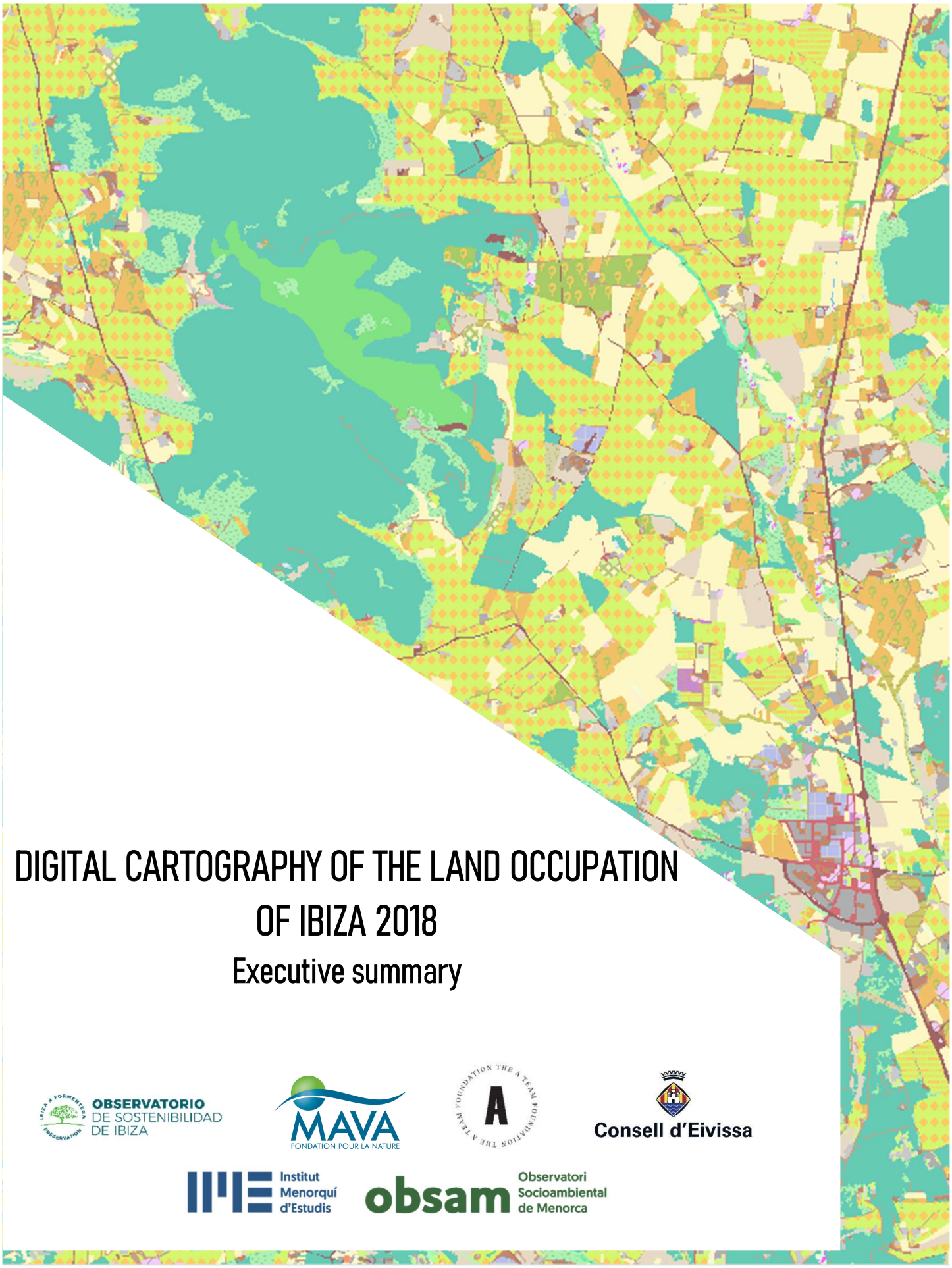

DIGITAL CARTOGRAPHY OF THE LAND OCCUPATION OF IBIZA 2018

Executive summary

OBSERVATORIO DE SOSTENIBILIDAD DE IBIZA

MAVA FONDATION POUR LA NATURE

THE A TEAM FOUNDATION

Consell d'Eivissa

Institut Menorquí d'Estudis

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Objective

The main objective of the project is the elaboration of the land cover and land use cartography, which able to acquire a deep knowledge of the territory of Ibiza and how it is used, besides permitting the elaboration of different analysis and territorial and environmental monitoring.

The methodology is based on photo interpretation, which consists in the identification of the elements through a visual analysis of aerial photographs and following drawing using proper Geographic Information Systems' tools in a 1:5.000 scale. This process has been complemented with field work in order to verify the land covers and uses.

The classification used is based on the CORINE Land Cover's (1985) European programme, linked to the Habitats Directive (1992) from the European Union (UE), and includes all the municipalities of the island of Ibiza: Sant Josep de sa Talaia, Sant Antoni de Portmany, Sant Joan de Labritja, Santa Eulària des Riu and Eivissa.

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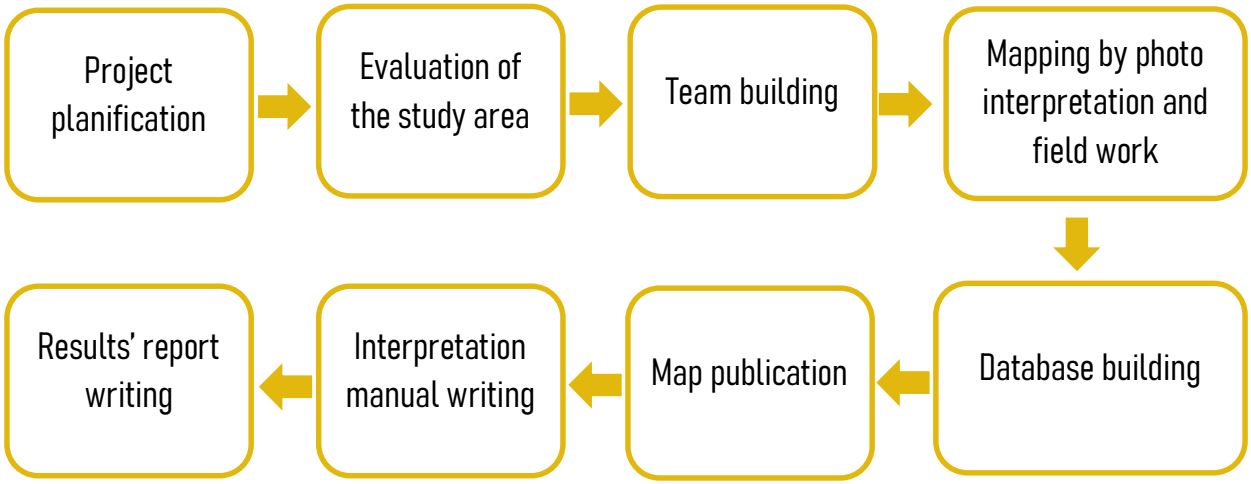
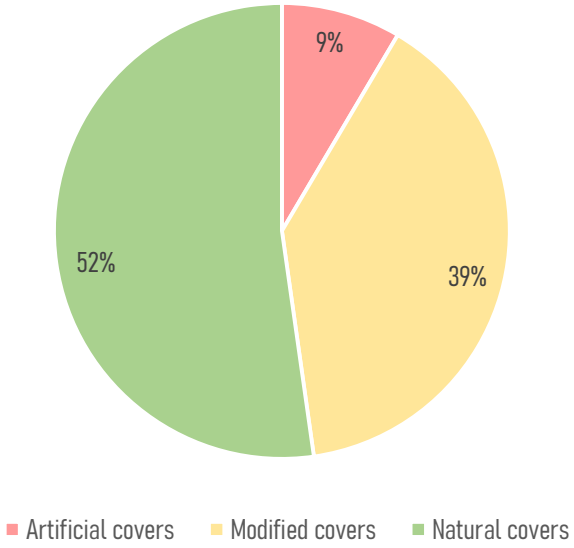


Mapping process

A visual analysis is applied to the aerial photography in order to identify de different elements that compose the territory.

The different covers are drawn and delineated as they are identified. Meanwhile, the database is completed with the information of every cover.

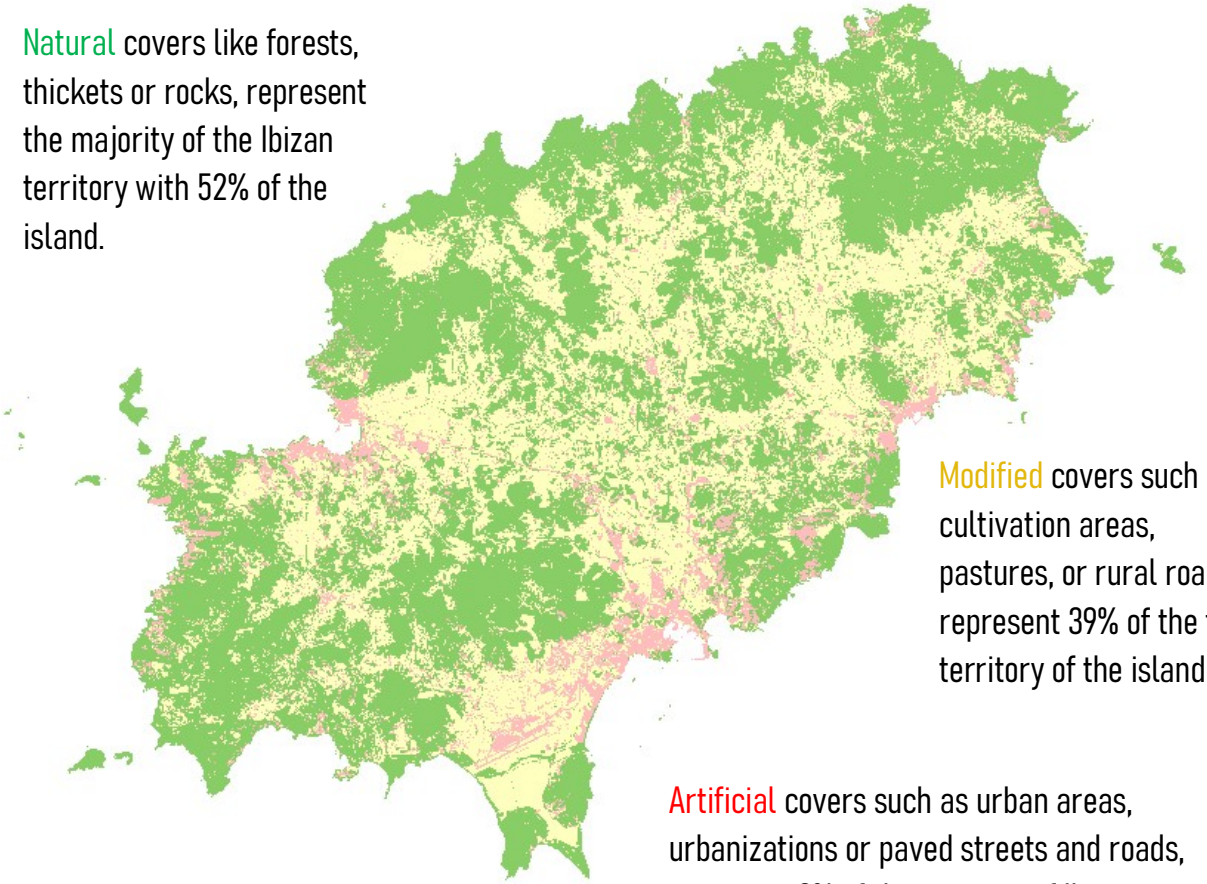
Different colours and textures are provided to the map in order to quickly identify the different types of covers.



The territory of Ibiza can be classified in three big blocks: artificial covers (irreversible anthropic zones to their natural status), modified covers (anthropic zones but reversible, such as farming areas), and natural covers (which do not have evident anthropic elements).

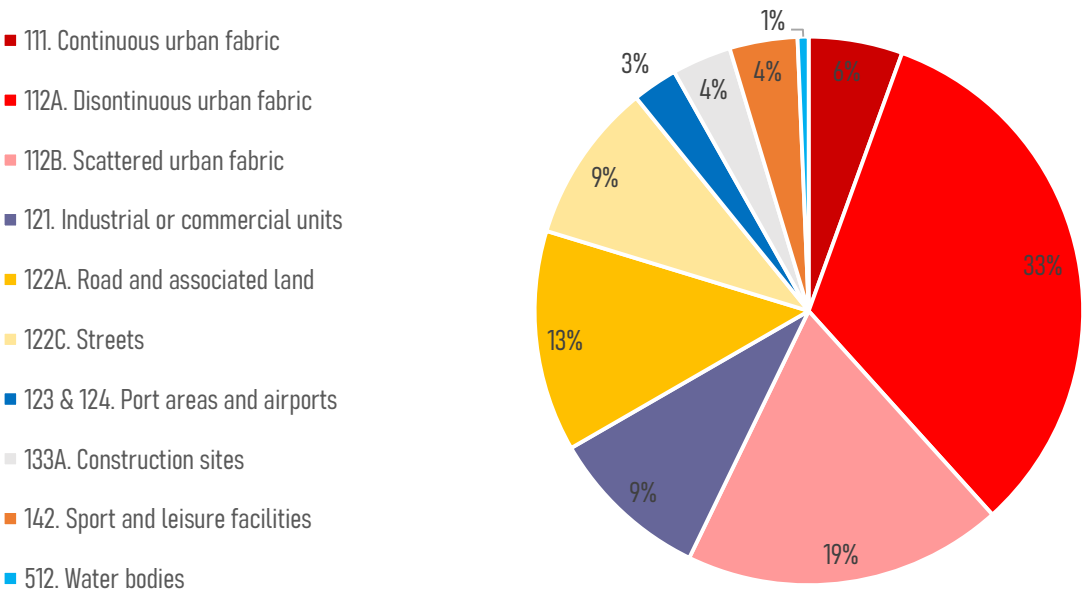
Types of covers

Natural covers like forests, thickets or rocks, represent the majority of the Ibizan territory with 52% of the island.

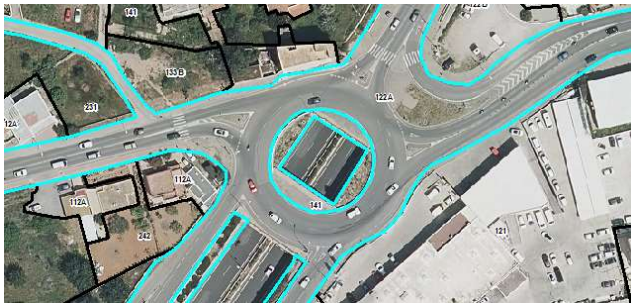


Modified covers such as cultivation areas, pastures, or rural roads, represent 39% of the total territory of the island.

Artificial covers such as urban areas, urbanizations or paved streets and roads, represent 9% of the territory of Ibiza.



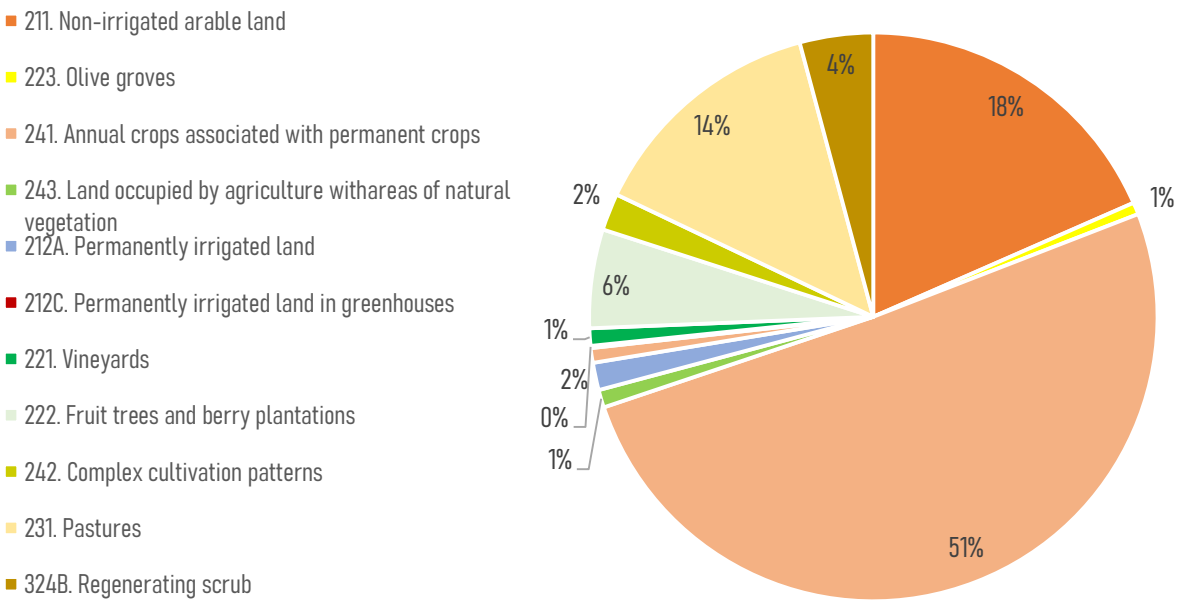
Artificial covers



In Ibiza, low-density or dispersed edifications predominate, with compact urban areas having very little weight. Residential areas represent more than 50% of the artificial covers.

Asphalted streets, highways and roads represent 22% of the artificial covers. They form the road network within the urban areas, the main roads, and the paved roads of the rural area.

The industrial, commercial and facilities, mostly located in the perimeter of urban areas, correspond the 9% of the artificial covers.

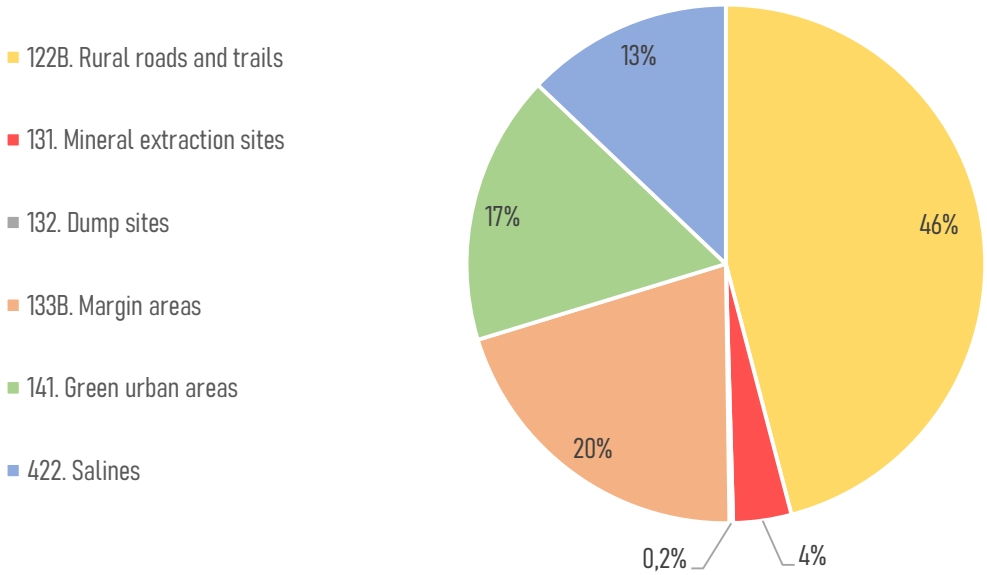


Agricultural covers

The farming that predominates in the island of Ibiza is extensive, which occupies more than 70% of the fields. The most common are annual crops associated with permanent crops.

Pastures and abandoned fields are the second most predominant type of agricultural cover (with 14% of the total agricultural areas), which, if used, are dedicated to cattle grazing.

Intensive farming, which conforms those farms that require a greater number of human resources and water for their development, represent around 11%.

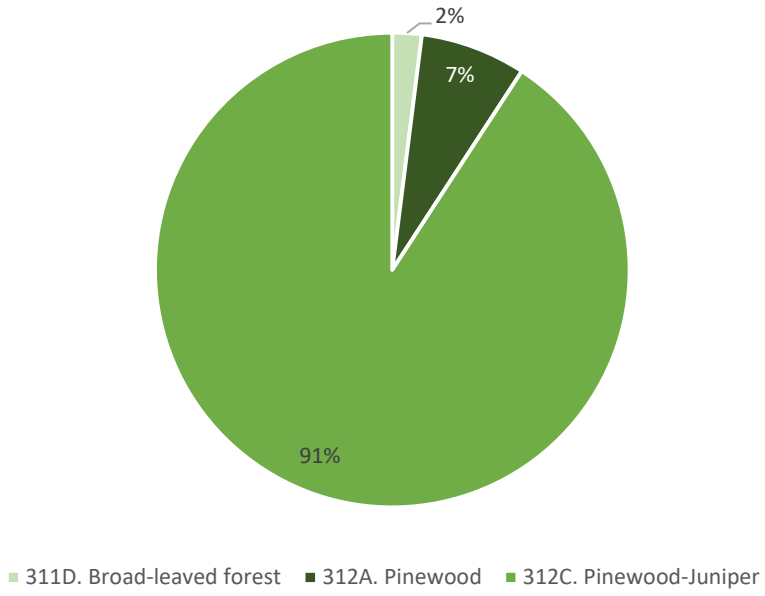


Non agricultural modified covers

Of the modified non-agricultural covers, the network of rural roads and trails stand out, which are mostly formed by compacted earth or gravel. This cover represents 46% of this category.

Margin areas represent the 20% of the non-agricultural modifies areas, and represent those non-profitable zones associated to another profitable cover. An example would be the sides of roads.

Green urban areas and gardens are mostly associated to an urban or residential zone, and conform the 17% of this category's surface.



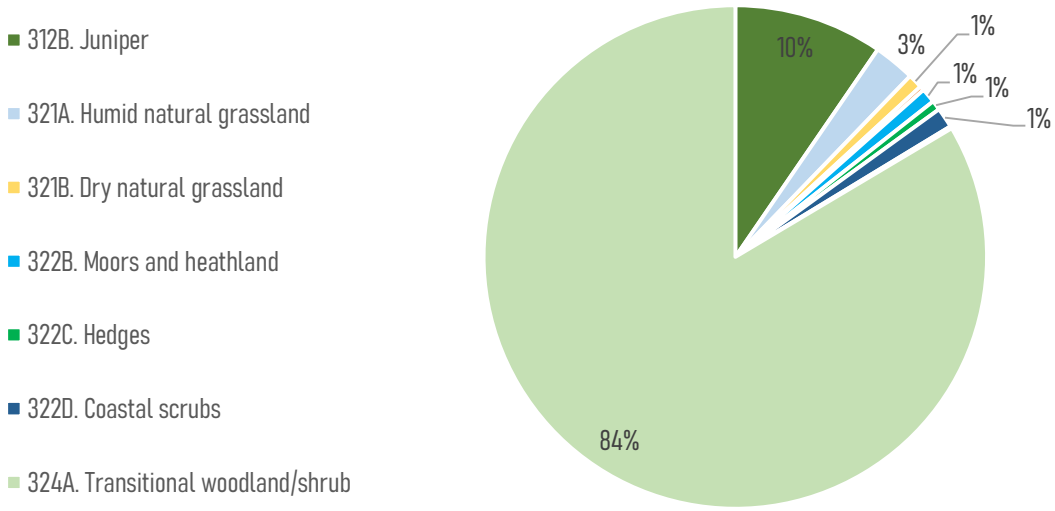
Natural covers can be forest areas with trees (77%), shrub vegetation associations (19%), and open spaces with little or no vegetation (4%). Each of them is explained below.

Forest covers

The pinewood-juniper is the most common natural cover in the island. It is formed by a forest mass of pines and an undergrowth of juniper.

The pinewood without the juniper undergrowth has a minor presence than the cover before, although still has a great presence throughout the forest covers of the island.

Margins with sparse vegetation do have a significantly minor presence than the covers above. These are usually located in transition areas between forest and non-tree zones.

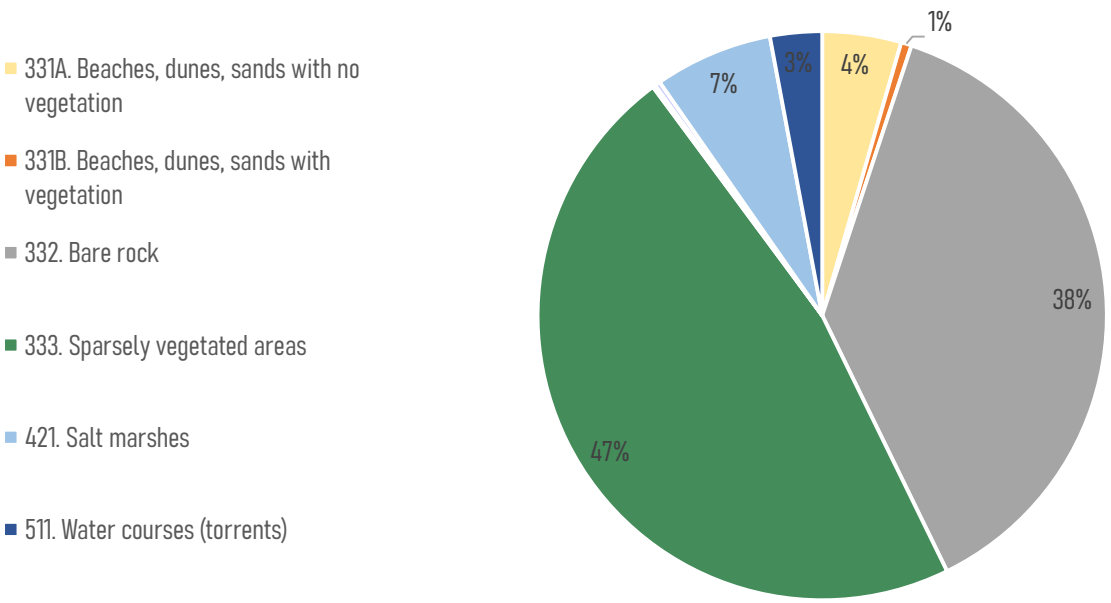


Shrub vegetation associations

Transitional woodland/shrub is the most extended shrub forest cover, with the 84% of this cover type. These are the primary phase of a pinewood-juniper forest.

Juniper forests or zones dominated by juniper, and are mostly located in the most interior zones of dune systems, although small spots can be found in remote areas far from the coast.

With significantly less coverage than the cover above, Humid natural grasslands are located in areas close to the coast, torrents, or with the water table near the surface.

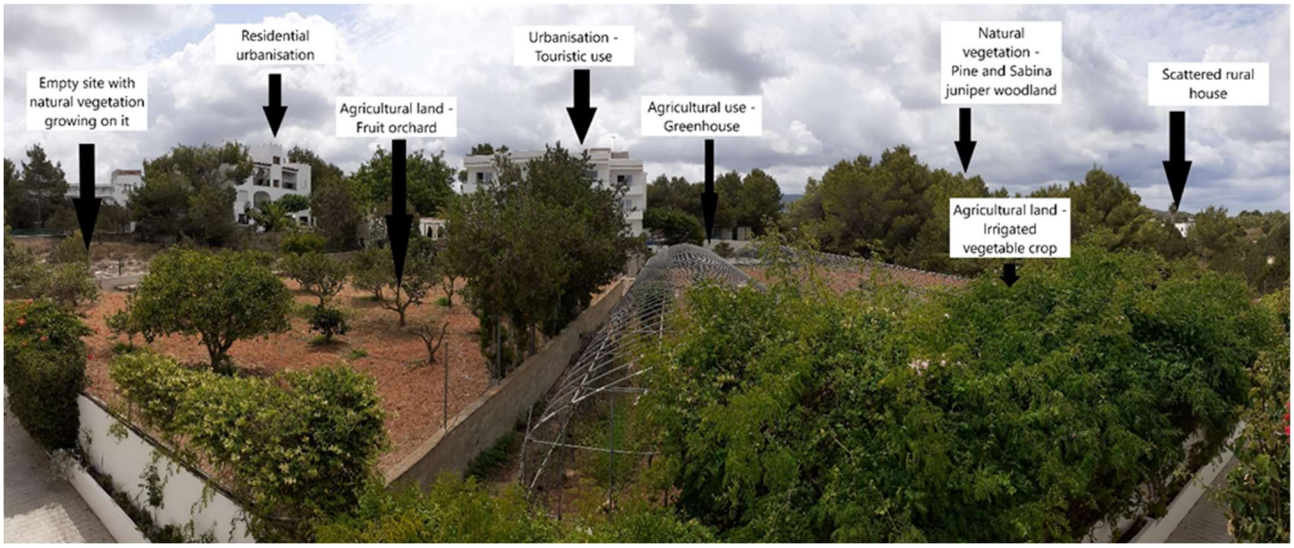


Open spaces with little or no vegetation

Sparsely vegetated areas represent the 47% of the open spaces with little or no vegetation category, and are located in cliffs or ravine walls. Its vegetation is mostly herbaceous with some little shrub.

Bare rock areas are located also in cliffs, in close areas to the coast and the most vertical ravine walls. The presence of vegetation is null or very little.

Coastal salt marshes are formed by shrub vegetation in muddy terrain easily flooded by seawater. The rest of this category's covers are also located near the coast.



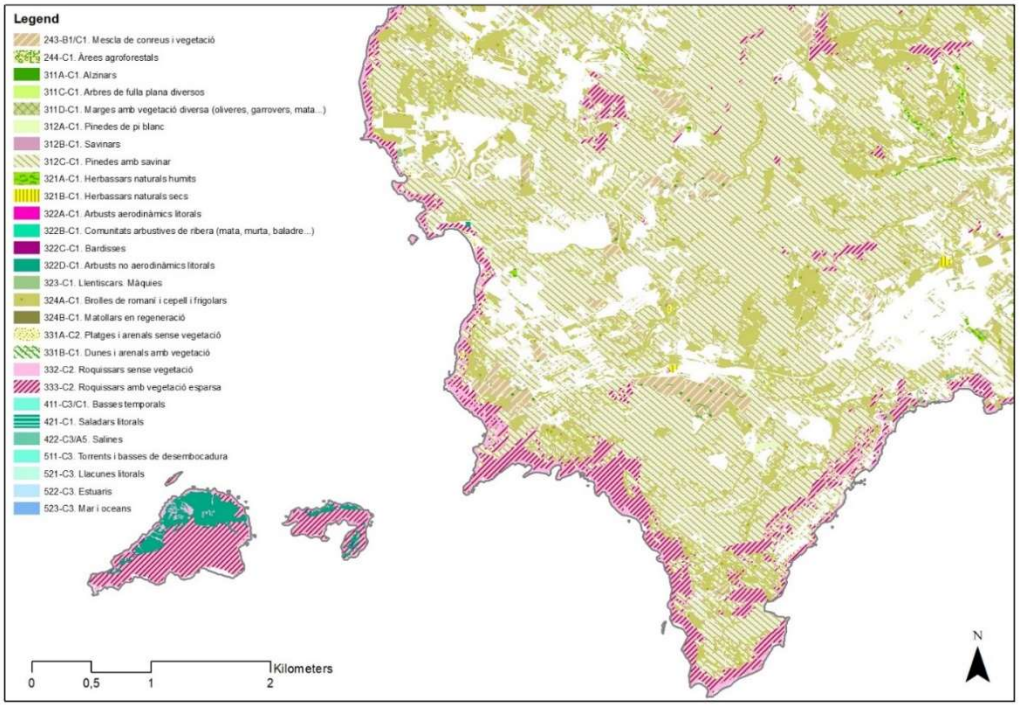
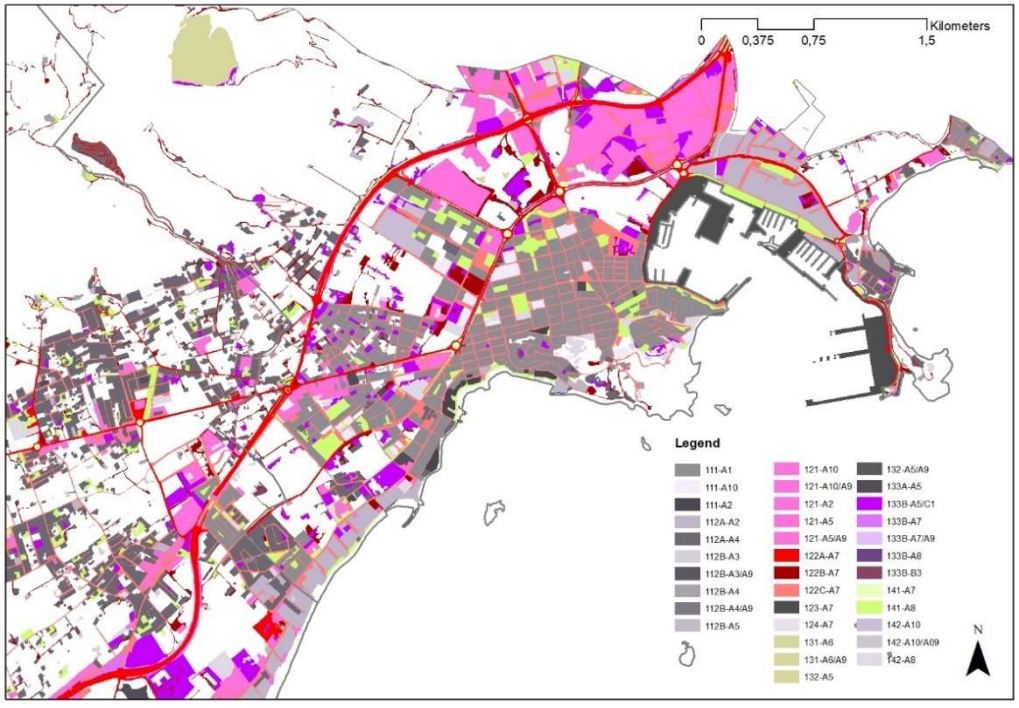
Peri-urban areas of cover classification

Interpretation examples

Coastal classification on the coast

Map examples

Natural cover sample of Es Vedrà and cala d'Hort.



Artificial cover sample of the city of Ibiza.