low-quality copper scrap, unfit for copper extraction in India.

* The rising demand of rare earth minerals exposed the countries overdependence on import which further aggregated during COVID-19 & RUS-UKR war.

↳ world's 1st largest nickel producer - 9.5% of global o/p.

Way Forward

(1) Ensuring domestic self-sufficiency in metals is paramount for countries like India. to push towards green energy.

(2) PLI schemes could incentivize the manufacturing of EV & photovaltaics. & automotive cell batteries.

(3) India should cut down the import duty on copper (2.5%) compared to S-Korea, CHN, JAP — zero duty.

(4) FTA with countries having rich earth metals could ensure mineral supply chains.

(5) Trade policy & environmental reforms are the need of the hour.

Conclusion — Mechanism @ state & central level should ~~be~~ redisigned to facilitate better integration of SD - economic & environtal objectives