



ENVIS CENTRE, CHANDIGARH

# NewsLetter

Paryavaran - Patra

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## Chandigarh State of Environment



### EDITORIAL

### LAND USE PATTERN AND CONSERVATION, CHANDIGARH

If air is considered essential for life, land is the platform for the same. Land provides base to all flora- fauna and even under the water, it is the land where flora roots to regulate the life cycle of the fauna. It is an essential resource for one's existence & livelihood. The Union Territory of Chandigarh has an area of 114 sq. km. In addition to this area, Sukhna Wild Life Sanctuary in U.T. Chandigarh spreaded across 26<sup>o</sup> sq. Km.



City beautiful has population of 10, 54, 686 lakhs (Census 2011) which has already crossed the mark of 1 million. Chandigarh is the capital of two states, Punjab and Haryana and enjoys the status of Union Territory as well. It has emerged as a regional hub for education, health, information and technology, and service sector etc. Chandigarh is ranked highest in Human Development Index and Quality of Life in the country. In Chandigarh, the majority of land is under Urban area (97%). Total area under agricultural crops is shrunk to negligible. Total Green Cover in the city, including Sukhna Wild Life Sanctuary, is 38.26% and area under water bodies is 3.1%, out of which 1.6% area is under Sukhna Wetland. The rest of the area is under vacant land and miscellaneous uses. Chandigarh has witnessed rapid population growth from 1961 to 2011 i.e. From 1,19,881 to 1054986. This pressure has driven change in land use pattern over the period of time.

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### Institutional Framework

Land use in Chandigarh and factors which cause its degradation are controlled by different departments as mentioned in the table :



### Existing Land Use

Important components of major land use of Chandigarh are discussed below:

#### Urban Area

Maximum land use of Chandigarh is in urban category. Census 2011 reveals that 97.3% households are in urban area and 2.7% in rural area. Out of total Area i.e. 28170 Acres 4.75 % is under commercial Area., 5.6% is under Defense, 7.5% is under Forest, 4.7% is under Industrial Area, 1% is under Public Utilities, 10.5% is under Public/Semi Public, 1.1% is under Railways, 8.6% is under Recreational Use, 37.8% is under Residential Area, and 7.3% is under Transport. Rest of the 10.9% of total land is vacant. An additional area of 25.42 sq. km. was acquired by the erstwhile Punjab Government from 1962 to 1964 for soil conservation works.

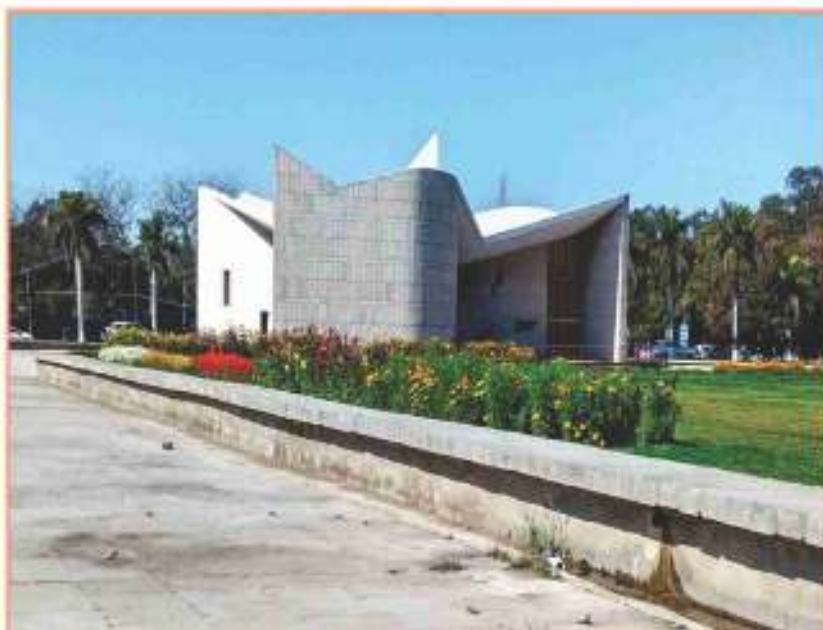
Source: Sr. Town Planner, Chandigarh

### Land Use pattern of Chandigarh

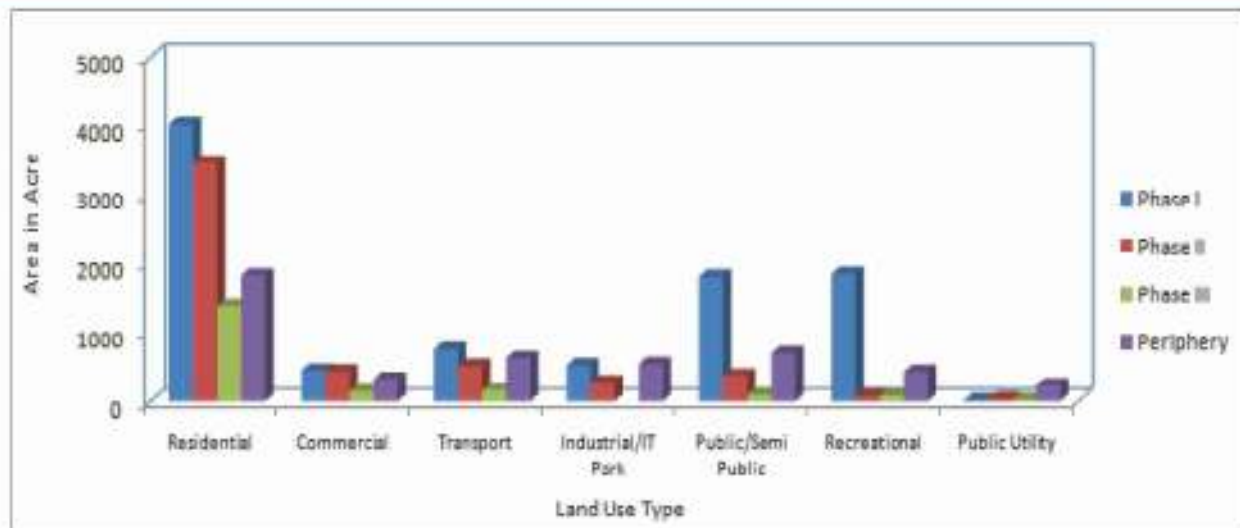
Land use pattern in Chandigarh is driven by anthropogenic activities. Nature has made indirect impact by attracting so many people from the neighboring states i.e. Punjab, Haryana, and Himachal Pardesh. A lot of commercial activities have come up in the form of industrial area and shopping complexes. Agricultural land is affected the most with increase in commercialization in Chandigarh. More population means more of transportation and traffic which triggers change in land use pattern for locomotion. Also, waste generated from industrial activities, encroachment, and urbanization impacts the land use pattern.

Available land area of Chandigarh is divided in to different categories depending upon the land use type. The development of the city was well planed in three phases(Phase I, Phase II, Phase III) with total distributed area of 28.170 acre. Phase wise distribution of the total land area of Chandigarh among different categories is described by the graph below. Out of the total area nearly 3082 acre is still lying vacant.

Land Use Type	Total Area (Acre)
Phase I	9398.82
Phase II	5158.75
Phase III	1870.53
Periphery	11741.86
Residential	10672.15
Commercial	1339.72
Transport	2046.9
Industrial/IT Park	1346.39
Public/Semi Public	2968.78
Recreational	2428.46
Public Utility	302.32
Railway Land	316.29
Total Defence	1573
Total Forest	2113.97



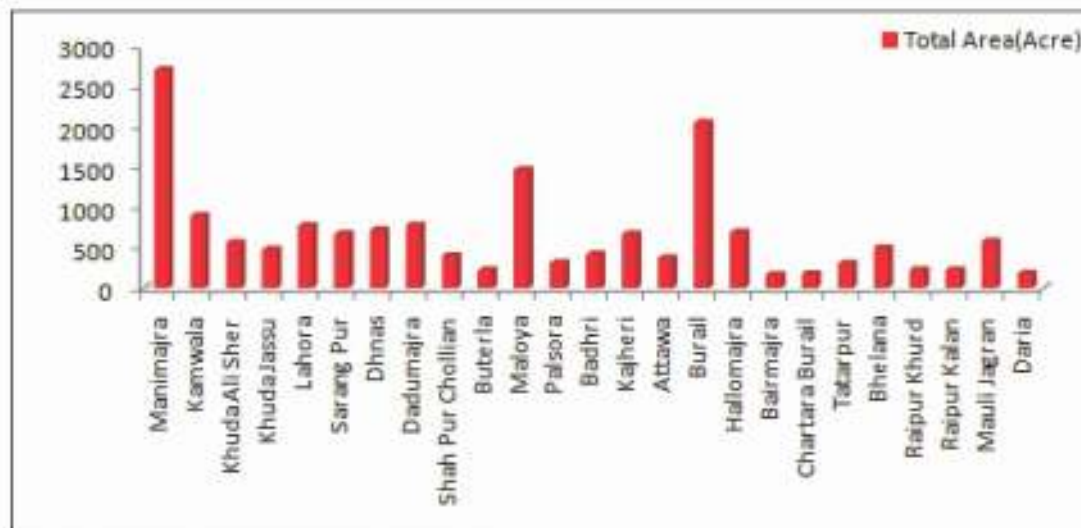
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Source: Naib Sadar Kamnaga, D.C. Office Sec-17 Chandigarh

### Land Area Under Existing Villages

Under the territory of UT Chandigarh, about 25 villages are existing with a total area of 16,597 acre. Out of which 378 acre are covered under red line area, 264.70 acre under extended abadi, 13249.05 acre is already acquired; thus the balance area is just 2,705 acre. Out of the total 25 villages, 23 villages are inhabited, 2 villages are uninhabited and 10 villages came under municipal corporation Chandigarh.



Source: Naib Sadar Kamnaga, D.C. Office Sec-17 Chandigarh

After, 2004, the acquisitions have taken place as under:

Total land acquired	635 acres
For Housing	26% ( 165. 2 acres)
For Industry, Commercial	42.83%(272 acres)
For Environment related Purpose	3.78% ( 24 acres)
For other developmental purpose	54% (343.67 acres)





Green cover of Chandigarh has increased to 38.04% of its total land mass. It covers now 53.26 Sq. Km. of total land of UT, Chandigarh. For details please refer to Chapter on Forests. Chandigarh is the greenest city of India. The credit goes to Chandigarh Administration as well as to the informed residents of the city.

### Land Classification (2010 - 2014)

Year	2010	2011	2012	2013	2014
Total Area According To Village Papers	17361	17361	17361	17361	17361
Forests	525	525	525	525	525
Not Available for Cultivation	13531	13531	13531	13531	13531
Other Uncultivated Land Excluding Fallow Lands	362	362	362	362	362
Current Fallow Lands	70	70	70	70	70
Fallow Land Other Than Current Fallow	123	123	123	123	123
Net Area Sown	2750	2750	2750	2750	2750
Total Cropped Area	4268	4231	4328	4328	4328
Area Sown More Than Once	1518	1481	1518	1518	1518
Net Irrigated Area	2750	2750	2750	2750	2750
Gross Irrigated Area	2750	2750	2750	2750	2750
Unit	Acre	Acre	Acre	Acre	Acre

### Agricultural Land Use:-

Chandigarh was planned in phases. In the first phase, 25 sectors were planned which are now increased to 56 (excluding sector 13) sectors and sector 61 and 63. Due to such fast development and urbanization, agricultural area is decreasing and simultaneously, residential area/urban population and industrial area are increasing. For Phase-III of industrial area, the vacant land has been acquired near Raipur Kalan. For IT park, land has been acquired near village Kishangarh and for Institutional/recreational sites, land has been acquired in Sarangpur. Due to expansion of Chandigarh, the cultivated area is decreasing with time. Change in land use pattern has exerted a great impact on the land of Chandigarh. Various types of houses and other commercial & recreational foundations are built up to match the needs of overgrowing population. As per record of Chandigarh Housing Board, there are 28,587 units of houses constructed since the board came into existence in 1976, under Economically Weaker Section (EWS), 10,675 under Middle Income Group (MIG), 8,511 under Lower Income Group (LIG), and 5,597 High Income Group (HIG) schemes. Therefore, construction of houses in total of all categories is 60,337 units.

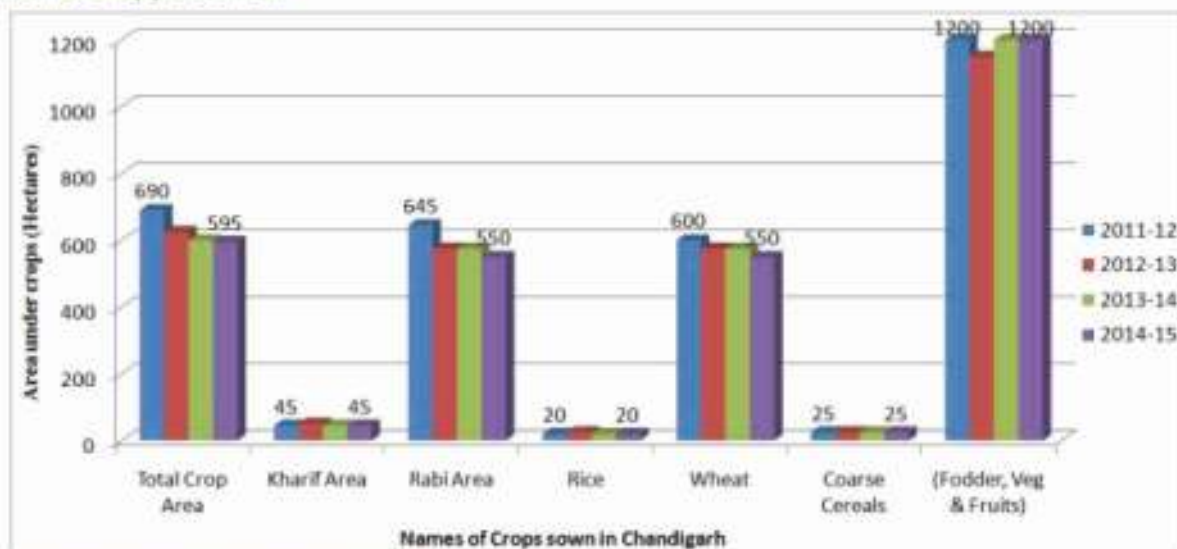
### Families practicing Agriculture:

Due to increasing population, development and the land value, the agricultural land is shrinking at a faster rate since last decade. In total, merely about 680 families in Chandigarh are indulged in agriculture. However, most of them (468) are small farmers with the land holding up to 1/2 - 2 acres only. Farmers up to 5 acres land are 187 only, whereas the number of big farm owners are just 25.





**Distribution of cropped area:**



Source: Dist. Agri. Officer Sec-17 Chandigarh

With the increasing urbanization, the total area available for agriculture has decreased from 690 hectare (2011-12) to 595 hectare in 2014-15. The crop wise distribution of the available area is described in the figure above, which shows that the main crops of the area are wheat and vegetables. Area under fodder crops is also notable because of the farm animals and dairy business.

**Consumption of Pesticides in Chandigarh:**

Year	Insecticide	Fungicide	Weedicides	Rodenticide	Unit
2004-05		0.05	0.14	Negligible	M.T
2005-06	0.59	0.05	0.11	Negligible	M.T
2006-07	0.55	0.05	0.1	Negligible	M.T
2007-08	0.35	0.2	0.3	Negligible	M.T
2008-09	0.3	0.01	0.01	0.03	M.T
2009-10	0.3	0.01	0.01	0.03	M.T
2010-11	0.22	0.01	0.01	0.03	M.T
2011-12	0.22	0.01	0.01	0.03	M.T
2012-13	0.21	0.01	0.01	0.02	M.T
2013-14	0.21	0.01	0.01	0.02	M.T
2014-15	0.17	0.01	0.01	0.01	M.T

Source: Dist. Agri. Officer Sec-17 Chandigarh

Due to smaller agricultural area, Chandigarh has very low consumption of pesticides. Use of insecticides is highest among all pesticides in Chandigarh which are sprayed in almost all food grain crops and vegetable cultivation. The Demand of Fertilizer is being met from the neighboring Villages of Punjab & Haryana states due to their negligible demand & decreasing trend of Agriculture Land. Also the availability of Farm Yard Manure in plenty around city beautiful. As there is no fertilizer Production unit exists in Union Territory, Chandigarh. About 40 to 45 MT fertilizer in terms of materials is being brought by the farmers from neighboring villages of Punjab & Haryana States (2014).





◆ **Actions for control of land degradation:**

-> **Lake rejuvenation and soil conservation: works:**

Sukhna lake of Chandigarh was formed by constructing a 12.8 meter high earthen embankment which harvested runoff from 4207 ha of denuded catchment of Shivalik hills drained by Kansal and Nepli Choe. Due to natural rainwater resource and large catchment area of 42.07 km<sup>2</sup>, the problem of siltation was raised in due course of time. Intensive soil and water conservation measures were taken up in the 2540 ha forest catchment of the lake by the administration, which included effective closure, large scale plantation, and construction of more than 190 silt measures. In a period of almost 3 decades, the siltation rates of the lake were reduced from 140 to 5 tonnes per hectare per year. As a result of various soil and moisture conservation works and afforestation most part of catchment is stabilized and is now covered under thick vegetation cover. The overall tree density improved from 160 to 450 trees per hectare and bush density from 5977 to 8994.



**Disposal of Fallen Tree Leaves:**

At present, the garden waste and waste of fallen tree leaves is being disposed of with the domestic and other waste at the existing landfill site. Instructions have been issued to the field workers not to burn any type of garbage or dry leaves. The corporation has invited 'expression of interest' from various agencies promoting different technologies for the setting up of a garbage processing unit. A proposal for the setting up of a separate unit for the disposal of Horticulture Waste and fallen dry leaves etc. is under consideration.



-> **Sahyog - Waste Management Project:**

To control the increasing quantity of waste and its disposal, Chandigarh Administration and Municipal Corporation with active involvement & participation of Resident Welfare Associations; NGO's like CAWEDS (Chandigarh Animal Welfare and Eco Development Society) & Yuvsatta; Institutions like hospitals, colleges, hotels and the university, have initiated a project 'SAHYOG' for the effective and meaningful disposal of waste. Under this project the household waste is taken to Sehaj Safai Kendras (S.S.K.) and Khad Banao Kendras (K.B.K.), which are established at various locations in the sectors. The Municipal Corporation initiated the (SSK) scheme in 2002 from Sector 15 for ensuring proper collection and transportation of Municipal Solid Waste in the city. So far, the Corporation has identified about 100 sites for the construction of above mentioned Kendras.





Dear Information Seeker,

ENVIS CENTRE, Chandigarh furnishes you with the services to collect and disseminate information related to environment of Chandigarh. To share information with us you are requested to fill up the form given below.

Your feedback is valuable to us and will be highly appreciated



- Name \_\_\_\_\_
- Designation \_\_\_\_\_
- Department \_\_\_\_\_
- Address \_\_\_\_\_
- \_\_\_\_\_ City \_\_\_\_\_
- State \_\_\_\_\_ Country \_\_\_\_\_ Pin \_\_\_\_\_
- Phone \_\_\_\_\_ Fax \_\_\_\_\_
- Email \_\_\_\_\_

Your views on scope of improvement :

- Interest Area \_\_\_\_\_

I would like to have information on following :



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**Er. Mohit Badhwar**  
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**Mr. Abhishek Sraw**  
(Information Officer)

**Mr. Surinder Sharma**  
(I.T. Assistant)

**Recommendations:**

1. A coordinated approach in consultation with the State Governments of Punjab and Haryana may be adopted to ensure implementation of the Punjab New Capital Periphery (Control) Act, 1952.
2. Discussions may be taken up with PUDA and HUDA to stop further expansion of satellite towns. However, it is important to realize that such pressures will continue in future. Hence, planning (like, MRTS, prevention of encroachment, etc.) for catering to these pressures may be taken up.
3. A strategy for integration of urban villages with adjoining planned sectors needs to be devised. Also, strategy for tackling problems of residential & commercial slums may be defined.
3. Commercial areas may be augmented with concept of multi level shopping.
4. Studies on characterization of solid waste need to be conducted and waste segregation at household level by the generators themselves; should be promoted.
5. For disposal of construction waste, the Administration may provide low lying area which can be filled up by Municipal authorities conveniently.
6. Land use changes in peri urban areas should be strictly curbed to retain/freeze existing land use pattern.

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To,

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