Evolution of urban models in a Mediterranean Coastal Area: An effective approach for delimiting urban typologies

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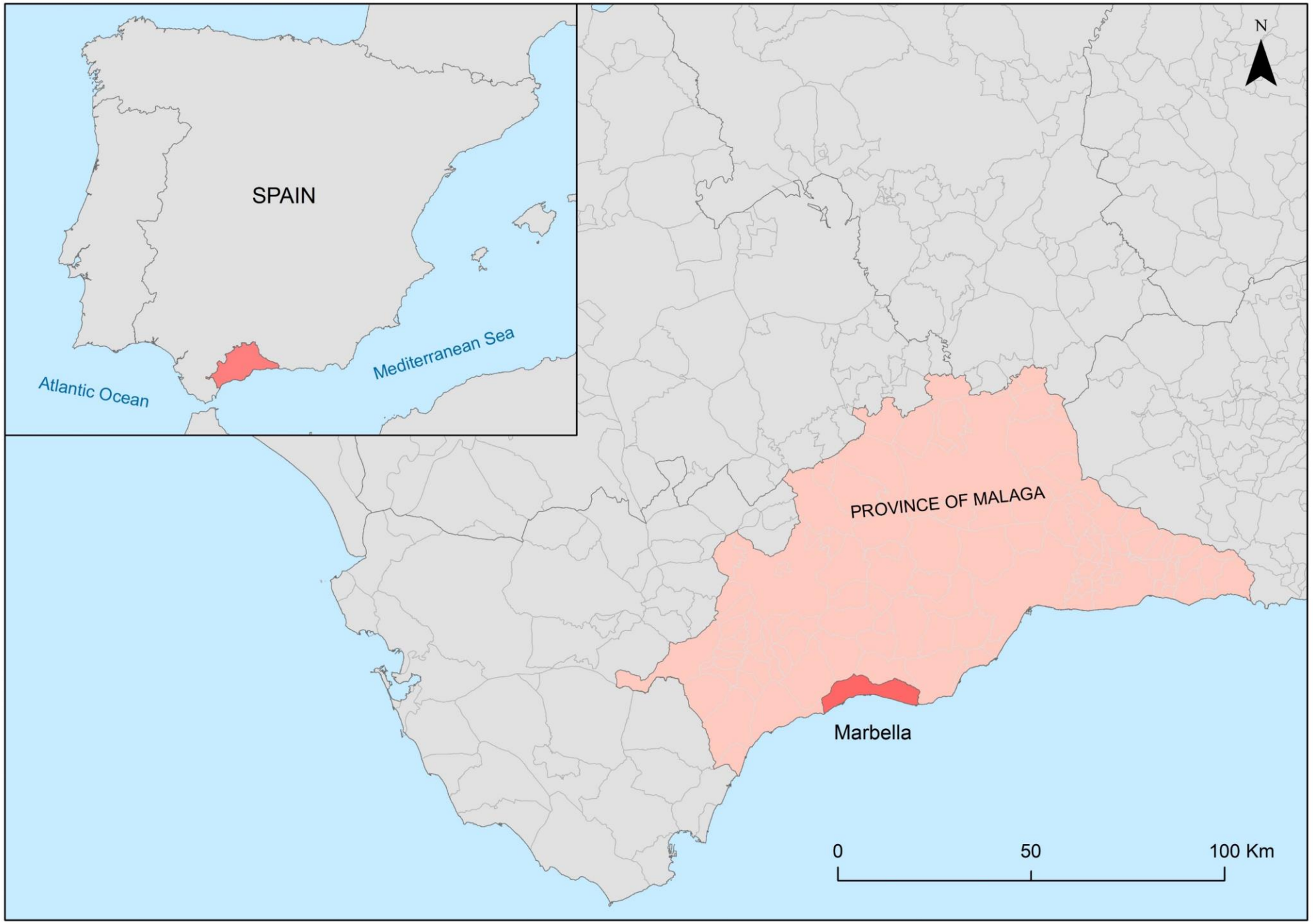
AIMS

1. To Categorize the urban typologies

2. To Identify the predominant construction models in each period

3. To Relate each urban typology with socioeconomic variables

STUDY CASE


SPAIN
Atlantic Ocean
Mediterranean Sea
PROVINCE OF MALAGA
Marbella
N
0
50
100 Km

STUDY CASE

Until the 1950s it was a rural area based on a traditional agrarian production model

Source: https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.marbellaactiva.es%2Fimagenes-del-pasado%2F&psig=AOvVaw1sJO_RE_yIfkZoU-npP7ud&ust=1621870158568000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCMCO76iP4PACFQAAAAAdAAAAABAD

In the mid-twentieth century the implementation of a production model focused on the service sector and construction began, promoted by businessmen linked to the Franco dictatorship

This broke with the traditional configuration of the town, and was linked to an urban process marked by frequent episodes of political-business corruption and the consequent Spanish real estate boom

Puerto Banús – 1960's

Source: https://pbs.twimg.com/media/EVG7vonU8AA2hJ6.jpg:large

Marbella, despite having a production model similar to the surrounding municipalities, has its own brand that keeps it on the market as a luxury tourist destination.

Why?

The legacy that still permeates the glamour of Puerto Banús from the 70s, one of the main local tourist landmarks of the national capitalist class.

The own construction model is key, with the introduction of landscaping resources for the real estate business such as golf courses.

METHODOLOGY

Variables of urban habitability

- Vegetation density
- Construction density
- Road density
- Building height
- Distance to the urban core

Socioeconomic variables

- Average annual income per household
- Gini Index
- Percentage of the population under 18

METHODOLOGY

- Sources

-Official Spanish Cadastre

- Construction density
- Road density
- Building height

-Spanish National Plan for Aerial Orthophotography (PNOA)

- Orthoimage

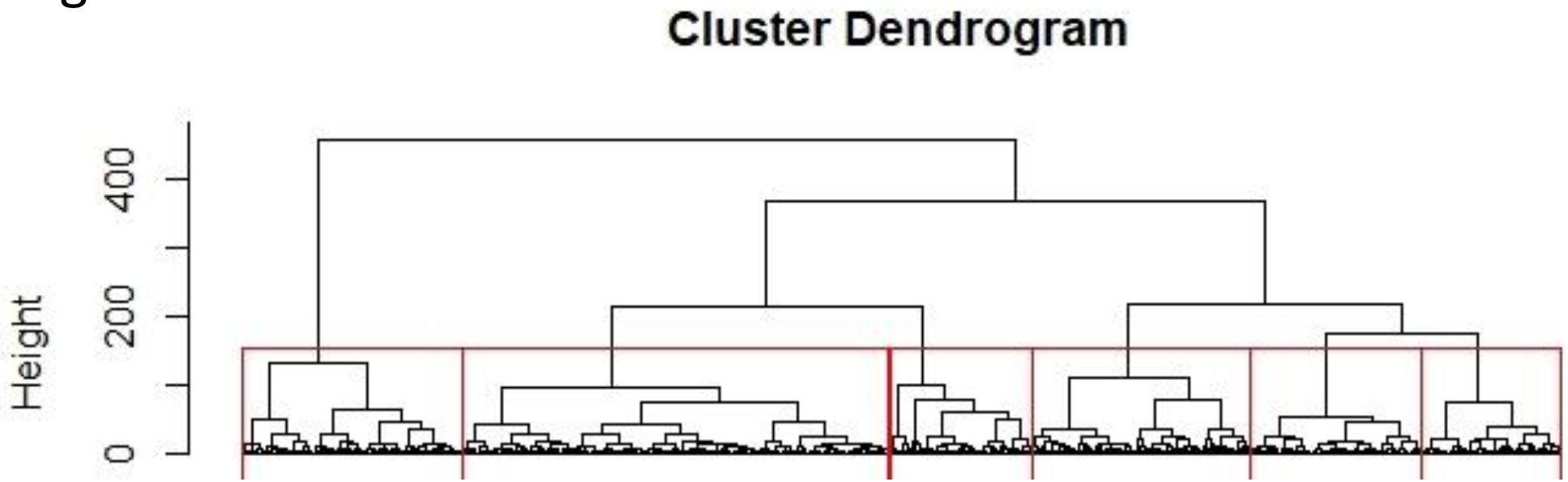
-Spanish Statistics National Institute (INE)

- Average annual income per household
- Gini Index
- Percentage of the population under 18

METHODOLOGY

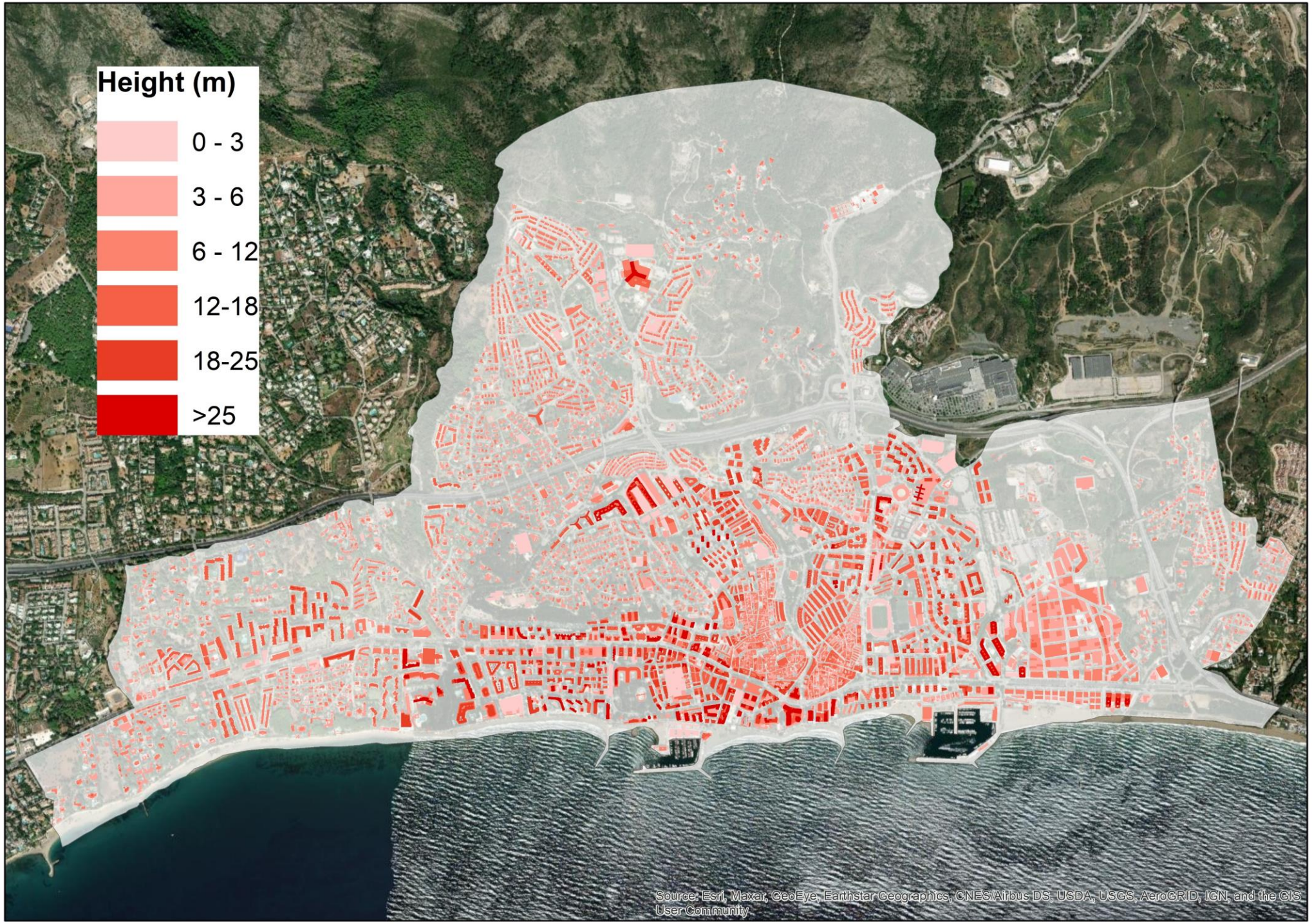
- Information processing

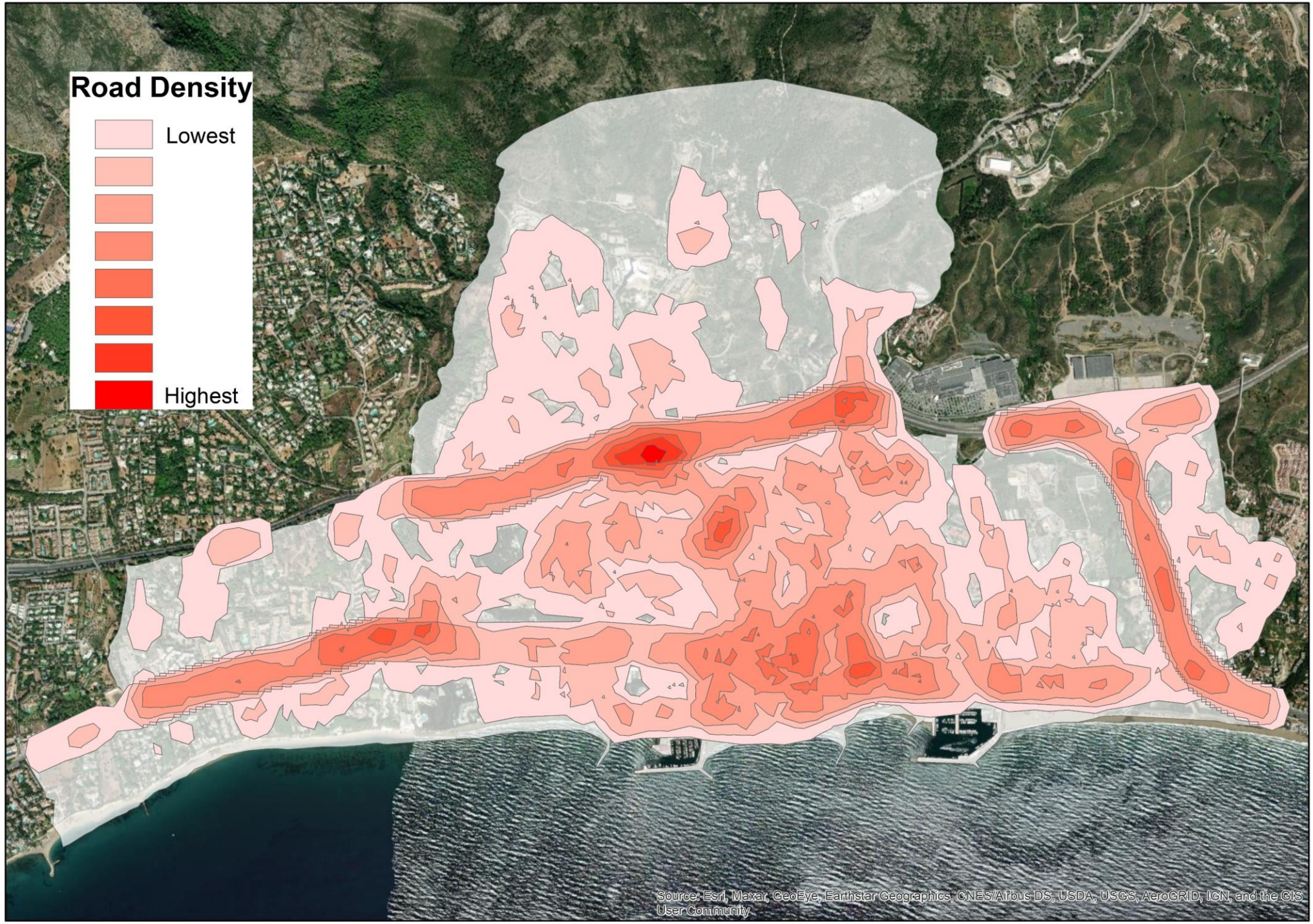
➢Clustering

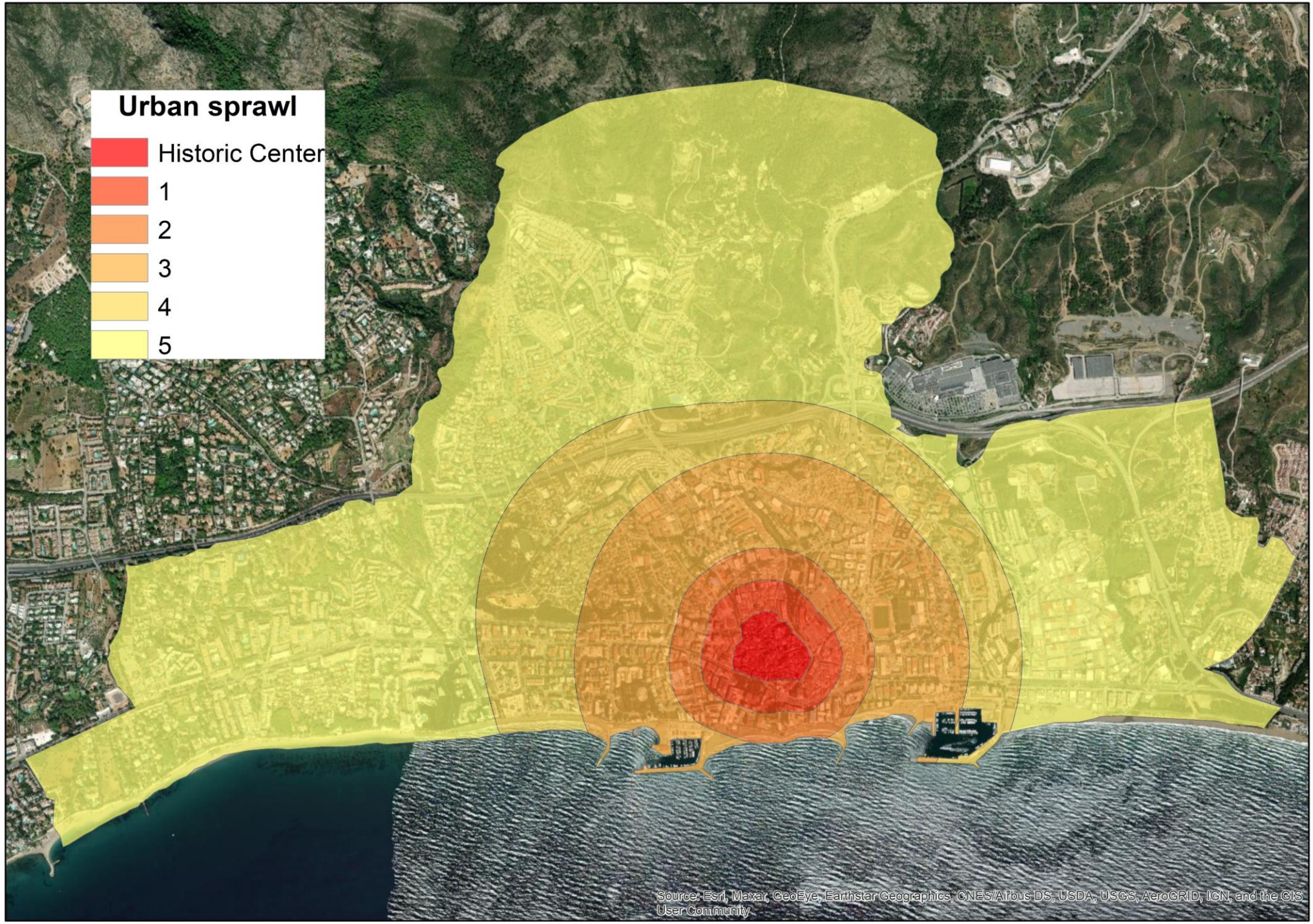


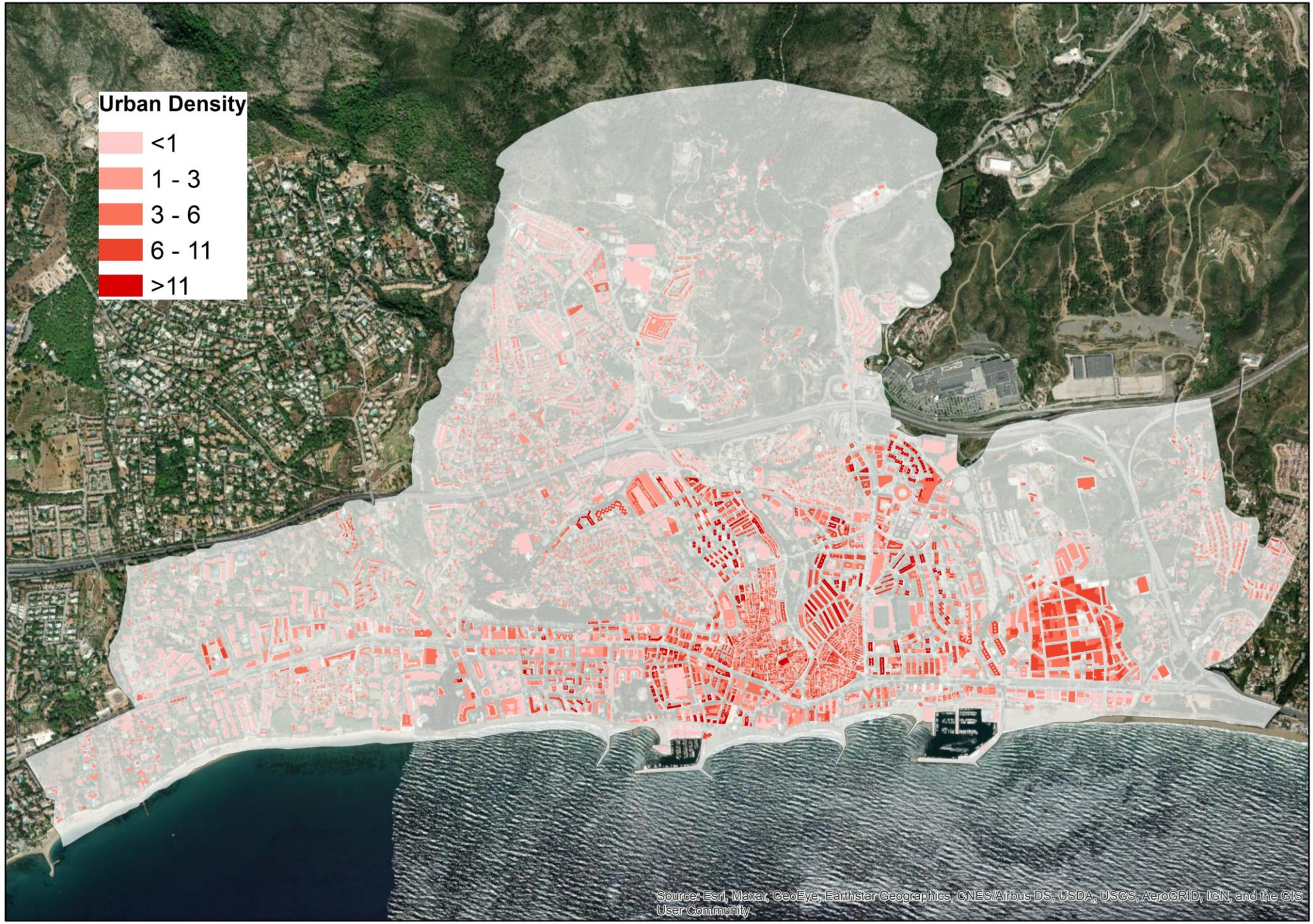
RESULTS

Source: Google Earth

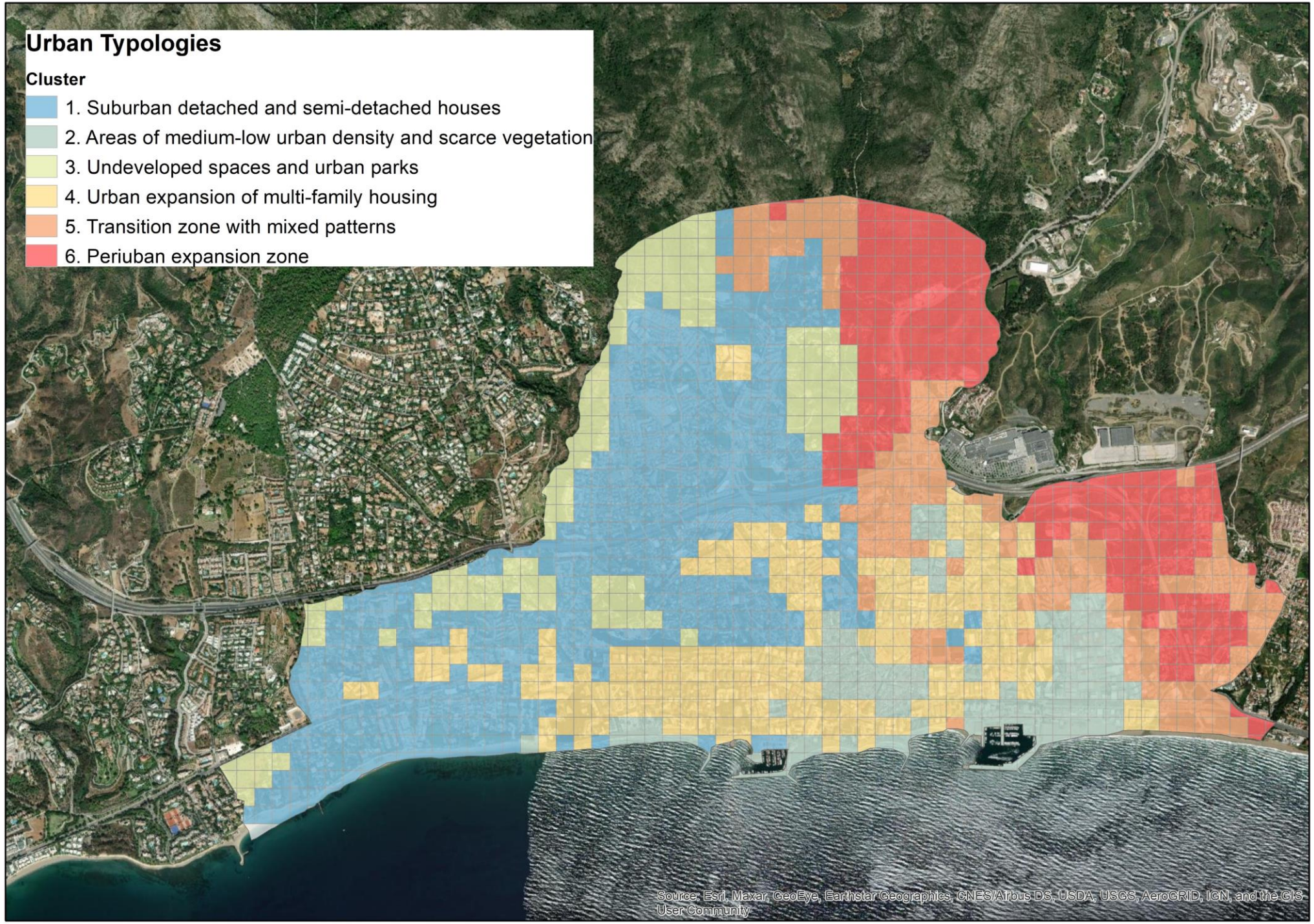

Height (m)
0 - 3
3 - 6
6 - 12
12-18
18-25
>25
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


Road Density
Lowest
Highest
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


Urban sprawl
Historic Center
1
2
3
4
5
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


Urban Density
<1
1 - 3
3 - 6
6 - 11
>11
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


Vegetation Cover
Trees
Scrub and grass
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community


Urban Typologies
Cluster
1. Suburban detached and semi-detached houses
2. Areas of medium-low urban density and scarce vegetation
3. Undeveloped spaces and urban parks
4. Urban expansion of multi-family housing
5. Transition zone with mixed patterns
6. Periuban expansion zone
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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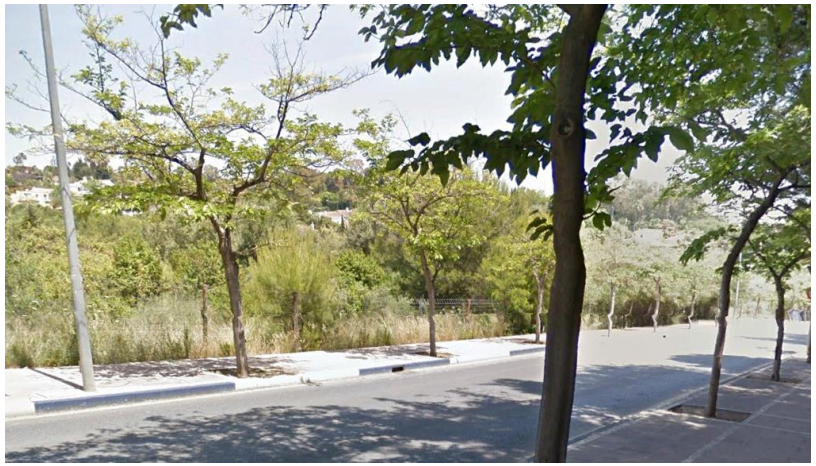

4. Urban expansion of multi-family housing

5. Transition zone with mixed patterns

6. Periuban expansion zone

Source: Google Earth

CONCLUSIONS

- Different predominant urban typologies with well-defined landscape features are recognized in Marbella.
- The proposed procedure is a useful tool to accurately assess changes in urban areas, so it may be used in landscape assessment research.

THANK YOU VERY MUCH

FOR YOUR ATTENTION!

DĚKUJI MNOHOKRÁT

PRO VAŠI POZORNOST!

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