Introduction

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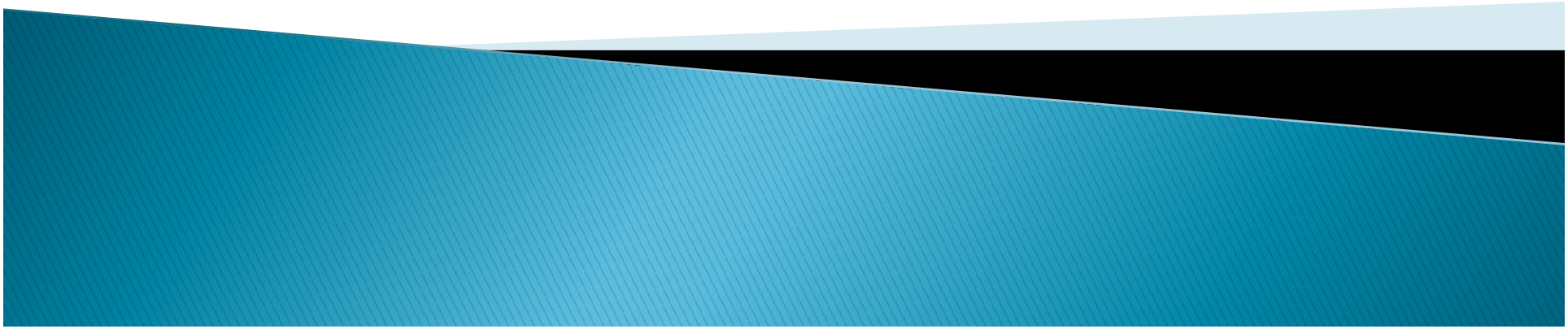
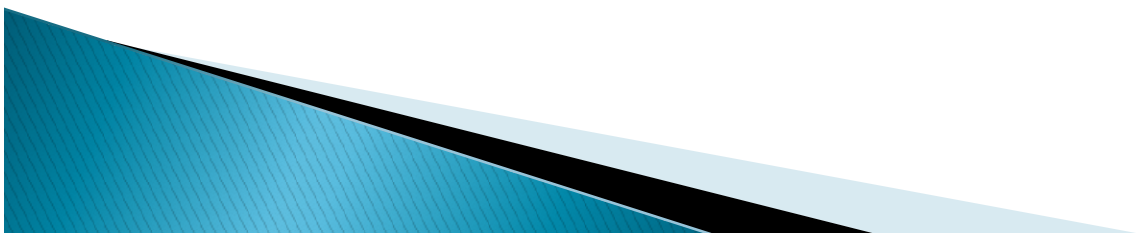


Near-real time forest change detection using planetscope imagery

Summery

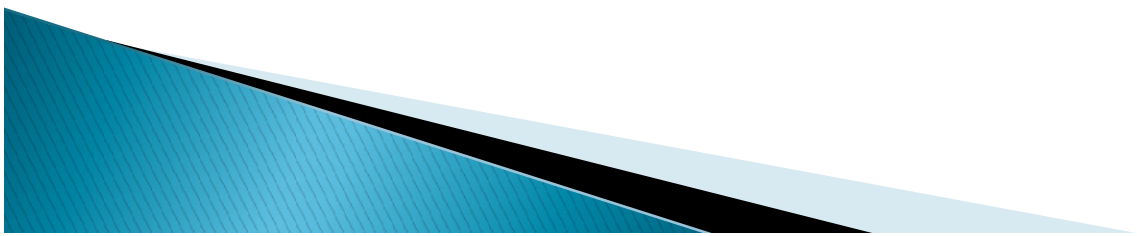
Change Detection

- Change detection is the process of identifying difference in the state of the object by observing it at different time.



Application of change detection

- Land use and Land cover change
- Forest or vegetation change .
- Deforestation and regeneration.
- Landscape change
- Urban change
- Environmental change etc.



Forest change (causes)

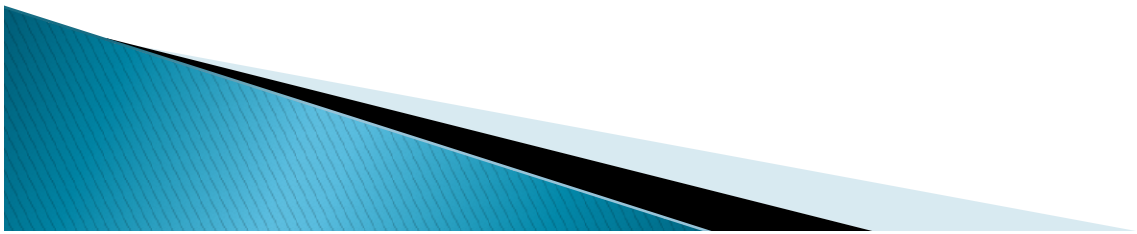
- Clearance vast area.
- Population explosion
- Wood uses
- Environmental pollution
- Etc

Planetscope

- It is sensor used to capture picture of the earth.
- It is composed by more 120 optical satellites
- First launched in 2015.
- Image capture capacity 200 million kilometers square every day.
- This sensor capture four different multispectral bands.
- The bands consist of red, blue, green, and near-infrared.

Diameter of spectral bands

- Blue: 455–515 nm
- Green: 500–590 nm
- Red: 590–670 nm
- Near-infrared: 780–860 nm



Specification

- Resolution 3-5 m
- Revisit frequency: Daily
- Orbit altitude: 475 km
- Orbit type: sun-asynchronous
- Orbit inclination: 98 degree
- Equator crossing time: 9:30-11:30 am