**Methodology**

**ISRO data use**

1. India district boundary shapefile (https://iitb-isro-aicte-mapathon.fossee.in/home#resources)

2. WMS Layer of LULC (50K) Himachal Pradesh 2005-06 (WMS Layer Name- lulc:HP\_LULC50K\_1112)

3. WMS Layer of LULC (50K) Himachal Pradesh 2011-12 (WMS Layer Name- lulc:HP\_LULC50K\_1516)

4. WMS Layer of LULC (50K) Himachal Pradesh 2015-16 (WMS Layer Name- lulc:HP\_LULC50K\_0506)

**Specific Steps in GIS**

1. Getting the vector layer for Mandi district from India district boundary shapefile.

2. Downloading the WMS Layer of LULC (50K) Himachal Pradesh 2005-06 locally on the system and extracting the raster layer of Mandi district from it.

3. Downloading the WMS Layer of LULC (50K) Himachal Pradesh 2011-12 locally on the system and extracting the raster layer of Mandi district from it.

4. Downloading the WMS Layer of LULC (50K) Himachal Pradesh 2015-16 locally on the system and extracting the raster layer of Mandi district from it.

**Complexities Involved**

1. Adding the LULC maps of different years on the same canvas in QGIS composer.

2. Getting the legend for downloaded WMS Layers.

3. Extracting Raster Layer for Mandi from WMS Layer of Himachal Pradesh.

**Application and Uses of LULC Maps**

1. Predict the change in LULC in coming years.

2. We can make plans for sustainable development in coming years.

3. Getting the statistics of Wasteland, we can make it more valuable by converting it into built-in area.