**Table S1** Details of satellite data used for Land use land cover map synthesis.

| Satellite | Date of acquisition | |
|---|---|---|
| | **Dharamsala** | **Pithoragarh** |
| ASTER (15 m) | 19 April 2002 | 20 April 2001 |
| | 17 March 2010 | 07 April 2008 |
| Sentinel 2-a (10 m) | 28 April 2016 | 22 April 2016 |
| | 03 April 2019 | 29 April 2019 |

**Table S2** LULC classes used in current study. Note: Here the classes with an asterisk (*) are of both Pithoragarh and Dharamsala, except waterbody.

| LULC category | Description |
|---|---|
| Deodar | Forest type dominated by *Cedrus deodara* |
| Oak* | Forest type dominated by *Quercus* spp |
| Pine* | Forest type dominated by *Pinus Roxburghii* |
| Oak mixed | Mixed forest type with *Quercus* spp and high altitude morinda spruce (*Picea smithiana*) |
| Pine mixed | Mixed forest type with *Pinus Roxburghii* and *Quercus* spp |
| Mixed forest | Mixed forest type with local deciduous vegetation including Prunus spp. (pajja), *Bauhinia variegate* (kachnar), duri along with patches of tea gardens and exotic *Grevillea robusta* (Himalayan silver oak). |
| Vegetation* | Sparse/low density trees within and around urban and agricultural regions |
| Waterbody* | Pithoragarh lake and streams<br>Dharamsala higher altitude region covered by glaciers |
| Barren land* | Barren lands including non-vegetated exposed rocks, unused and unmanaged regions sandy areas that are un-irrigated lands within and around urban region. |
| Cropland* | Currently cultivated agricultural land |
| Fallow* | Currently non-cultivated agricultural land |
| Open area* | Open areas that are un-irrigated lands within and around urban region. |
| Built up* | Residential, commercial, industrial, artificial or road infrastructures |

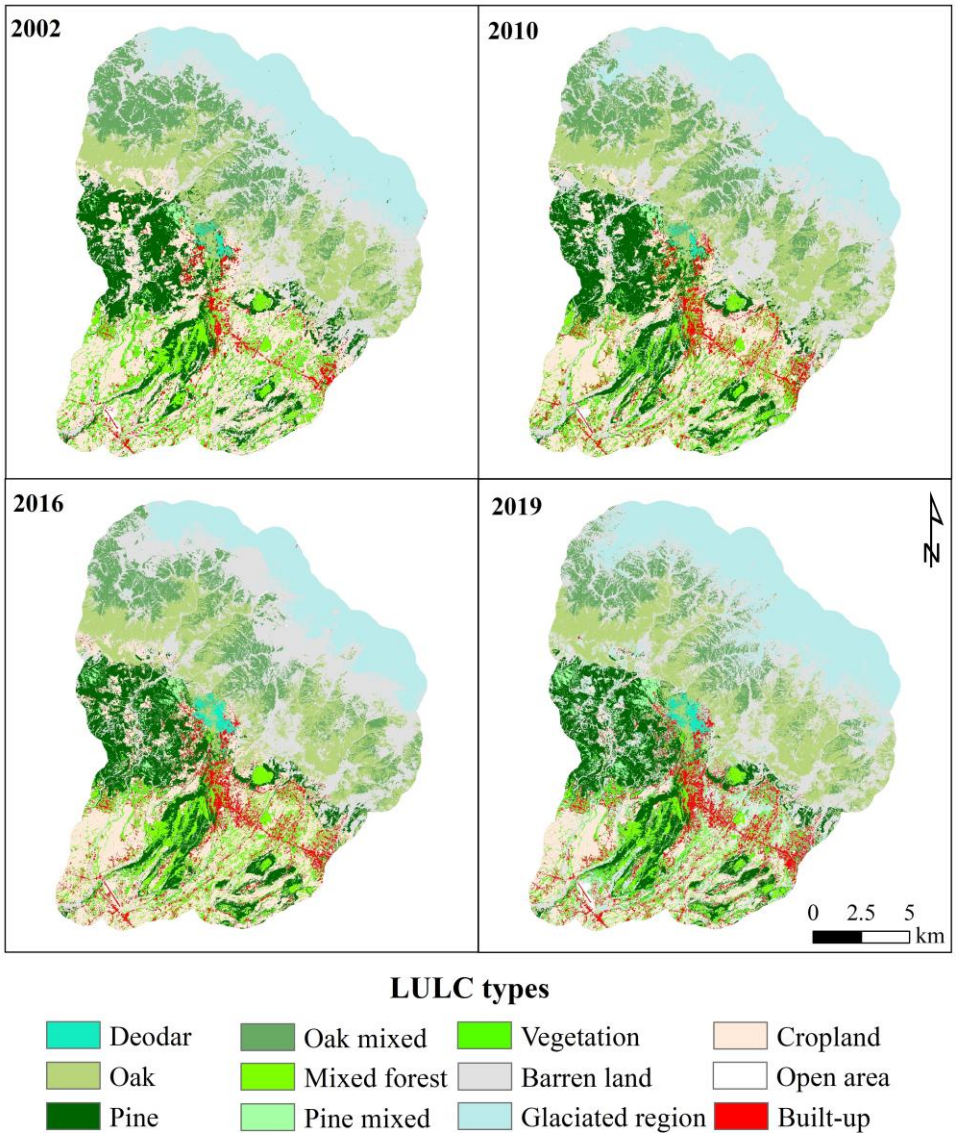


**Figure S1** Land use land cover changes in Dharamsala during years 2002, 2010, 2016 and 2019.

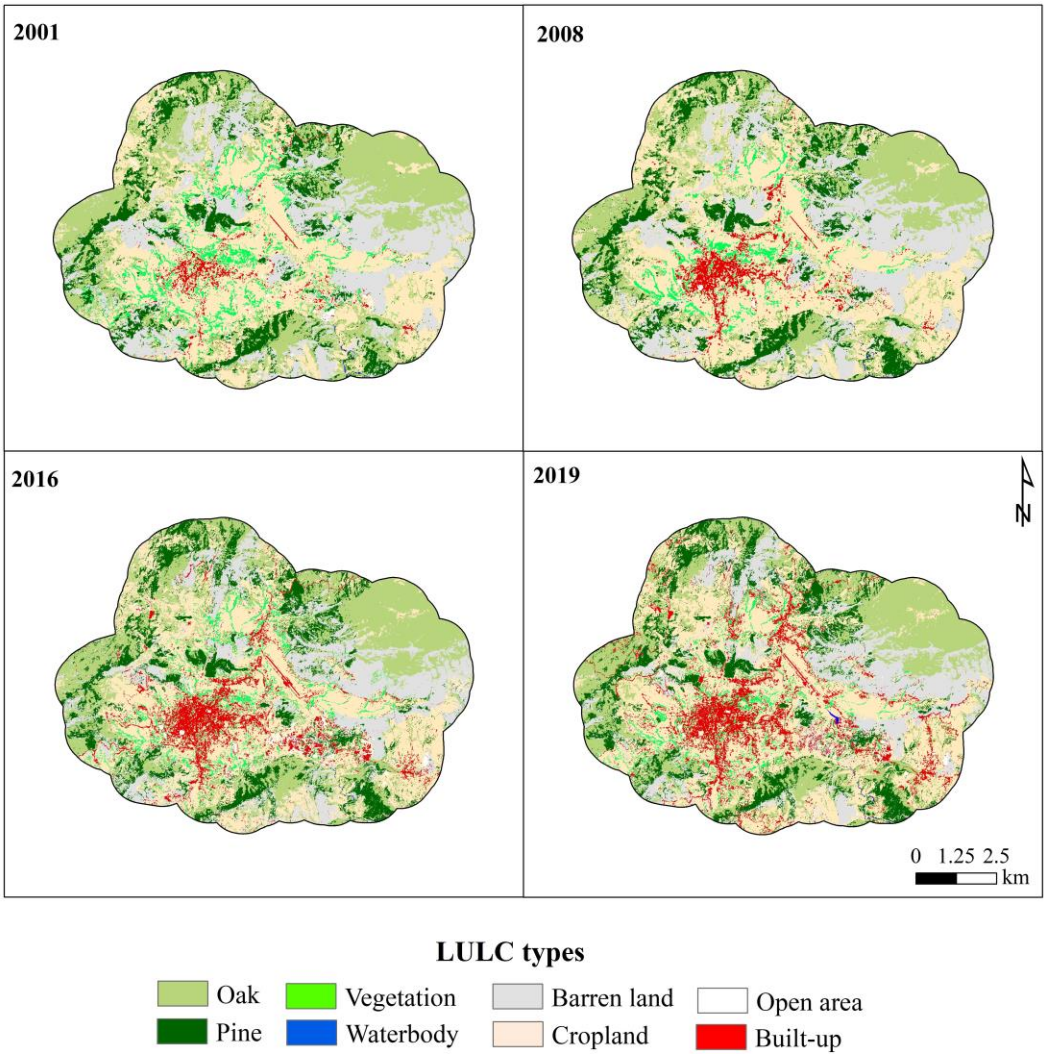


**Figure S2** Land use land cover changes in Pithoragarh during years 2001, 2008, 2016 and 2019.

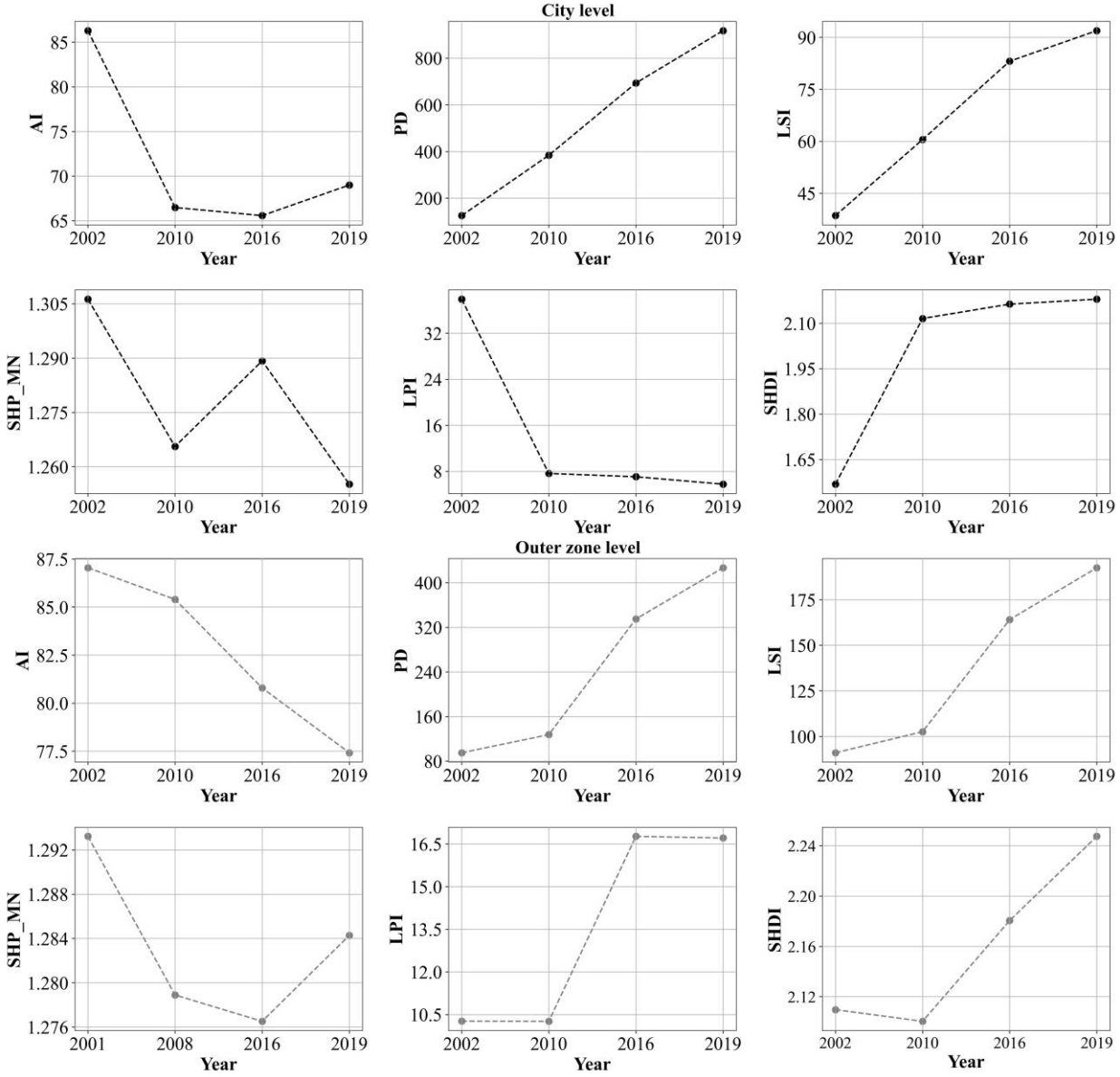


**Figure S3** Temporal series of landscape metrics of Dharamsala quantified at landscape level.

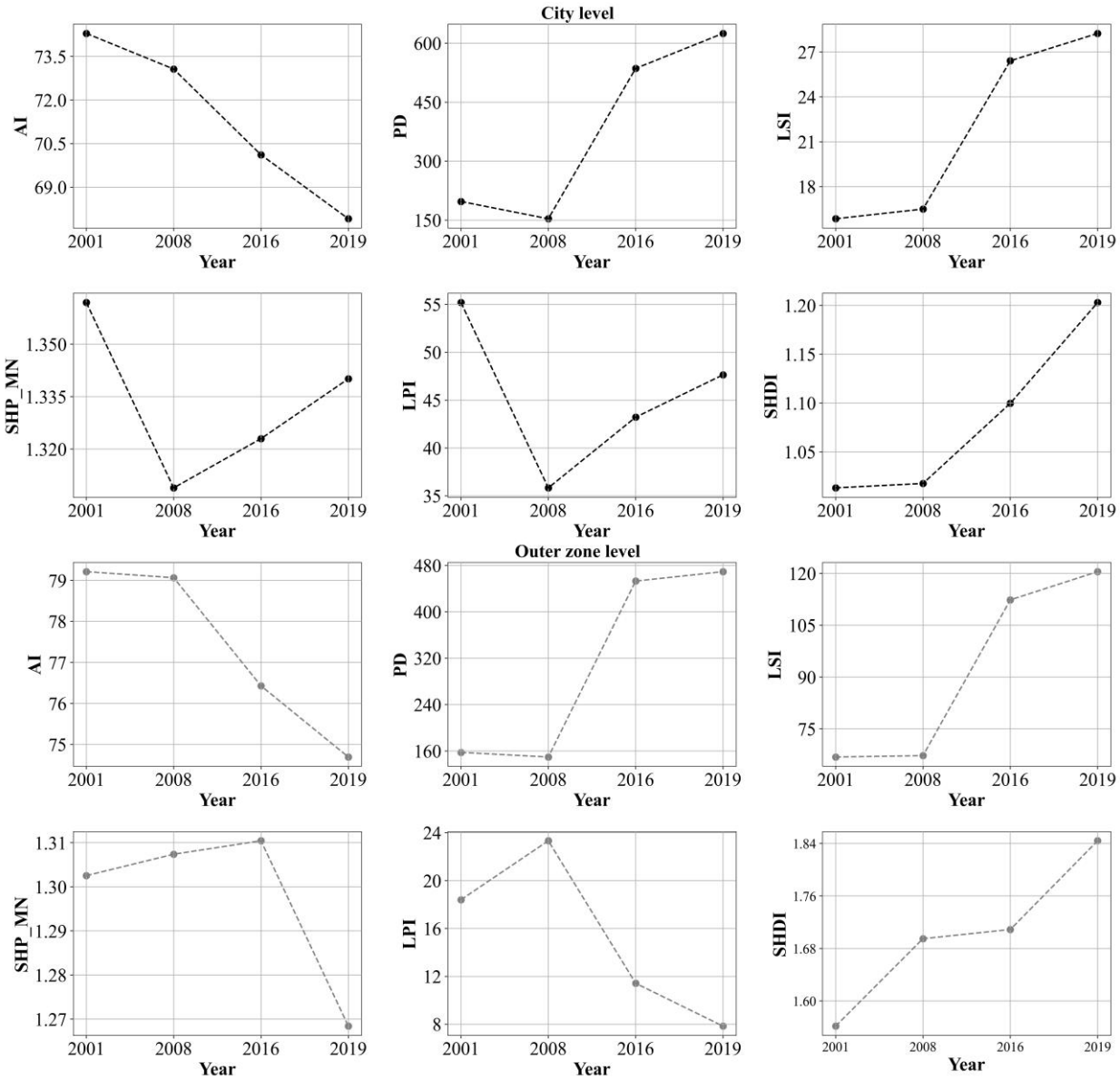


**Figure S4** Temporal series of landscape metrics of Pithoragarh quantified at landscape level.