Assessment of Lake Water Quality and Quantity Using Satellite Remote Sensing

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Why is It Important ?

Lakes provide various socioeconomic benefits:

- Fisheries.
- Recreations.
- Hydroelectricity.
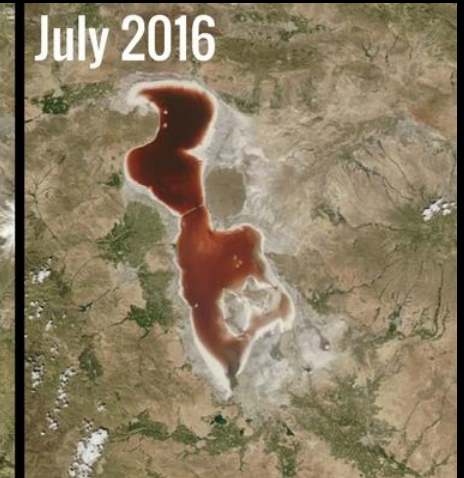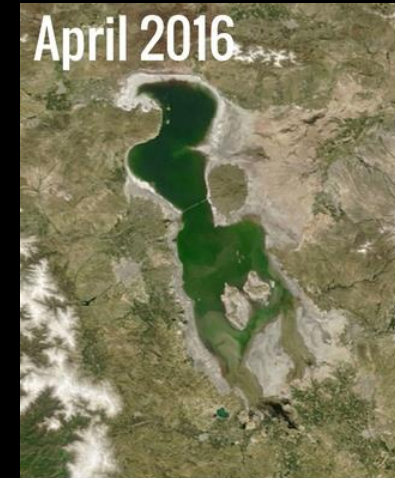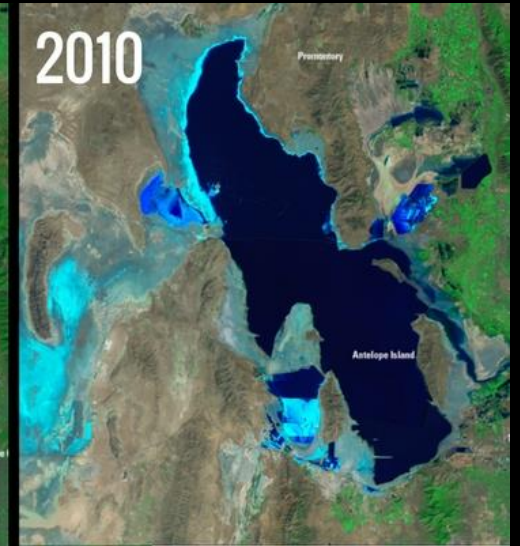- Drinking and Irrigation water supply.

Environmental benefits:

- Ease the Impacts of Floods and Droughts.
- Replenish groundwater.
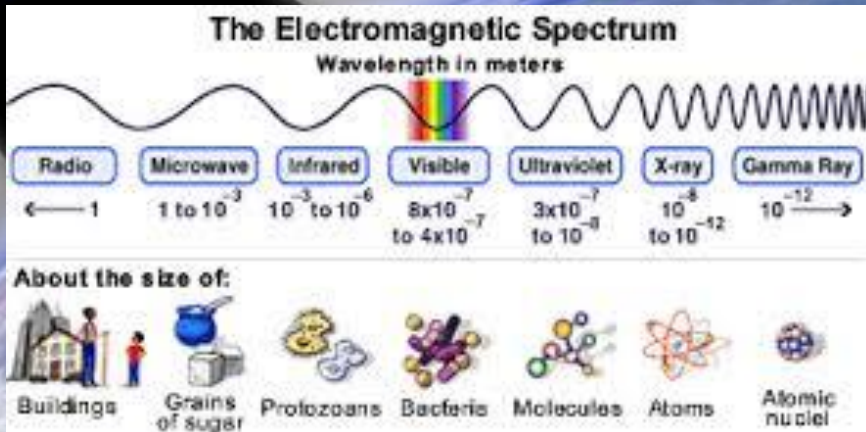- Preserve biodiversity and habitat of the area.

What Would We Be Looking For?

- Surface area change.
- Turbidity/Sedimentation.
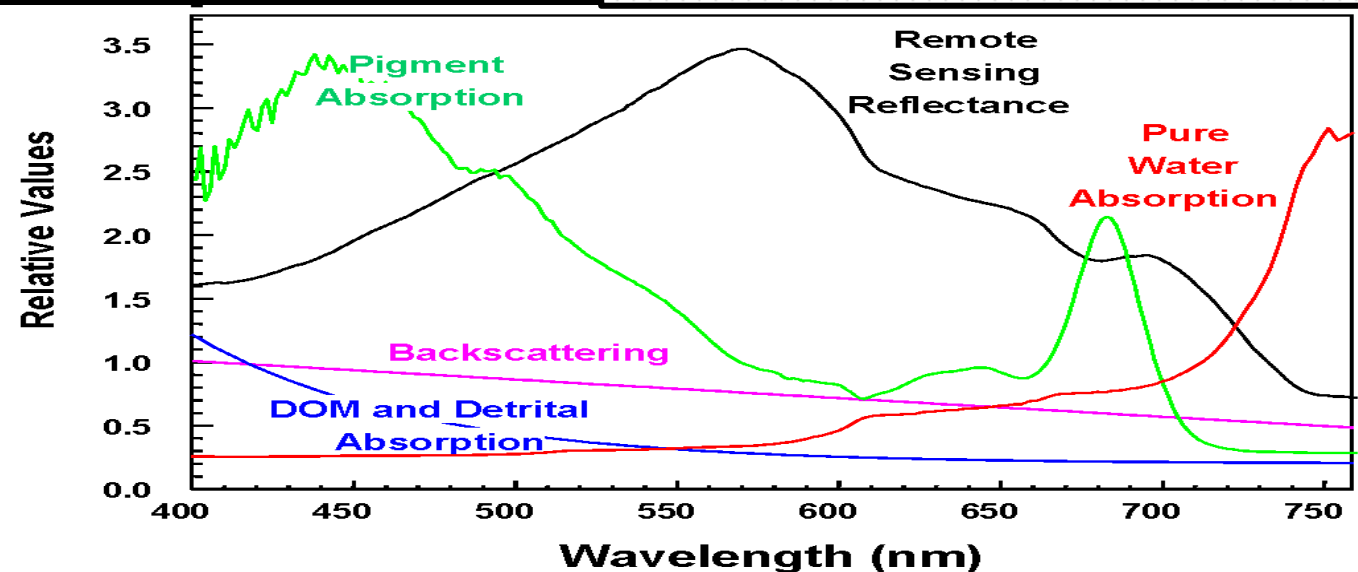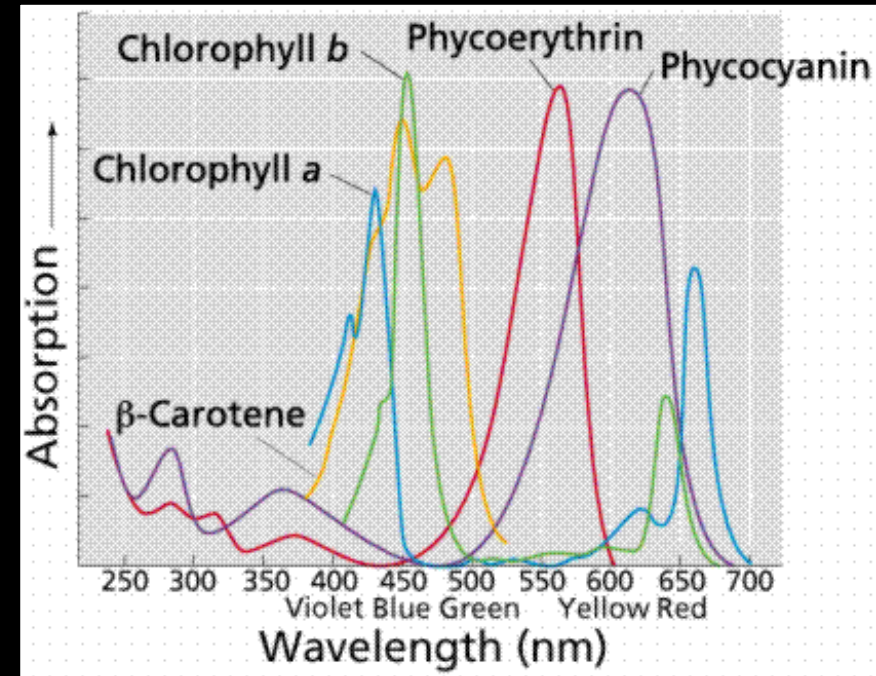- Algal blooms (eutrophication).

How Would We Be Doing So?

- 10 lakes would be picked around the globe.
- Landsat, MODIS, and SAR and any in situ data.
- Period of around 20 years.

The Electromagnetic Spectrum

How Would We Be Doing So?

- Using GIS and MATLAB.

- Satellite imagery to estimate the water surface area difference.

- The water quality analysis will be based on water color and the Inherent Optical Properties (IOP).

ANY QUESTION ?