



Evolution of built-up area in Mediterranean coastal zones between 1975 to 2015

Meeting of the CORMON on Coast and Hydrography
Rome, Italy, 21-22 May 2019

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Outline of the presentation

- Background
- Data sources
- Methodology
- Results
- Conclusions
- Next steps

Background

- Testing the CCI 25 “Land use change” on a Mediterranean level:

EcAp MED II Project – Activity 2.1 “*Carry out specific sub-regional pilot testing joint monitoring activities in selected area*”; in collaboration with UNEP GRID in 2017

- Increase of built-up areas was assessed since “urbanization, or land-take, is the most dramatic change of coastal zones given the (almost) irreversibility of the process”
- Contribution to the implementation of the ICZM Protocol (Articles 5, 6, 8, etc.)

Data sources

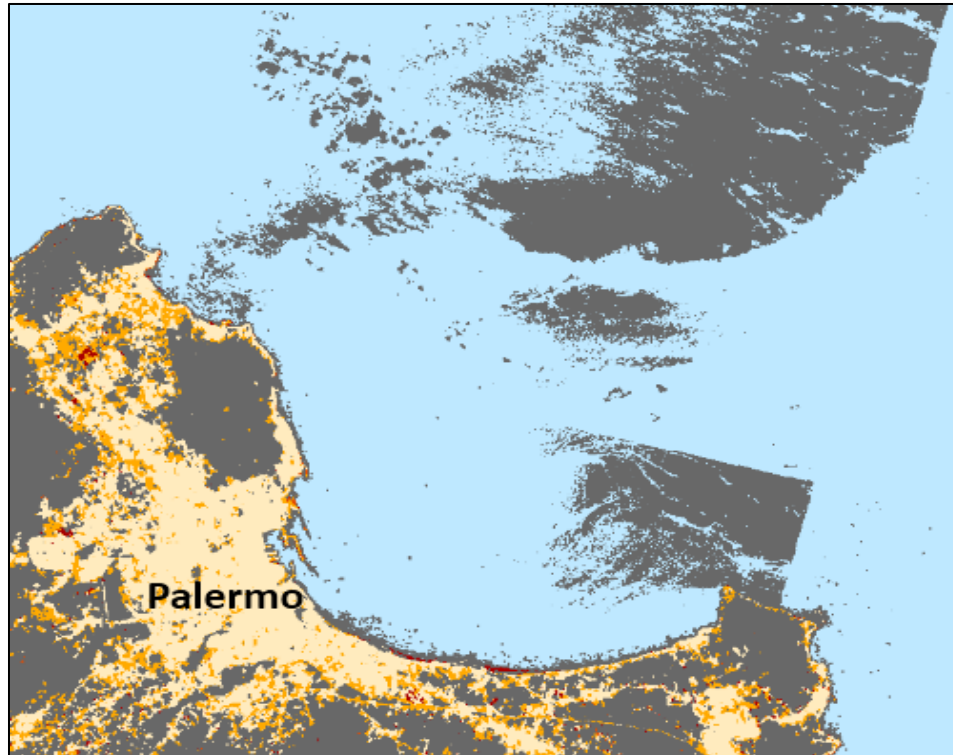
- **Built-up areas:** Landsat collection 1975, 1990, 2000 and 2015, a subset of the Global Human Settlement (GHS) Layer or GHSL (provided by EC JRC)
- **International boundaries:** UN Cartographic section



The boundaries and names shown and designations used on this map do not imply official endorsement or acceptance by the United Nations.

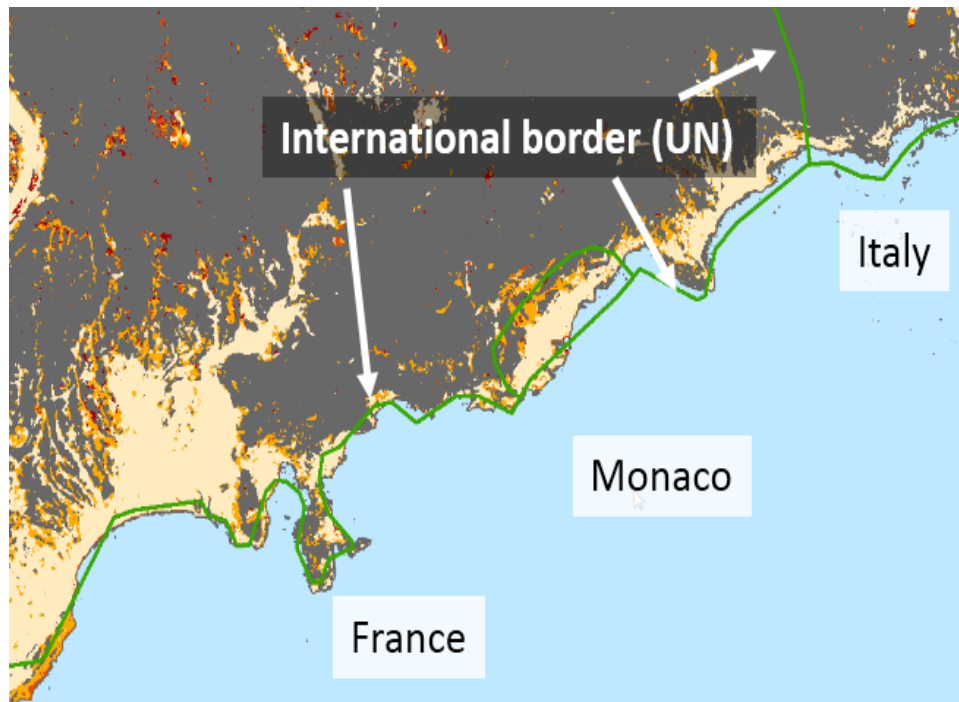
Methodology

- **Step 1: Pre-processing** (e.g. masking the internal waters, removing the “noise” etc.)



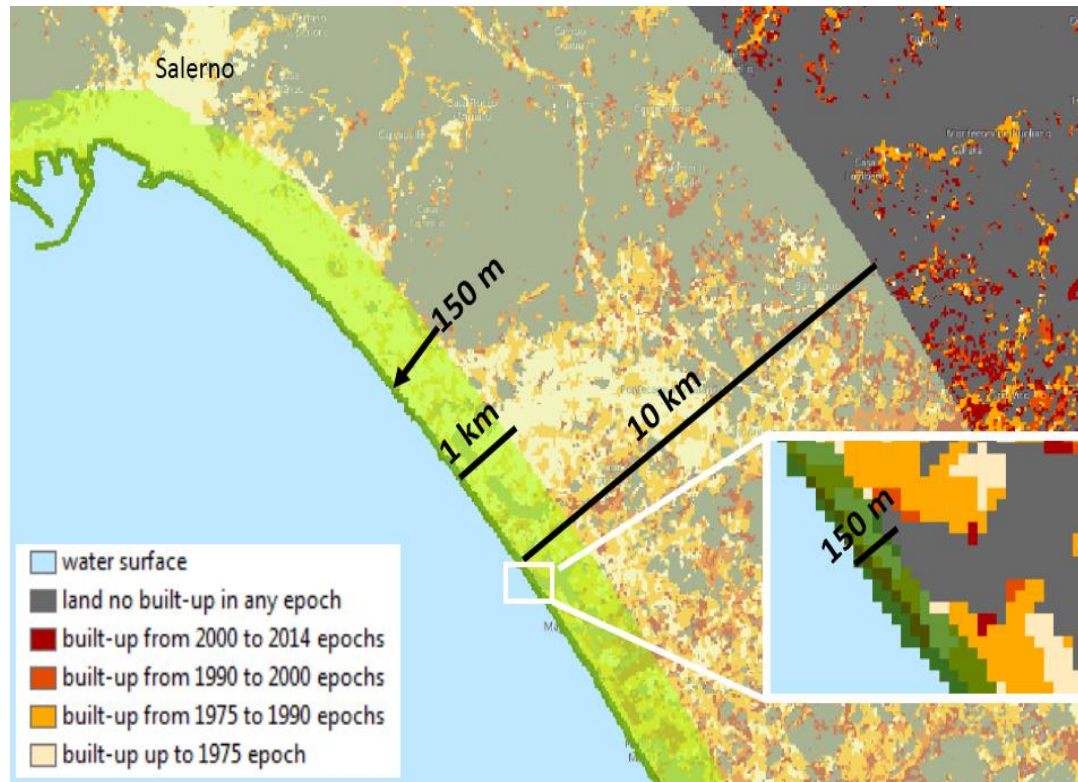
Methodology

- **Step 2: Matching physical and administrative boundaries (UN administrative boundaries do not match the GHSL shoreline)**



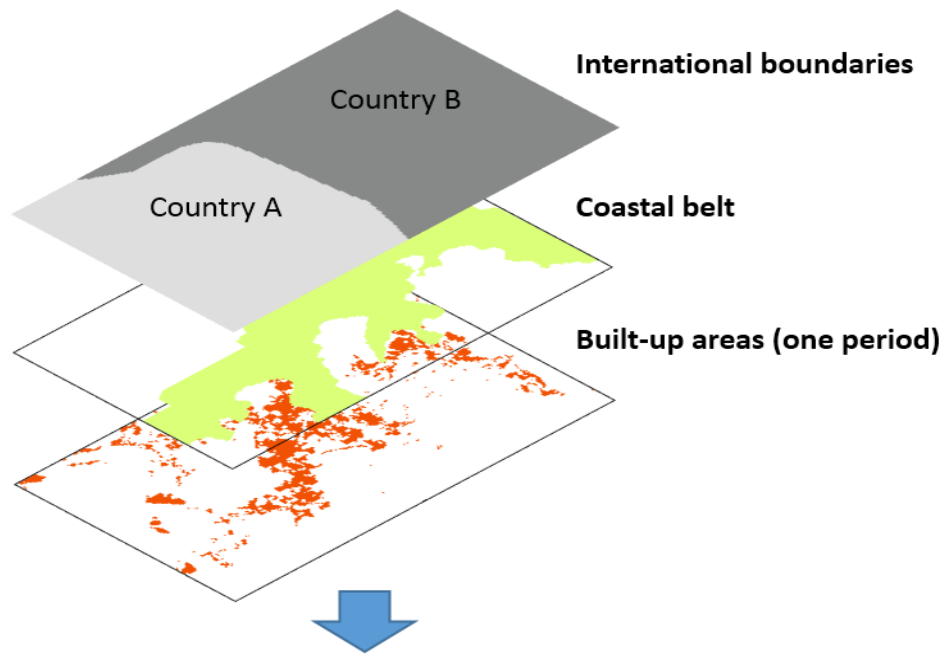
Methodology

- **Step 3: Generation of coastal belts**
- Coastal belts of 150m, 1 km and 10 km width



Methodology

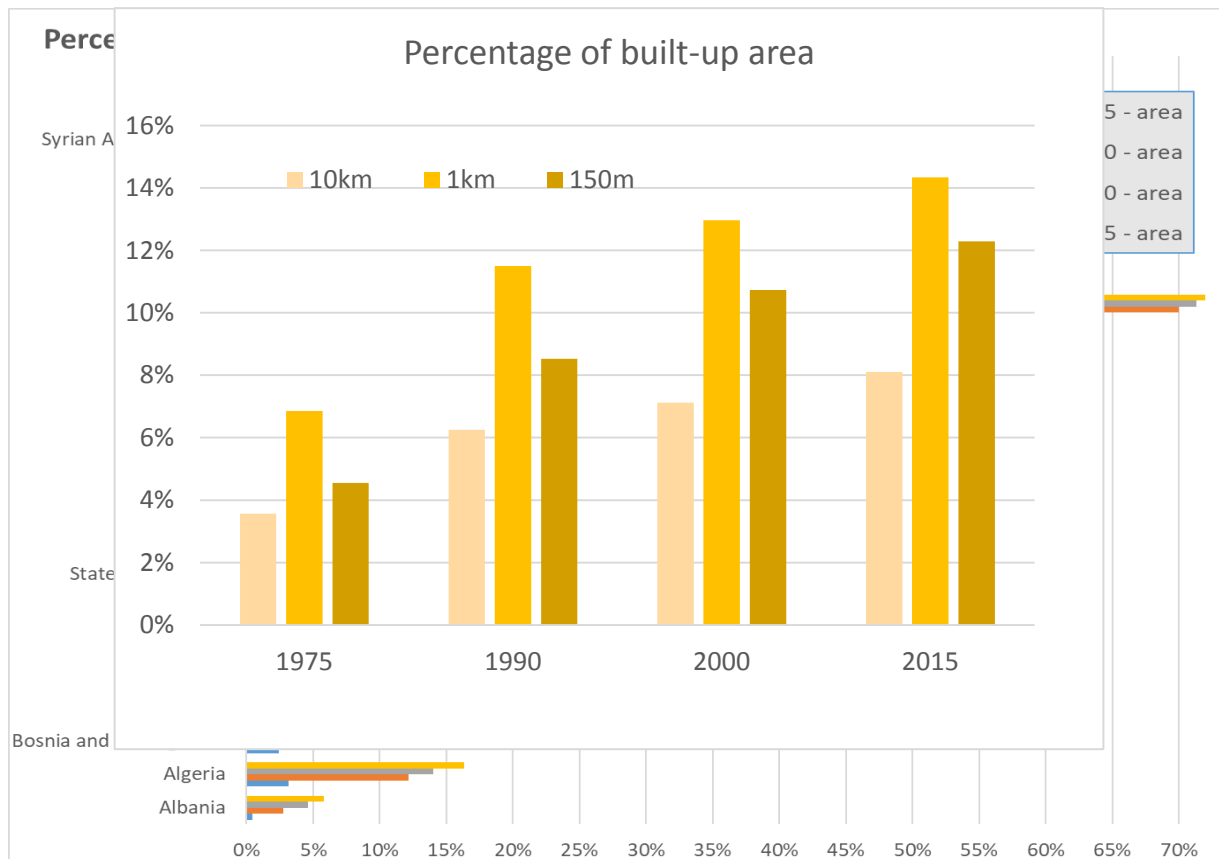
- **Step 4: Extraction of built-up areas per coastal belt and year**



Country	Built-up surface (km ²)
A	100
B	200

Results

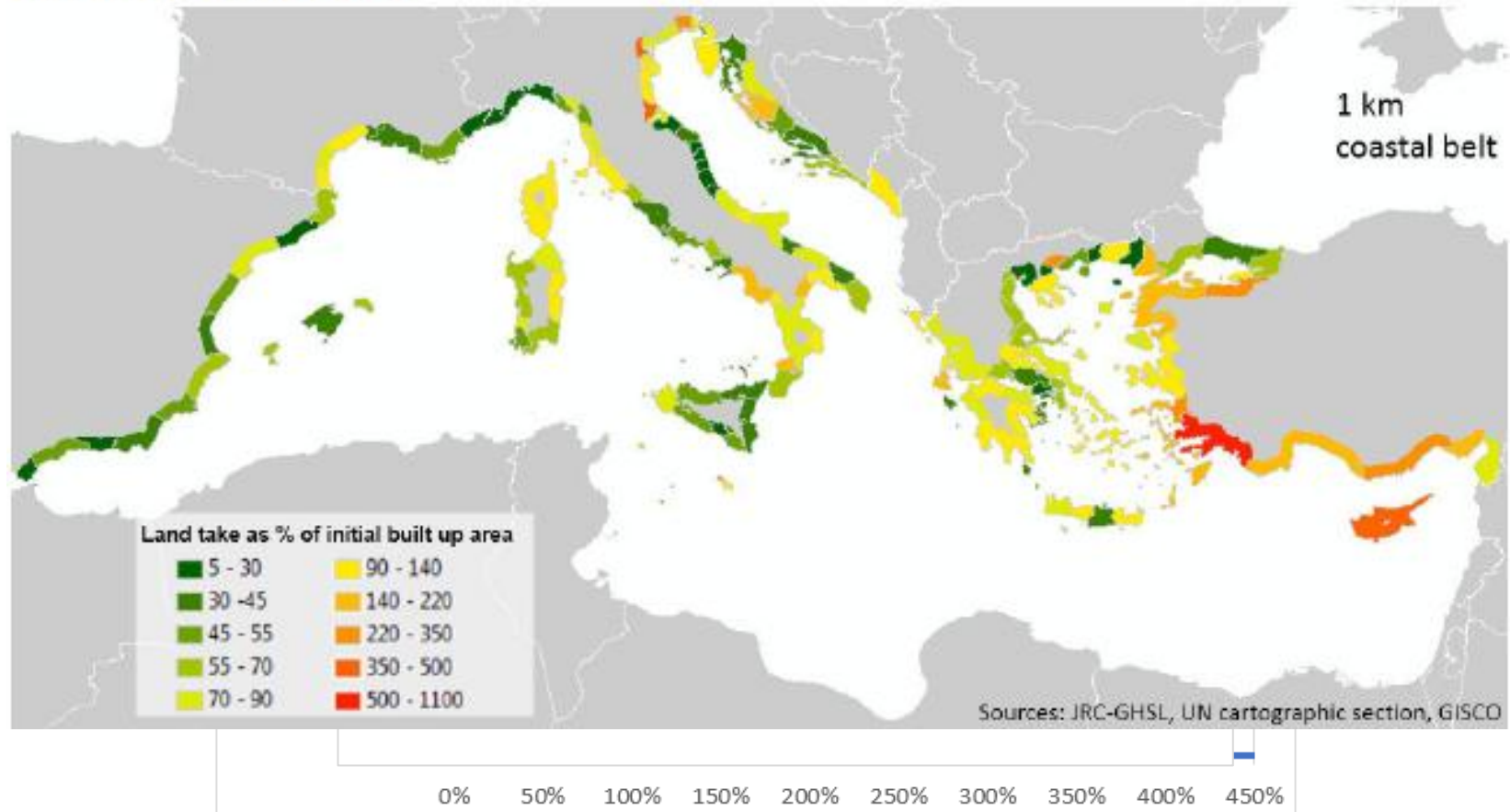
- **Percentage of built-up area**, i.e. the area of built-up land in coastal zone as a proportion of the total area in the same unit;



Results

- **Land take** as percentage of the initial built-up area on the coastal zone.

Land take 1975-1990



Conclusions

- For the first time, the same relevant methodology and data sources (the same resolution, level of precision) used for all Mediterranean countries;
- The whole Mediterranean coastal zone clearly shows a constant **increase in the built-up area since 1975**;
- The period that shows a major built-up increase is **between 1975 and 1990**; the most affected areas are within the coastal belt of **1 km width**;
- A more detailed analysis within a local knowledge would be necessary to elaborate these results

Next steps

- Next steps: National validation
- CCI 25 to become common indicator
- Quality Status Report 2023
- Status of Environment and Development 2021



Thank you

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