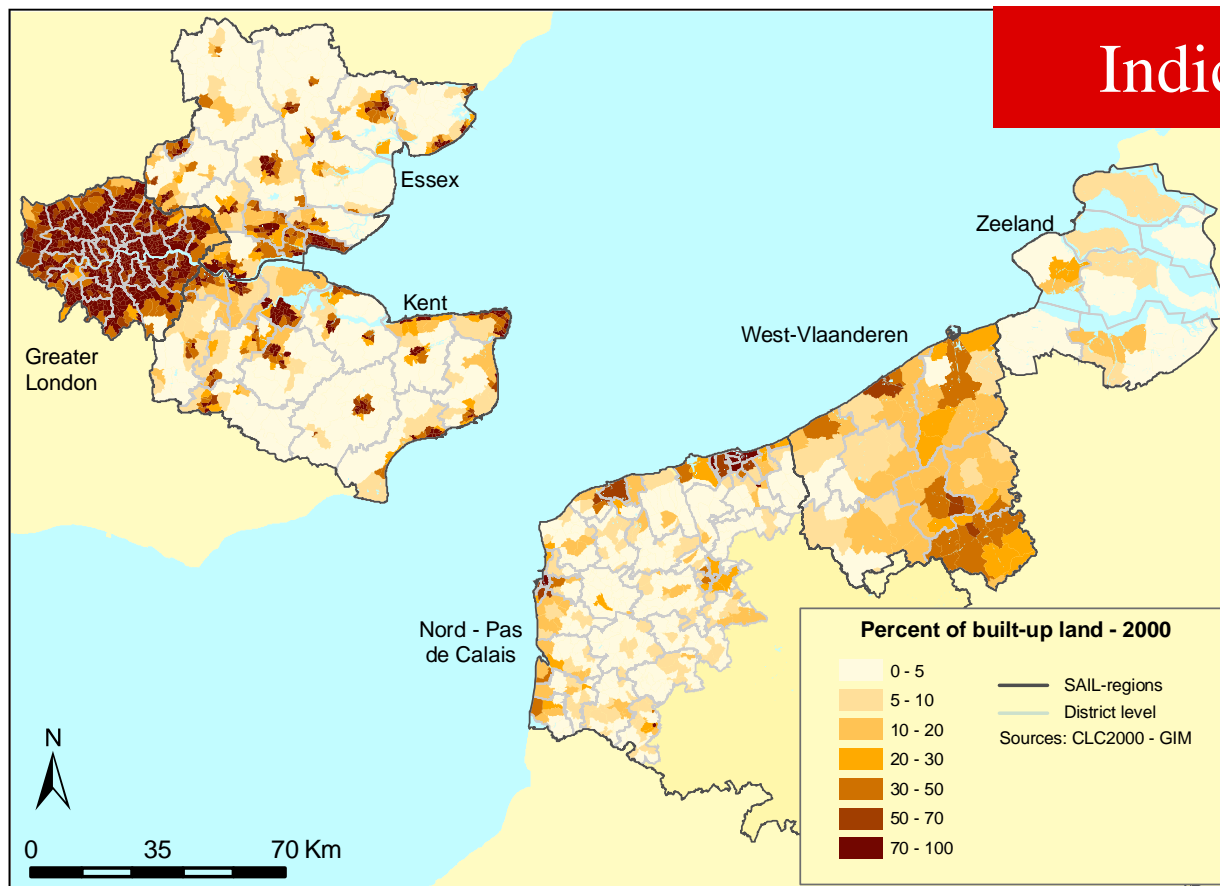


Indicator 2 Area of built-up land



Percentage of built-up land in the SAIL sub-regions 1990-2000

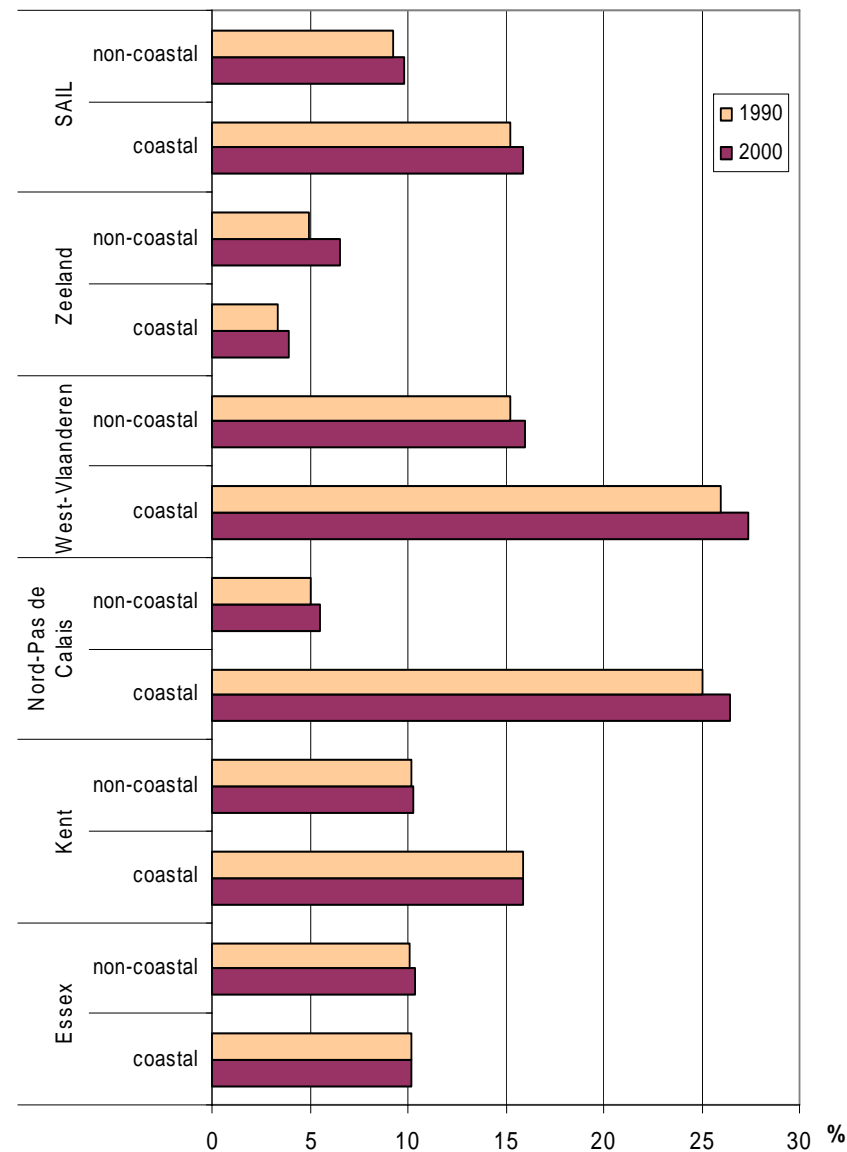


Table: Percentage of built-up land in coastal zones of the SAIL sub-regions

SAIL sub-region	CLC 1990	CLC 2000	Rate of increase
Essex	10.19%	10.19%	0%
Kent	15.85%	15.91%	0.06%
Nord-Pas de Calais	25.09%	26.43%	1.34%
Thames	70.14%	71.17%	1.03%
West-Vlaanderen	26.02%	27.43%	1.41%
Zeeland	3.38%	3.90%	0.52%
SAIL	15.22%	16.95%	0.70%

Key Message

- The area of built-up land in the coastal municipalities of the Southern North Sea region has increased from 15.2% in 1990 to 15.9% in 2000. In spite of this seemingly slow increase over the last decade, the rate of urbanisation in the coastal zone is still higher than in the hinterland.
- This high proportion of occupation, mostly associated with the tourism sector, has led to fragmentation of important coastal ecosystems that play a vital role in the protection of both the coast and hinterland.

Why monitor the amount of built-up land?

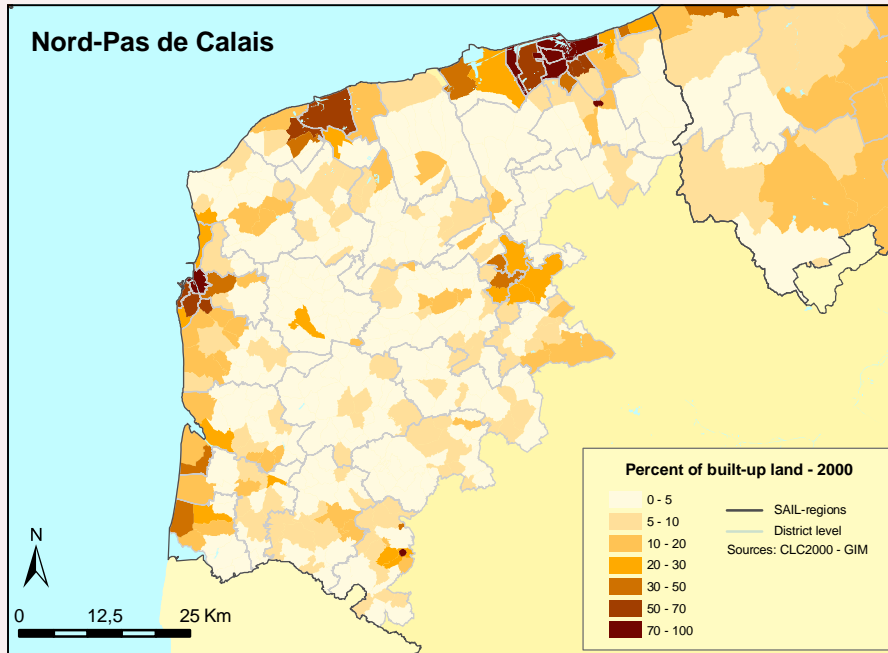
The extent to which the coast has been built-up over the past several years indicates the degree of pressure on the coast and the likelihood of changes in the future. The intensity and pattern of urban sprawl result from three main factors: economic development, demand for housing by households and rapid changes in their structure, and the extension of transport networks. Land use by urban area has the highest impact on the environment due to 'sealing of soil' and the environmental impact from transport, waste dumping and pollution. The conversion of greenfield sites and the increase of transport networks to connect cities add to the fragmentation and degradation of the natural landscape and loss of biodiversity. Monitoring the area of built-up land by distance from the coastline illustrates the pattern of development. In some coastal zones, development has been characterised by building in a relatively narrow coastal strip, while in others development has spread a considerable way inland.

Where do the data come from?

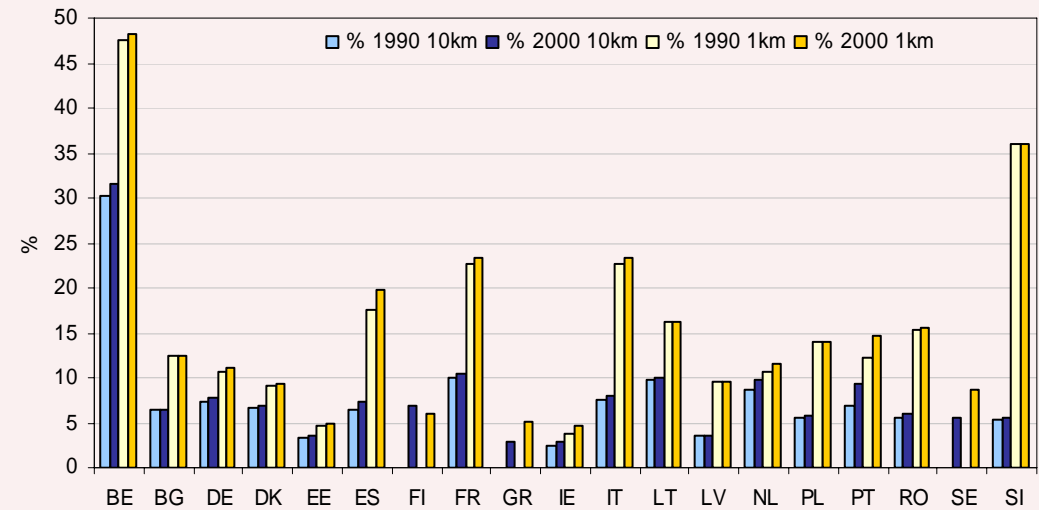
Corine Land Cover (CLC) represents a major mapping effort of land cover in Europe, realised during a period spanning from 1986 to 1995. An update of CLC was conducted in 2000. The rate of increase in built-up land is calculated by subtracting the results of CLC 2000 from CLC 1990. Corine data is based on satellite imagery. The CLC spatial data and metadata are distributed by the European Environment Agency (downloadable). Geographic Information Management (GIM) provided calculations for the SAIL region.

'Built-up land' is defined as the sum of the areas classified as urban fabric, industrial or commercial units, road and rail networks, ports and airports, and sites for mineral extraction, waste and construction.

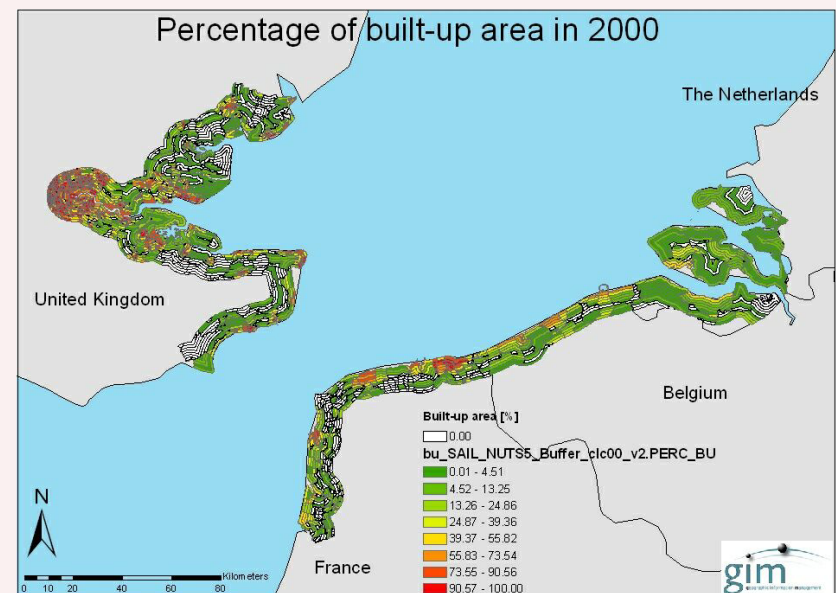
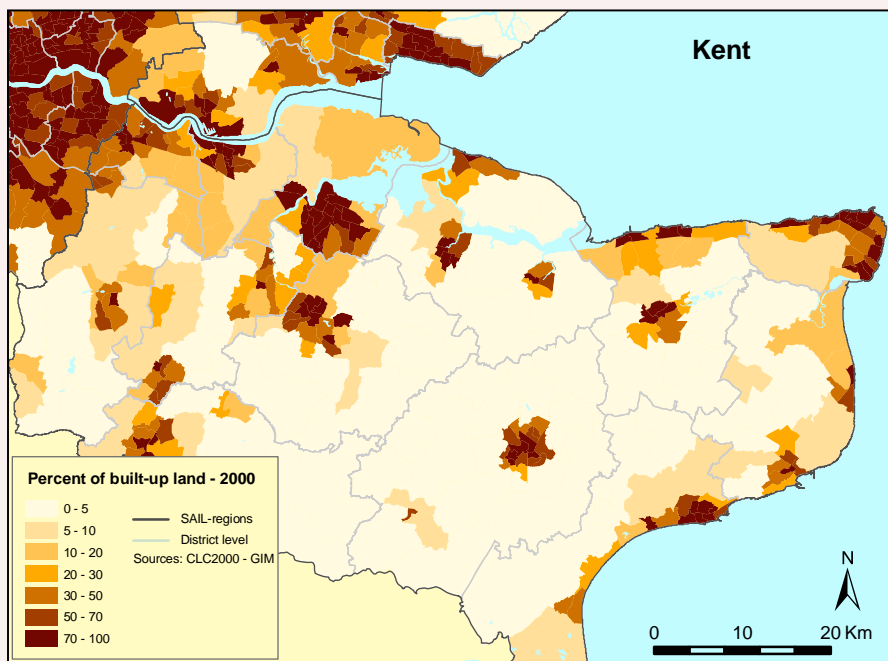




Percentage of built-up land at 1km and 10km distance from the coast, by EU coastal Member State and NUTS3 (CLC 1990 and 2000) *source: EEA*



Percentage of built-up land by distance from the coastline, SAIL sub-regions, 2000 (1km buffers, by NUTS5)



What does the indicator show?

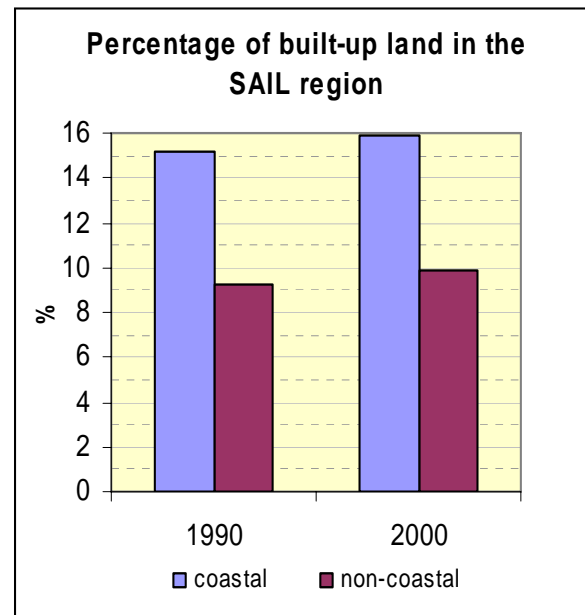
The area of built-up land in the coastal zone of the Southern North Sea region has increased from 15% in 1990 to 16% in 2000. In spite of this seemingly slow increase over the last decade, the rate of urbanisation in the coastal zone is still 1.32 times that of the hinterland. The coastal zone of the Southern North Sea is on average more urbanized than the inland areas (16% versus 10%), but there are considerable differences between sub-regions. In fact, most of the increases are localized around poles of development that may be driven by tourism (Thanet-UK, Belgian coast) or port development (Dover, Chatham). The drivers of urbanization at the coast are different to those inland.

Essex and Zeeland are the less urbanized sub-regions (10% and 4% respectively). The percentage of built-up land in the hinterland of Zeeland is higher (7%) and more rapidly increasing compared to the coastal municipalities that border the Southern North Sea.

The Thames area is urbanized for 71% of its area and has also seen a slight increase in urbanization over the last decade (1%). This trend is expected to continue with the development of brownfield sites and in Thames Gateway where approximately 200,000 new houses will be built in the coming years. The coastal zones of West-Vlaanderen (27%) and Nord-Pas de Calais (26%) are highly urbanized. Urbanization is most pronounced in the municipalities of the Côte d'Opale (26%) compared to the rest of Nord-Pas de Calais (5%). Urbanization rates on the Belgian and northern French coasts are the highest of the SAIL region. Furthermore, we must take into account that a significant proportion of new development in coastal zones is characterized by high-rise buildings.

What are the implications for planning and managing the coast?

The EU Recommendation for Integrated Coastal Zone Management urges regions 'To control, as appropriate, further development of the undeveloped coast'. Urban sprawl is one of the major concerns about the state of the coast in Europe. Coastal areas are often confronted with high



population densities and a positive net migration balance. Land-take for new built-up areas and transport has been mostly at the expense of agricultural land and to a lesser extent semi-natural areas such as forests and grasslands. By the conversion from greenfield to brownfield development, the potential for recreational use is gradually lost while noise and air pollution, traffic congestion and pressure for further infrastructure are increasing.

There are no specific targets for land take for urban development at the European level, although different documents reflect the need for better planning to control urban growth. Policies related to land-use issues and spatial planning are generally the responsibility of the local planning authorities. Although subsidiarity rules (the principle that promotes local decision-taking) assign land and urban planning responsibilities to national and regional levels, most European policies have a direct or indirect effect on urban development.

How reliable is the indicator?

The minimum mapping unit in CLC is 25ha. Therefore an object or habitat type (e.g. dunes or saline lagoons) smaller than 25ha is likely not to be detected and mapped. Hence a severe bias can be expected for small and fragmented habitat types. Similarly, this level of accuracy does not allow detection of the real increase in urban development. Thematic accuracy is higher than 85%, meaning that an area of particular habitat type has 15% chance of being wrongly interpreted under a different habitat type. Hence, CLC is less suitable for the analysis of fragmentary and dispersed features.