**DATA USED AND METHODOLOGY FOR LAND USE LAND COVER MAPPING OF CHITRADURGA DISTRICT USING QGIS SOFTWARE**

* **ISRO DATA USED**

LISS III data were downloaded from BHUVAN site for Land use land cover change mapping of Chitradurga District of Karnataka. 21 scenes of LISS III were used for mapping of each year (2011 and 2013).

* **METHODOLOGY**

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| 1. DOWNLOAD LISS 3 IMAGES OF 2011 AND 2013 YEARS |
| 1. STACKING, FCC GENERATION AND SUBSET |
| 1. SUPERVISED CLASSIFICATION ( LAND USE LAND COVER MAP |
| 1. INSTALLATION OF MOLUSCE PLUGIN |
| 1. INPUT BOTH IMAGES IN MOULSCE TOOL AND CHECK GEOMETRY |
| 1. AREA CHANGE ANALYSIS AND CHANGE DETECTION MAP |
| 1. LAYOUT |

**MOLUSCE**

**MOLUSCE** (Modules for Land Use Change Evaluation) is a user-friendly plug-in for QGIS 2.0 and above. MOLUSE is designed to analyze, model and simulate land use/cover changes. The plug-in incorporates well-known algorithms, which can be used in land use/cover change analysis, urban analysis as well as forestry applications and projects. MOLUSCE user interface offers an easy-to-use interface with specific modules and functions. Following is a brief description of basic modules in MOLUSCE.

**Input module** - Land use/cover maps from different epochs, biophysical and socio-economic driving factor data such as road network, rivers, topography, population etc., are loaded in the input module.

**Area change analysis** -Computes land use/cover changes between two time periods (T1 and T2). Land use/cover change transition matrices as well as land use change maps are produced.

**Modelling methods** - Four methods, namely Artificial Neural Networks (ANN), Logistic Regression (LR), Multi-Criteria Evaluation (MCE) and Weights of Evidence (WoE) are used for modelling land use/cover change transition potential.

* **COMPLEXITIES**

1. When you are doing change detection, be careful with land use land cover classes’ names. Number of classes and names should be same in both the year of land use land cover map.
2. Classes should be arrange in the same order in both the map ( Ex: water body is the first class in both the years map, so that when you will run it MOLUSCE for area statistics, plug-in compares the same classes.