# Effects of Lithium Mining in Reasi | Jammu & Kashmir | 04 Sep 2024

## Why in News?

Recently, a new study highlights the environmental concerns associated with lithium **brine extraction**, a process involving pumping salt-rich water to the surface and using evaporation ponds to extract lithium.

## Key Points

- **Potential Impact of Lithium Mining in Reasi (J&K):**
  - **Water Crisis**: Many villages in Reasi are struggling to access enough water, after perennial streams dried up following the construction of the Chenab Rail Bridge.
    - Water-intensive lithium mining can further worsen the situation.
  - **Threat to Biodiversity**: The Himalayan region in J&K is a biodiversity hotspot and a eco-sensitive region, and mining could lead to a significant loss of biodiversity.
    - It can hamper the habitat of migratory birds like Common Teal, Northern Pintail etc who come every year to stay in lakes, marshes and wetlands of Jammu and Kashmir.
  - **Food Insecurity**: Mining and processing lithium can further jeopardise food security through its excessive carbon emissions, water, and land use methods.
  - **Pollution:** The Himalayas are the source of so many rivers and mining activity may pollute the entire riparian ecosystem.

- **Lithium:** It is a soft, silvery metal. It has the lowest density of all metals.
  - It has high reactivity, low density and excellent electrochemical properties.
  - Its ores are Petalite, Lepidolite and Spodumene. It is also known as the "white gold".
- **Applications:**
  - **Batteries:** The most important use of lithium is in rechargeable batteries for mobile phones, laptops, digital cameras and electric vehicles.
    - Lithium is also used in some non-rechargeable batteries for things like heart pacemakers, toys and clocks.
  - **Alloys:** A magnesium-lithium alloy is used for armour plating.
  - **Air Conditioning:** Lithium chloride and lithium bromide are used in air conditioning and industrial drying systems due to their hygroscopic properties.
  - **Lubricants:** Lithium stearate is used as an all-purpose and high-temperature lubricant.