Lake Tahoe: US

Why in News

Drought fueled by climate change **has dropped Lake Tahoe in the US below its natural rim** and **halted flows into the Truckee River.**

- It is **an historically cyclical event that's occurring sooner** and more often than it used to.

//

Key Points

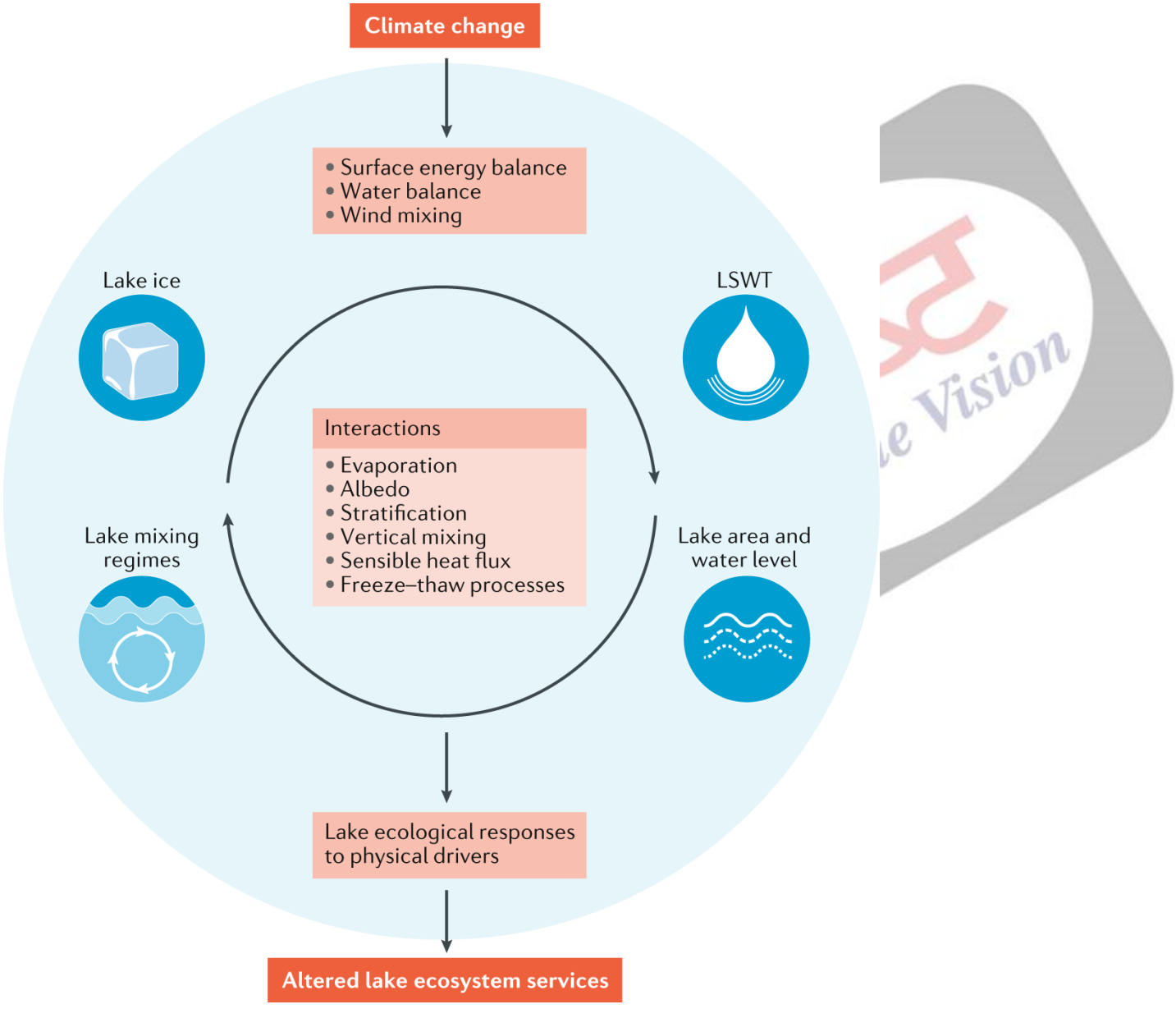
- **About:**
  - Lake Tahoe is the **largest alpine lake in North America**, and the **second deepest lake in the US**, with **Crater Lake in Oregon being the deepest** in the US.
    - Alpine lakes are lakes or reservoirs at **high altitudes**, usually over above sea level or above the tree line.

Note: Great Lakes, chain of **deep freshwater lakes in east-central North America** comprising **Lakes Superior, Michigan, Huron, Erie, and Ontario**. Except for Lake Michigan, the lakes provide a natural border between Canada and the United States.

- **Impact of Climate Change on Lakes:**
  - **Less Ice Cover**: Lakes are experiencing less ice cover, with more than 1,00,000 lakes at

risk of having ice-free winters if air temperatures increase by 4 °C.

- **Increasing LSWT**: Lake Surface Water Temperatures have increased worldwide, which is similar to or in excess of air temperature trends.
- **Increase in Evaporation rate**: Global annual mean lake evaporation rates are forecast to increase 16% by 2100, with regional variations dependent on factors such as ice cover, stratification, wind speed and solar radiation.
    - Lake stratification is the **tendency of lakes to form separate and distinct thermal layers** during warm weather.
- **Affecting Lake Water Storage**: Global lake water storage is sensitive to climate change, but with substantial regional variability, and the magnitude of future changes in lake water storage remains uncertain.



Source: IE