



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.