



Universitat d'Alacant
Universidad de Alicante

LAND OCCUPATION MODELS IN ALICANTE PROVINCE

MEASUREMENT THROUGH STATISTICAL PARAMETRES

PROVINCIA DE ALICANTE

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**I NATIONAL CONFERENCE ON RESEARCH APPLIED TO
BUILDING MANAGEMENT**

Alicante, 28, 29 y 30 de junio de 2010

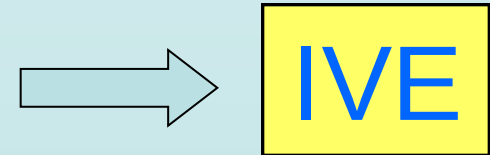


Objectives

- Measure and evaluate the growth of cities land occupation
- Prove a series of indicators as a practical exercise
- Evaluate city compacity with these indicators

Parameters:

- Built urban land
- County territory size
- Population density
- Building heights



Indicators used/designed

Population density (inhab/Km²)

$$\frac{\text{Num inhabitants}}{\text{Territory area (Km}^2\text{)}}$$

Built land population density (hab/Km²)

$$\frac{\text{Num inhabitants}}{\text{Built urban land (Km}^2\text{)}}$$

County land Occupation (%)

$$\frac{\text{Built urban land (Km}^2\text{)}}{\text{Total county land (Km}^2\text{)}}$$

Indicators used/designed

Built urban footprint (Ha/inhab)

Built urban land (Ha)

Num inhabitants

Inhabitants per property (inhab/dw)

Num inhabitants

Num properties

Percentage of properties per floor (%)

Num properties per floor

Num total properties

Methodology

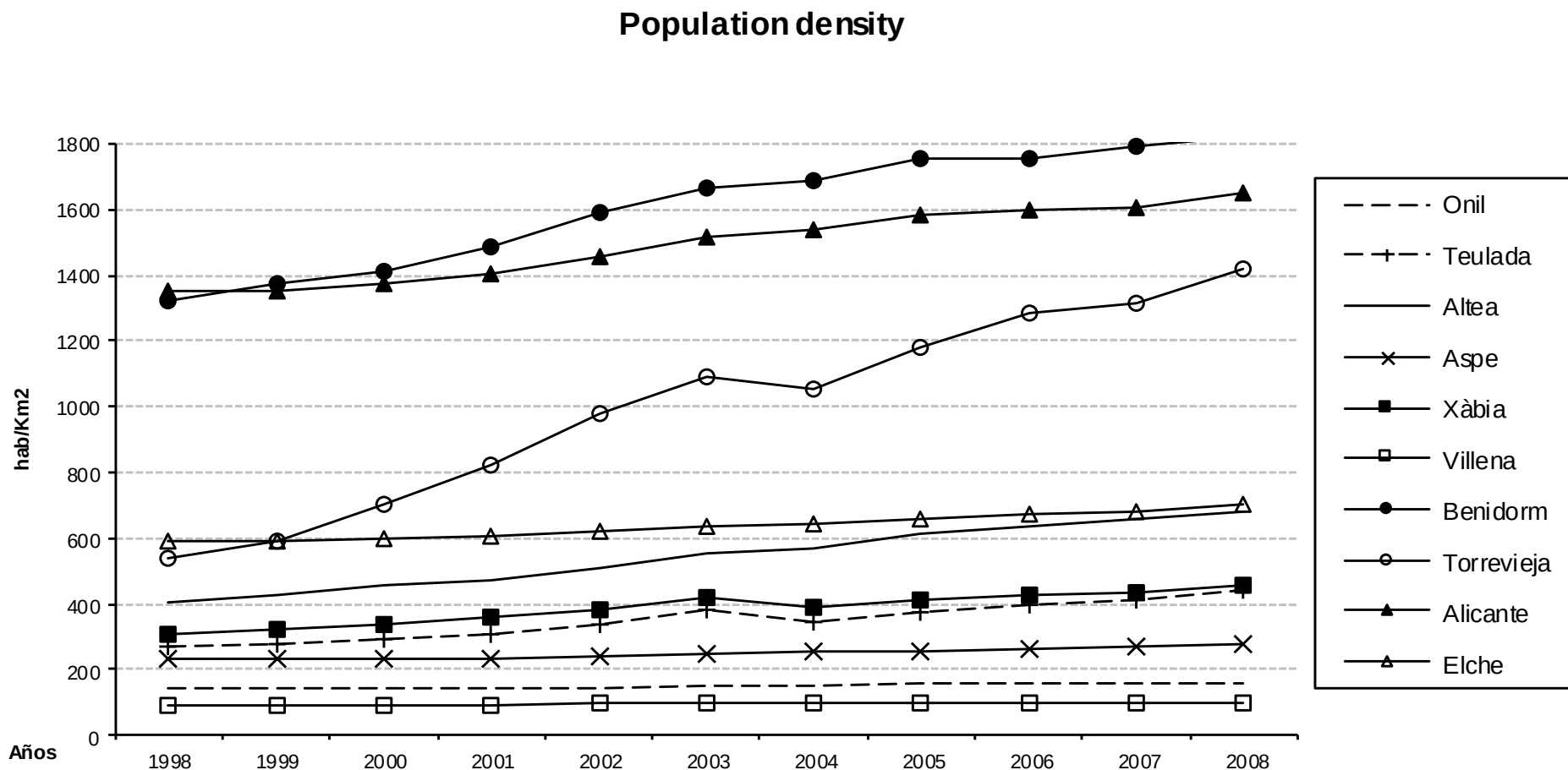
1º Calculation of Built urban footprint for all counties in Alicante province

2º Establishment of 5 ranges and selection of 2 counties per each

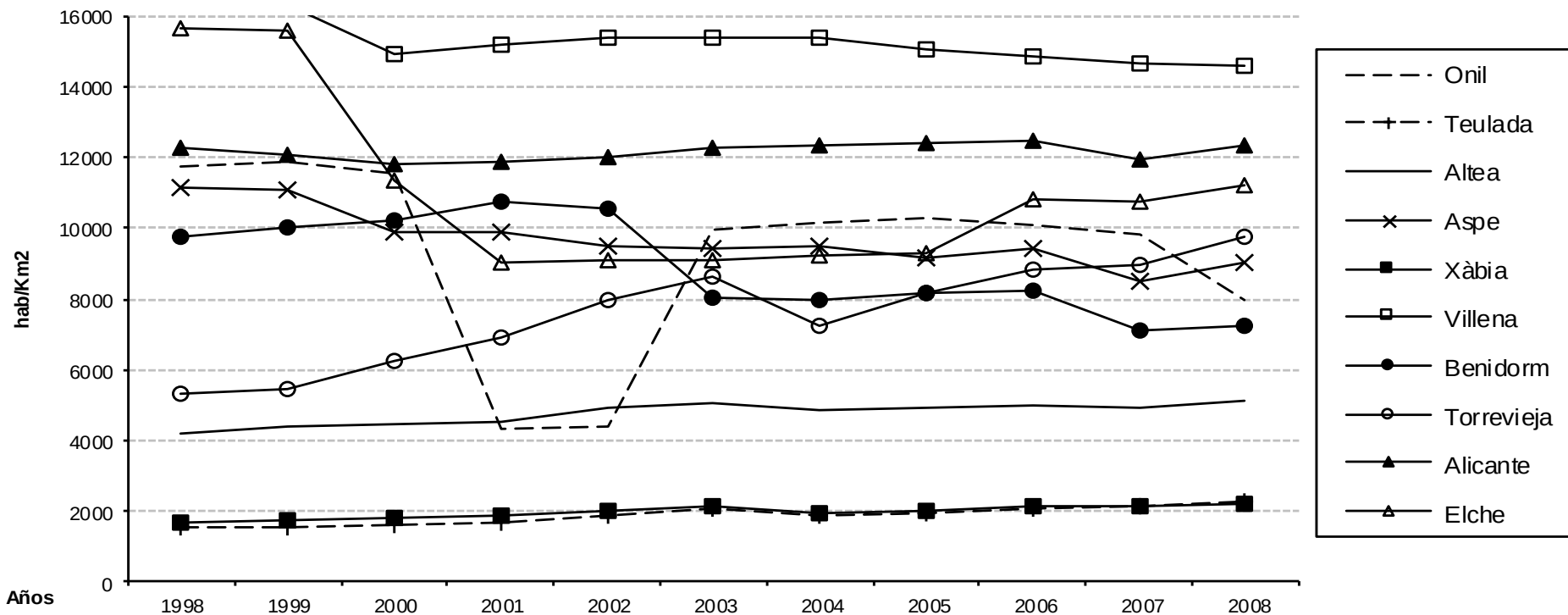
5,000 to 10,000 inhabitants	Onil	Teulada
10,000 to 20,000 inhabitants	Aspe	Altea
20,000 to 50,000 inhabitants	Villena	Xàbia
50,000 to 200,000 inhabitants	Benidorm	Torre Vieja
More than 200,000 inhabitants	Alicante	Elche

Evolutionary study from 1998 to 2008

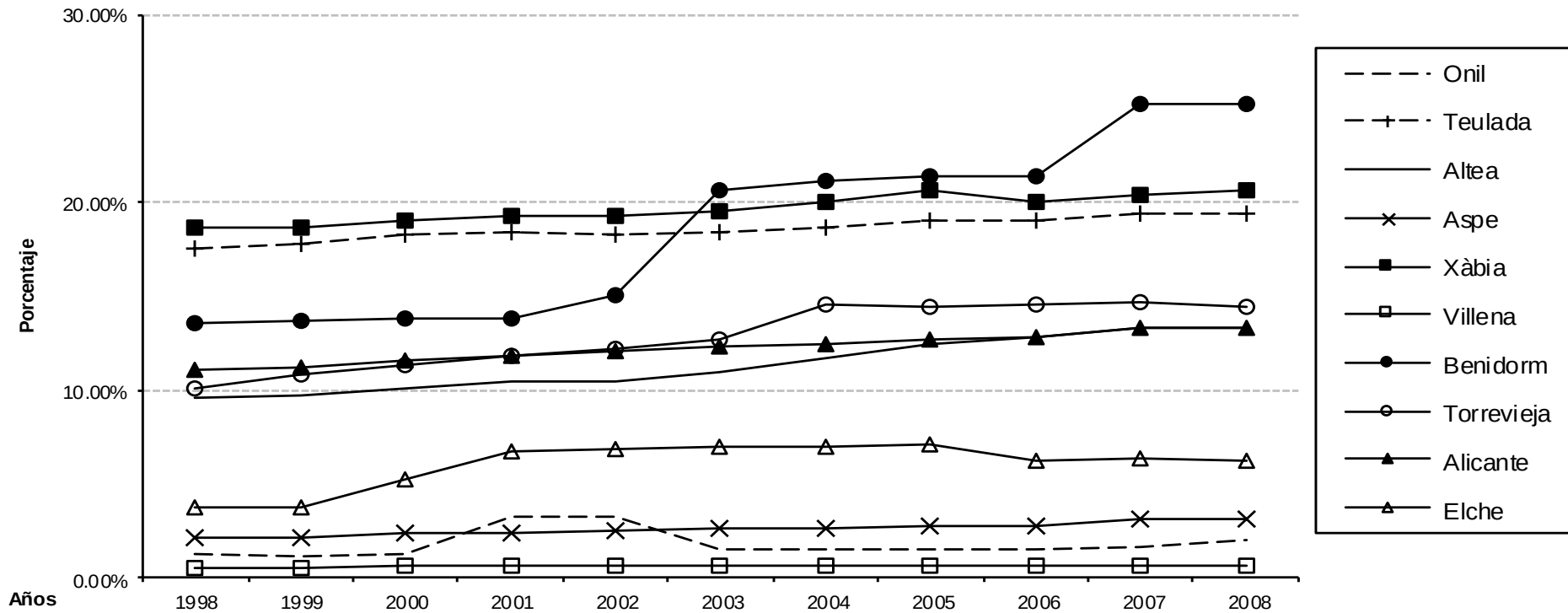
Percentage of properties per floor: only for 2001



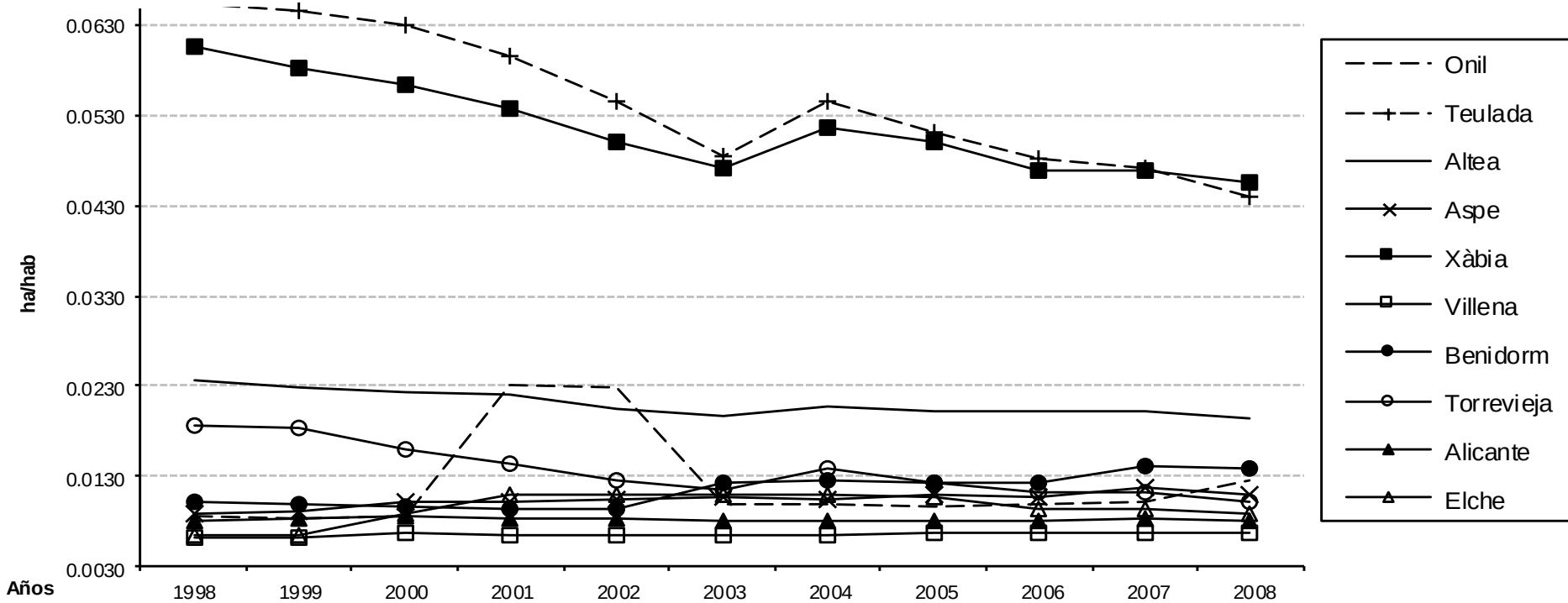
Population density per unit of built urban land



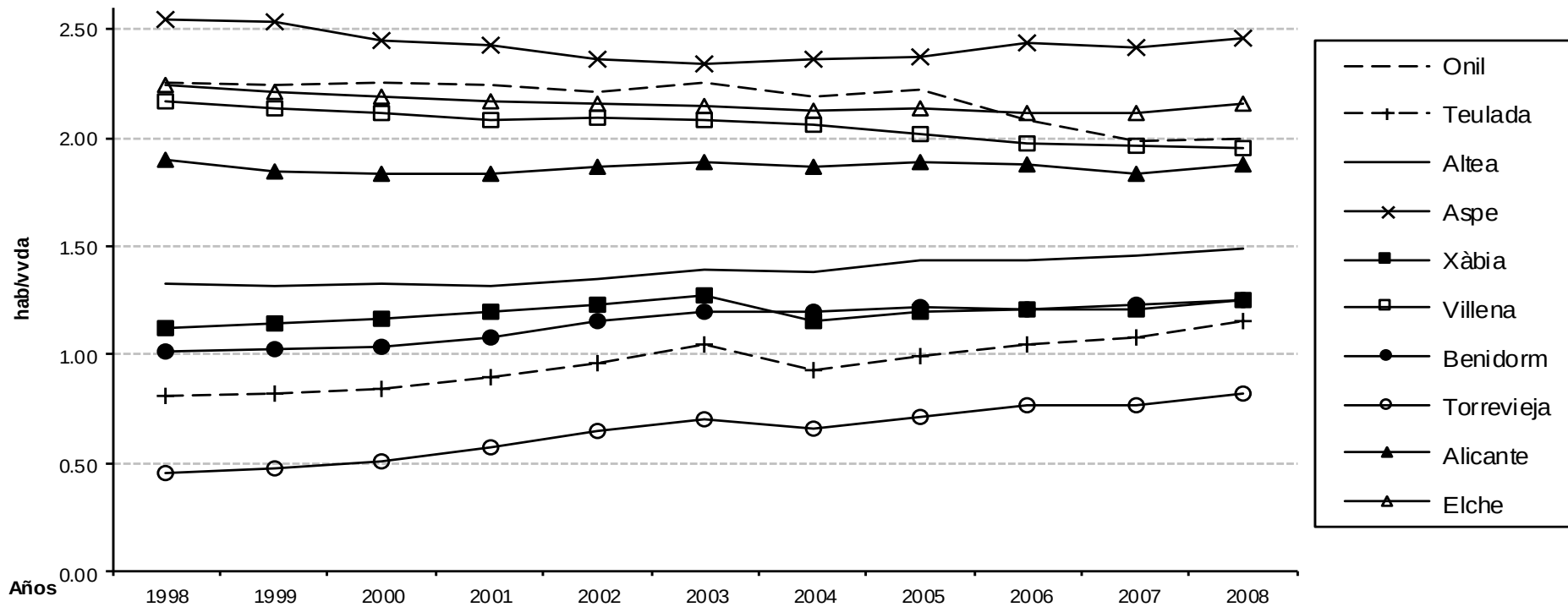
County land occupation grade



Built urban footprint



Inhabitants per property



2001. Percentage of properties per floor. Floor number

	1	2	3	4	5	6	7	8	9	10 o más
Onil	6,56%	19,56%	17,40%	20,83%	14,40%	5,39%	6,04%	5,13%	4,70%	0,00%
Teulada	48,09%	34,37%	5,17%	3,82%	5,52%	1,29%	0,00%	0,00%	0,00%	1,74%
Altea	27,89%	20,68%	12,64%	7,49%	12,92%	8,85%	6,40%	2,59%	0,40%	0,13%
Aspe	17,42%	37,14%	16,47%	15,74%	8,67%	1,89%	1,27%	1,22%	0,00%	0,17%
Xàbia	28,62%	27,15%	9,36%	9,53%	13,05%	8,14%	2,36%	1,54%	0,00%	0,24%
Villena	22,35%	13,68%	11,38%	19,62%	10,95%	3,86%	2,74%	6,90%	0,57%	7,94%
Benidorm	2,38%	2,72%	2,14%	2,83%	4,97%	6,35%	7,31%	11,61%	0,33%	59,35%
Torrevieja	29,89%	10,56%	8,47%	6,00%	11,10%	17,57%	8,58%	4,02%	0,15%	3,65%
Alicante	4,97%	3,18%	3,93%	10,38%	16,81%	15,93%	7,56%	16,49%	1,18%	19,57%
Elche	13,47%	6,10%	3,31%	9,44%	16,84%	22,57%	13,89%	9,44%	0,99%	3,95%

Conclusions

- Remarkable difference between coastal and inner populations
- Evolution towards a converging trend
- Trend to reduction of built urban footprint in cities/towns with less density, increase in the ones with bigger density
- This set of indicators is suggested being used for easy measurement and analysis of city compacity. Further improvements should be done.