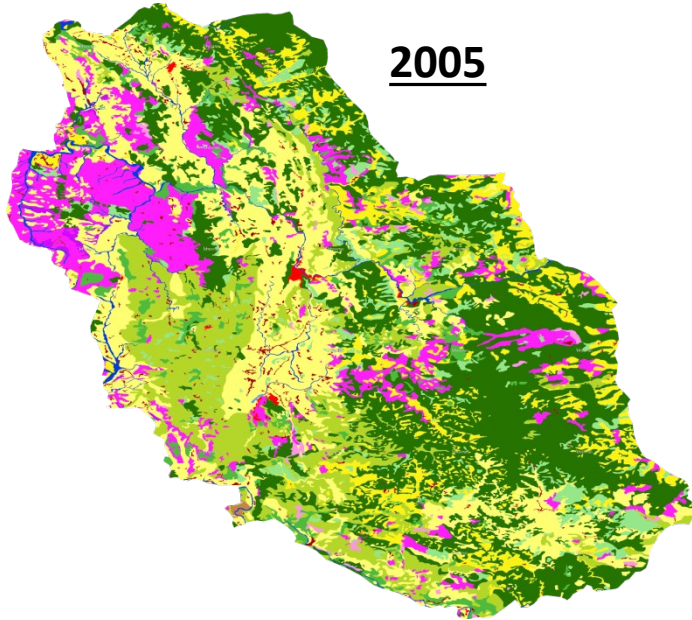
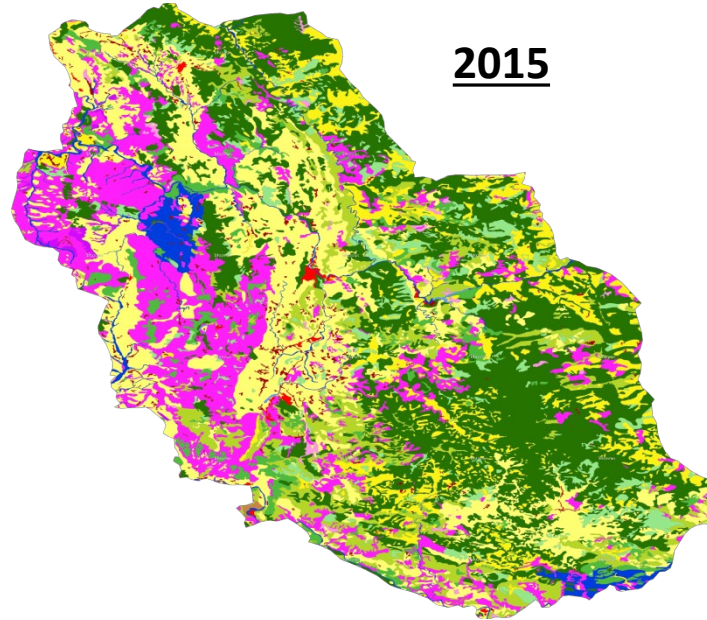


# LULC MAPS OF MANDI

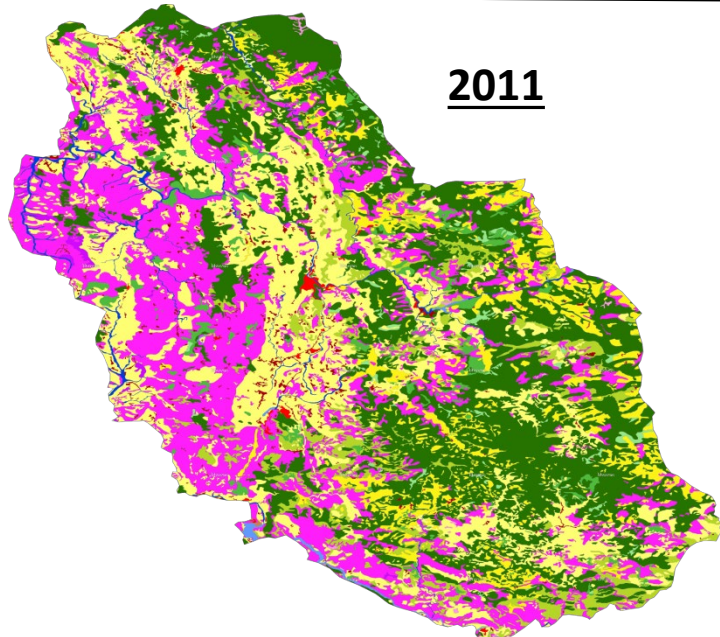
**2005**



**2015**



**2011**



## Legend

- Builtup,Urban
- Builtup,Rural
- Builtup,Mining
- Agriculture,Crop land
- Agriculture,Plantation
- Agriculture,Fallow
- Agriculture,Current Shifting Cultivation
- Forest,Evergreen / Semi evergreen
- Forest,Deciduous
- Forest,Forest Plantation
- Forest,Scrub Forest
- Forest,Swamp/Mangroves
- Grass/Grazing
- Barren/unculturable/Wastelands,Salt Affected Land
- Barren/unculturable/Wastelands,Gullied/Ravinous Land
- Barren/unculturable/Wastelands,Scrub land
- Barren/unculturable/Wastelands,Sandy area
- Barren/unculturable/Wastelands,Barren rocky
- Rann
- Wetlands/Water Bodies,Inland Wetland
- Wetlands/Water Bodies,Coastal Wetland
- Wetlands/Water Bodies,River/Stram/Canals
- Wetlands/Water Bodies,Reservoir/Lakes/Ponds
- Snow and Glacier

**SCALE- 1:50000**

**Team Name:** Little Green

**Topic:** LULC Map

**Team members:** Lalita Gupta, Juhi Chatterjee, Devansh Goel

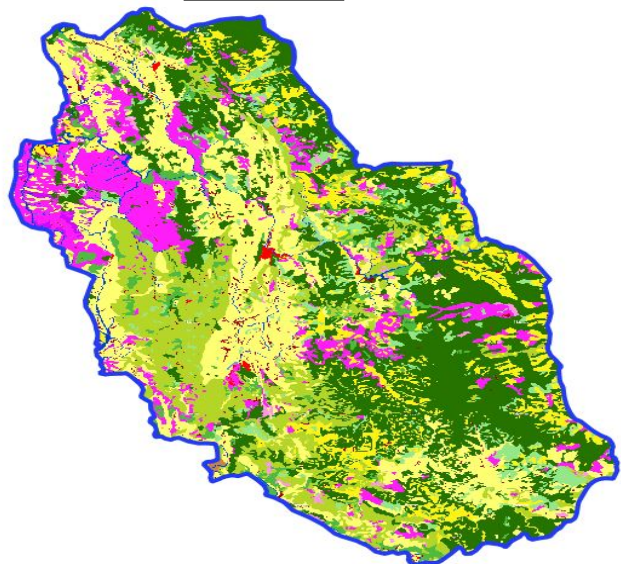
**Contact:** 7838869212(Devansh Goel)

**E-mail:** [lgupta0731@gmail.com](mailto:lgupta0731@gmail.com),  
[juhichatterjee2002@gmail.com](mailto:juhichatterjee2002@gmail.com)



# LULC Change for 2005-06 and 2011-12

2005-06

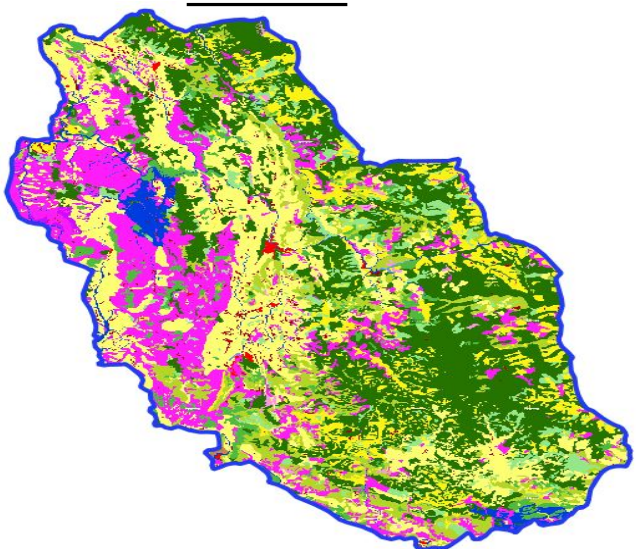


## Legend

- Builtup,Urban
- Builtup,Rural
- Builtup,Mining
- Agriculture,Crop land
- Agriculture,Plantation
- Agriculture,Fallow
- Agriculture,Current Shift
- Forest,Evergreen / Semi evergreen
- Forest,Deciduos
- Forest,Forest Plantation
- Forest,Scrub Forest
- Forest,Swamp/Mangroves
- Grass/Grazing
- Barren/unculturable/Wastelands,Salt Affected Land
- Barren/unculturable/Wastelands,Gullied/Ravinous Land
- Barren/unculturable/Wastelands,Scrub land
- Barren/unculturable/Wastelands,Sandy area
- Barren/unculturable/Wastelands,Barren rocky
- Rann
- Wetlands/Water Bodies,Inland Wetland
- Wetlands/Water Bodies,Coastal Wetland
- Wetlands/Water Bodies,River/Stram/Canals
- Wetlands/Water Bodies,Reservoir/Lakes/Ponds
- Snow and Glacier



2011-12



**Team Name:** Little Green

**Topic:** LULC Map

**Team members:** Lalita Gupta, Juhi Chatterjee, Devansh Goel

**Contact:** 7838869212(Devansh Goel)

**E-mail:** [lgupta0731@gmail.com](mailto:lgupta0731@gmail.com),  
[juhichatterjee2002@gmail.com](mailto:juhichatterjee2002@gmail.com)

# Map description and Analysis

## Introduction

Mandi is a district in Himachal Pradesh having an area of 3950sq. km.

**Hotspots(Huge change) in LULC for 2005 and 2011**

## Build-up/Urban

In 2005 built-up area was 8.86sq. km whereas it changes to 12.17sq km in 2011.

## Forest/Scrub Forest

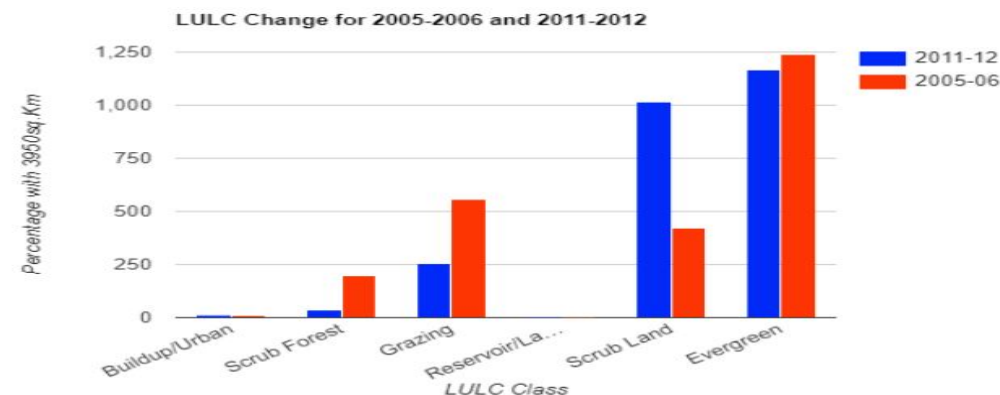
In 2005 Scrub Forest covered an area of 199.84sq. Km whereas it changes to 35.67sq km in 2011.

## Grass/Grazing

In 2005 Scrub Forest covered an area of 554sq. Km whereas it changes to 35.67sq km in 2011.

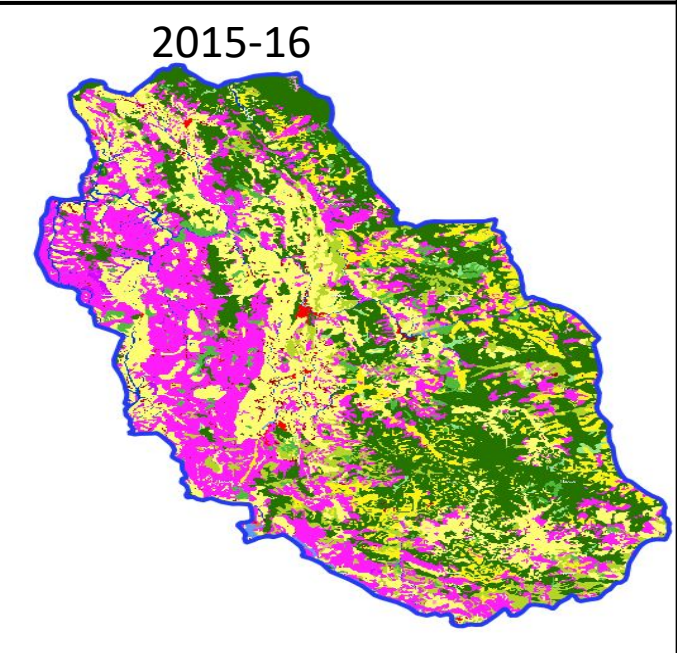
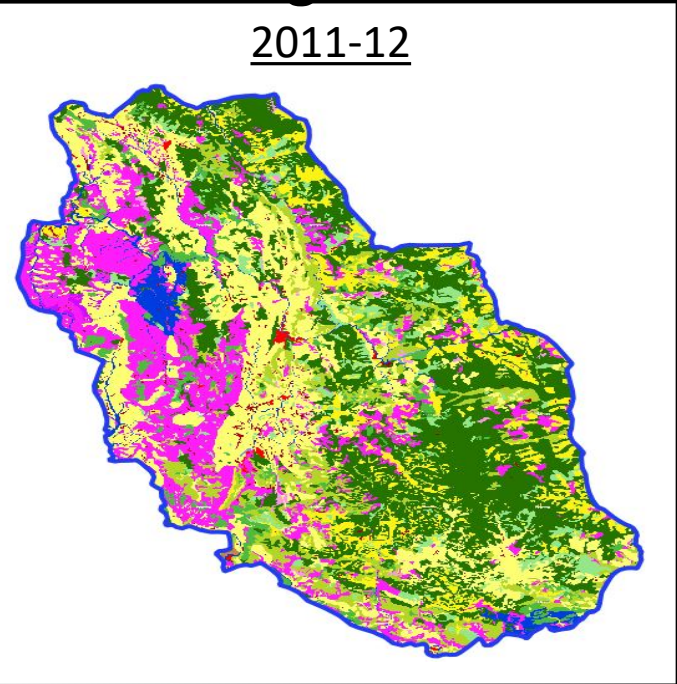
## Reservoir/Lakes/Ponds

In 2005 Scrub Forest covered an area of 0.49sq. Km whereas it changes to 2.34sq km in 2011.





# LULC Change for 2011-12 and 2015-16



**Legend**

- Builtup,Urban
- Builtup,Rural
- Builtup,Mining
- Agriculture,Crop land
- Agriculture,Plantation
- Agriculture,Fallow
- Agriculture,Current Shifting Cultivation
- Forest,Evergreen / Semi evergreen
- Forest,Deciduos
- Forest,Forest Plantation
- Forest,Scrub Forest
- Forest,Swamp/Mangroves
- Grass/Grazing
- Barren/unculturable/Wastelands,Salt Affected Land
- Barren/unculturable/Wastelands,Gullied/Ravinous Land
- Barren/unculturable/Wastelands,Scrub land
- Barren/unculturable/Wastelands,Sandy area
- Barren/unculturable/Wastelands,Barren rocky
- Rann
- Wetlands/Water Bodies,Inland Wetland
- Wetlands/Water Bodies,Coastal Wetland
- Wetlands/Water Bodies,River/Stram/Canals
- Wetlands/Water Bodies,Reservoir/Lakes/Ponds
- Snow and Glacier



**Team Name:** Little Green  
**Topic:** LULC Map  
**Team members:** Lalita Gupta, Juhi Chatterjee, Devansh Goel  
**Contact:** 7838869212(Devansh Goel)  
**E-mail:** [lgupta0731@gmail.com](mailto:lgupta0731@gmail.com),  
[juhichatterjee2002@gmail.com](mailto:juhichatterjee2002@gmail.com)

## Map description and Analysis

**Hotspots(Huge change) in LULC for 2011-12 and 2015-16**

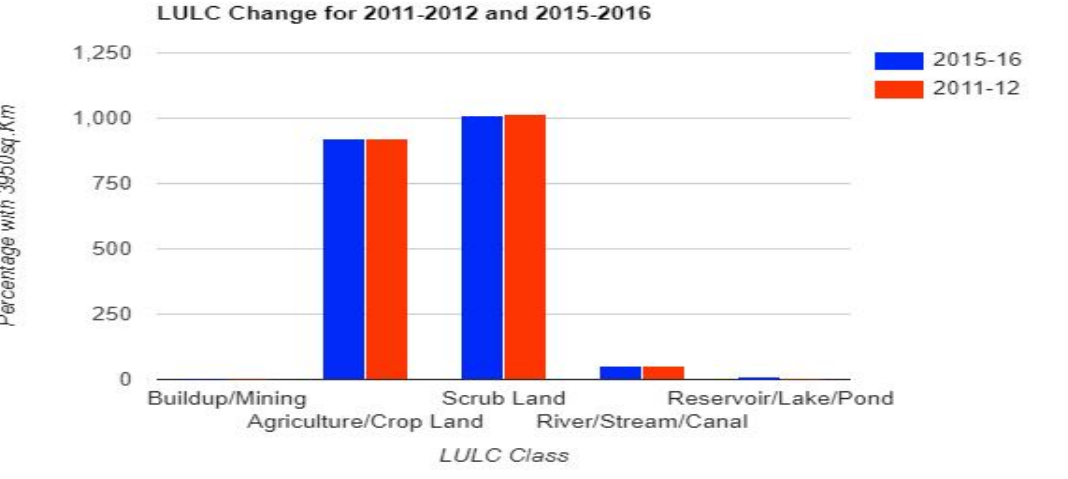
**Builtup/Mining**  
In 2011 Mining area was 3.62sq. km whereas it changes to 1.54sq km in 2015.

**Agriculture/Crop Land**  
In 2011 crop land was 921.55sq. km whereas it changes to 920.5sq km in 2015.

**Scrub Land**  
In 2011 scrub land was 1014.09sq. km whereas it changes to 1012.48sq km in 2015.

**Reservoir/Lake/Pond**  
In 2011 reservoir/lake/pond area was 2.34sq. km whereas it changes to 10.3sq km in 2015.

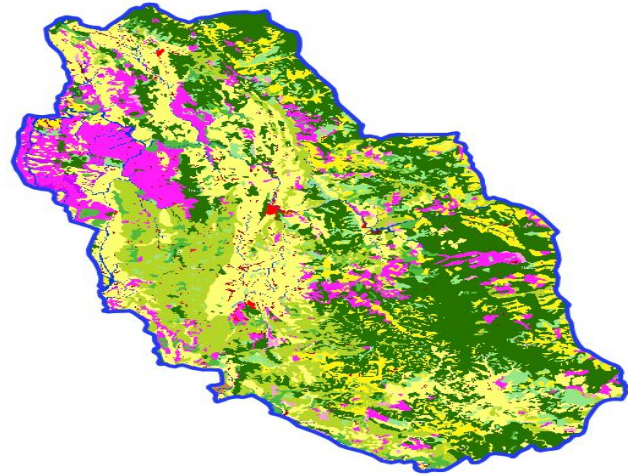
**LULC Change for 2011-2012 and 2015-2016**



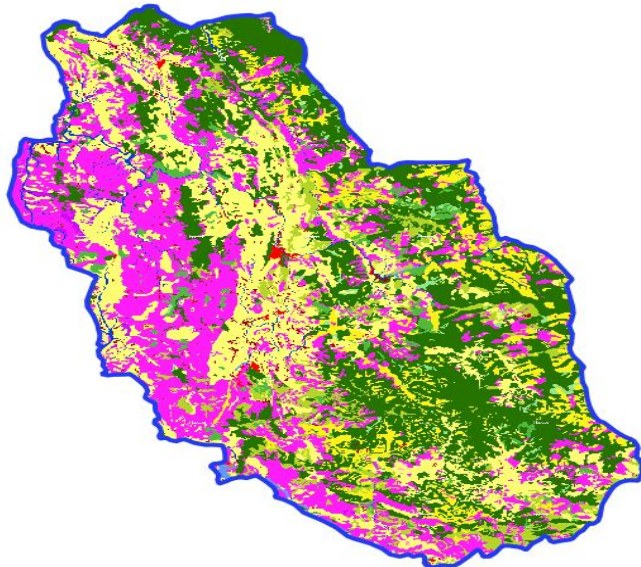
LULC Class	2015-16 (%)	2011-12 (%)
Builtup/Mining	~920	~920
Agriculture/Crop Land	~920	~920
Scrub Land	~1012	~1014
Reservoir/Lake/Pond	~10	~2

# LULC Change for 2005-06 and 2015-16

**2005-06**



**2015-16**



## Legend

- Builtup, Urban
- Builtup, Rural
- Builtup, Mining
- Agriculture, Crop land
- Agriculture, Plantation
- Agriculture, Fallow
- Agriculture, Current Shifting Cultivation
- Forest, Evergreen / Semi evergreen
- Forest, Deciduous
- Forest, Forest Plantation
- Forest, Scrub Forest
- Forest, Swamp/Mangroves
- Grass/Grazing
- Barren/unculturable/Wastelands, Salt Affected Land
- Barren/unculturable/Wastelands, Gullied/Ravinous Land
- Barren/unculturable/Wastelands, Scrub land
- Barren/unculturable/Wastelands, Sandy area
- Barren/unculturable/Wastelands, Barren rocky
- Rann
- Wetlands/Water Bodies, Inland Wetland
- Wetlands/Water Bodies, Coastal Wetland
- Wetlands/Water Bodies, River/Stram/Canals
- Wetlands/Water Bodies, Reservoir/Lakes/Ponds
- Snow and Glacier



**Team Name:** Little Green

**Topic:** LULC Map

**Team members:** Lalita Gupta, Juhi Chatterjee, Devansh Goel

**Contact:** 7838869212 (Devansh Goel)

**E-mail:** [lgupta0731@gmail.com](mailto:lgupta0731@gmail.com),  
[juhichatterjee2002@gmail.com](mailto:juhichatterjee2002@gmail.com)

## Map description and Analysis

**Hotspots (Huge change) in LULC for 2005-06 and 2015-16**

### Agriculture/ Plantation

In 2005 Plantation area was 367.91sq. km whereas it changes to 306.43sq km in 2015.

### Scrub Forest

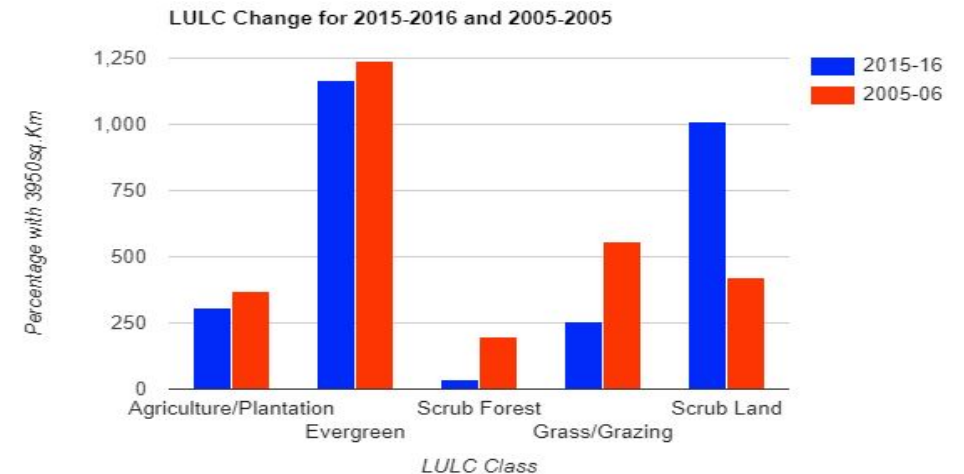
In 2005 Scrub Forest area was 199.84sq. km whereas it changes to 35.67sq km in 2015.

### Grass/Grazing

In 2005 Grazing area was 554.94sq. km whereas it changes to 257.43sq km in 2015.

### Scrub Land

In 2005 Scrub Land area was 423.17sq. km whereas it changes to 1012.48sq km in 2015.





LULC DATASET AND CHANGES IN MANDI STATISTICS													
LULC CLASSES/YEAR		2005-06		2011-12		2015-16		Diff for 2011-12 and 2015-16		Diff for 2005-06 and 2011-12		Diff for 2005-06 and 2015-16	
Level-1	Level-2	Area(sq km)	% with 3950 sq. km	Area(sq km)	% with 3950 sq. km	Area(sq km)	% with 3950 sq. km	Area(sq km)	% change in area	Area(sq km)	% change in area	Area(sq km)	% change in area
Builtup	Urban	8.86	0.224303797	12.17	0.308101266	12.29	0.311139241	0.12	0.986031224	3.31	37.35891648	3.43	38.71331828
	Mining	2.84	0.071898734	3.62	0.09164557	1.54	0.038987342	-2.08	-57.45856354	0.78	27.46478873	-1.3	-45.77464789
	Rural	44.5	1.126582278	44.44	1.125063291	44.47	1.125822785	0.03	0.067506751	-0.06	-0.134831461	-0.03	-0.06741573
Agriculture	Plantation	367.91	9.314177215	306.86	7.768607595	306.43	7.757721519	-0.43	-0.140129049	-61.05	-16.59373216	-61.48	-16.71060857
	Crop Land	869.19	22.00481013	921.55	23.33037975	920.5	23.30379747	-1.05	-0.113938473	52.36	6.023999356	51.31	5.90319723
	Fallow	0	0	0.63	0.015949367	0.63	0.015949367	0	0	0.63	0	0.63	0
Forest	Evergreen/Semi evergreen	1237.72	31.33468354	1168.45	29.58101266	1167.84	29.56556962	-0.61	-0.052205914	-69.27	-5.59658081	-69.88	-5.645864978
	Deciduous	146.33	3.704556962	109.61	2.774936709	109.38	2.769113924	-0.23	-0.209834869	-36.72	-25.09396569	-36.95	-25.25114467
	Scrub Forest	199.84	5.059240506	35.67	0.903037975	35.67	0.903037975	0	0	-164.17	-82.15072058	-164.17	-82.15072058
Grass	Grazing	554.94	14.04911392	257.68	6.523544304	257.43	6.51721519	-0.25	-0.097019559	-297.26	-53.5661513	-297.51	-53.61120121
Barren/Uncultured/													
Wasteland	Gullied/Ravinous Land	16.07	0.406835443	15.78	0.399493671	15.78	0.399493671	0	0	-0.29	-1.804604854	-0.29	-1.804604854
	Scrub Land	423.17	10.71316456	1014.09	25.67316456	1012.48	25.63240506	-1.61	-0.158763029	590.92	139.6412789	589.31	139.2608172
	Sandy Area	0.11	0.00278481	0.13	0.003291139	0.13	0.003291139	0	0	0.02	18.18181818	0.02	18.18181818
	Barren Rocky	26.01	0.658481013	5.6	0.141772152	5.56	0.140759494	-0.04	-0.714285714	-20.41	-78.4698193	-20.45	-78.62360631
Wetlands/													
Water Bodies	River/Stream/Canals	51.77	1.310632911	51.37	1.300506329	49.55	1.25443038	-1.82	-3.542923886	-0.4	-0.772648252	-2.22	-4.288197798
	Reservoir/Lakes/Ponds	0.49	0.012405063	2.34	0.059240506	10.3	0.260759494	7.96	340.1709402	1.85	377.5510204	9.81	2002.040816

**Team Name:** Little Green  
**Topic:** LULC Map  
**Team members:** Lalita Gupta, Juhi Chatterjee, Devansh Goel  
**Contact:** 7838869212 (Devansh Goel)  
**E-mail:** [lgupta0731@gmail.com](mailto:lgupta0731@gmail.com),  
[juhichatterjee2002@gmail.com](mailto:juhichatterjee2002@gmail.com)