# DESCRIPTION OF THE CATEGORIES OF THE LAND COVER MAP OF CATALONIA
# (Level 5 of the legend)

*Bellaterra (Cerdanyola del Vallès), 13/06/2013*

**Stone pine forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus pinea* (stone pine) with a density of trees greater than 20%.

**Maritime pine forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus pinaster* (maritime pine) with a density of trees greater than 20%.

**Aleppo pine forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus halepensis* (aleppo pine) with a density of trees greater than 20%.

**Austrian pine forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus nigra* (Austrian pine) with a density of trees greater than 20%.

**Scots pine forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus sylvestris* (scots pine) with a density of trees greater than 20%.

**Mountain pine forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus mugo* subsp *uncinata* (mountain pine) with a density of trees greater than 20%.

**Silver fir forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Abies alba* (silver fir) with a density of trees greater than 20%.

**Other conifers (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the coniferous order (Monterey pine, spruce, English yew,...) different from other conifers listed in the legend of the Land Cover Map with a density of trees greater than 20%. They are unusual species in our territory.

**Evergreen oak forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus ilex* (evergreen oak) with a density of trees greater than 20%.

**Cork oak forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus suber* (cork oak) with a density of trees greater than 20%.

**Strawberry tree forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees or arboreal shrubs from the specie *Arbutus unedo* (strawberry tree) with a density of trees greater than 20%.

**Other evergreens (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of evergreen trees or arboreal shrubs (phillyrea, bay tree, common tamarisk,...) different from other evergreen species listed in the legend of the Land Cover Map with a density of trees greater than 20%. They are unusual species in our territory.

**Silver birch forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Betula pendula* (silver birch) with a density of trees greater than 20%.

**Spanish chestnut forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Castanea sativa* (Spanish chestnut) with a density of trees greater than 20%.

**European beech forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Fagus sylvatica* (European beech) with a density of trees greater than 20%.

**Pedunculate oak forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus robur* (pedunculate oak) with a density of trees greater than 20%.

**Sessile oak forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus petraea* (sessile oak) with a density of trees greater than 20%.

**Algerian oak forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus canariensis* (Algerian oak) with a density of trees greater than 20%.

**Pubescent oak forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus humilis* (pubescent oak) with a density of trees greater than 20%.

**Portuguese oak forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus faginea* (Portuguese oak) with a density of trees greater than 20%.

**Pyrenean oak forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus pyrenaica* (pyrenean oak) with a density of trees greater than 20%.

**Common hazel forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Corylus avellana* (common hazel) with a density of trees greater than 20%.

**Common ash forest (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Fraxinus excelsior* (common ash) with a density of trees greater than 20%.

**Other deciduous trees (>= 20%cc):**
Natural forests with a tree canopy mainly consisting of deciduous trees (northern red oak, maple, nettle tree,...) different from other deciduous species listed in the legend of the Land Cover Map with a density of trees greater than 20%. They are unusual species in our territory.

**Deciduous riparian forests (>= 20%cc):**
Natural forests with tree canopy consisting of several species of deciduous riparian trees situated on the banks of rivers, without a plantation frame, with a density of trees greater than 20%. Does not include ash woods which have a category of their own.

**Stone pine forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus pinea* (stone pine) with a density of trees between 5 and 20%.

**Maritime pine forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus pinaster* (maritime pine) with a density of trees between 5 and 20%.

**Aleppo pine forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus halepensis* (Aleppo pine) with a density of trees between 5 and 20%.

**Austrian pine forest (5-20%cc):**

Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus nigra* (Austrian pine) with a density of trees between 5 and 20%.

**Scots pine forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus sylvestris* (scots pine) with a density of trees between 5 and 20%.

**Mountain pine forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus mugo* subsp *uncinata* (mountain pine) with a density of trees between 5 and 20%.

**Silver fir forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Abies alba* (silver fir) with a density of trees between 5 and 20%.

**Other conifers (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the coniferous order (Monterey pine, spruce, English yew,...) different from other conifers listed in the legend of the Land Cover Map and with a density of trees between 5 and 20%. They are unusual species in our territory.

**Evergreen oak forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus ilex* (evergreen oak) with a density of trees between 5 and 20%.

**Cork oak forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus suber* (cork oak) with a density of trees between 5 and 20%.

**Strawberry tree forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees or arboreal shrubs from the specie *Arbutus unedo* (strawberry tree) with a density of trees between 5 and 20%.

**Other evergreens (5-20%cc):**
Natural forests with a tree canopy mainly consisting of evergreen trees or arboreal shrubs (phillyrea, bay tree, common tamarisk,...) different from other evergreen species listed in the legend of the Land Cover Map and with a density of trees between 5 and 20%. They are unusual species in our territory.

**Silver birch forests (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Betula pendula* (silver birch) with a density of trees between 5 and 20%.

**Spanish chestnut forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Castanea sativa* (Spanish chestnut) with a density of trees between 5 and 20%.

**European beech forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Fagus sylvatica* (European beech) with a density of trees between 5 and 20%.

**Pedunculate oak forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus robur* (pedunculate oak) with a density of trees between 5 and 20%.

**Sessile oak forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus petraea* (sessile oak) with a density of trees between 5 and 20%.

**Algerian oak forest (5-20%cc):**

Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus canariensis* (Algerian oak) with a density of trees between 5 and 20%.

**Pubescent oak forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus humilis* (pubescent oak) with a density of trees between 5 and 20%.

**Portuguese oak forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus faginea* (Portuguese oak) with a density of trees between 5 and 20%.

**Pyrenean oak forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus pyrenaica* (pyrenean oak) with a density of trees between 5 and 20%.

**Common hazel forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Corylus avellana* (common hazel) with a density of trees between 5 and 20%.

**Common ash forest (5-20%cc):**
Natural forests with a tree canopy mainly consisting of trees from the specie *Fraxinus excelsior* (common ash) with a density of trees between 5 and 20%.

**Other deciduous trees (5-20%cc):**
Natural forests with a tree canopy mainly consisting of deciduous trees (northern red oak, maple, nettle tree,...) different from other deciduous species listed in the legend of the Land Cover Map and with a density of trees between 5 and 20%. They are unusual species in our territory.

**Deciduous riparian forests (5-20%cc):**
Natural forests with tree canopy consisting of several species of deciduous riparian trees situated on the banks of rivers, without a plantation frame, with a density of trees between 5 and 20%.

**Buffer strip of stone pine:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus pinea* (stone pine) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of maritime pine:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus pinaster* (maritime pine) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of Aleppo pine:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus halepensis* (aleppo pine) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of Austrian pine:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus nigra* (Austrian pine) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of scots pine:**

Natural forests with a tree canopy mainly consisting of trees from the specie *Pinus sylvestris* (scots pine) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of evergreen oak:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus ilex* (evergreen oak) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of cork oak:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus suber* (cork oak) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of Spanish chestnut:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Castanea sativa* (Spanish chestnut) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of European beech:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Fagus sylvatica* (European beech) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of pedunculate oak:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus robur* (pedunculate oak) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of sessile oak:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus petraea* (sessile oak) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of Algerian oak:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus canariensis* (Algerian oak) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of pubescent oak:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus humilis* (pubescent oak) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of Portuguese oak:**
Natural forests with a tree canopy mainly consisting of trees from the specie *Quercus faginea* (portuguese oak) with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Buffer strip of other deciduous trees:**

Natural forests with a tree canopy mainly consisting of deciduous trees (northern red oak, maple, nettle tree,...) different from other deciduous species listed in the legend of the Land Cover Map, with a low tree density (about 30%), usually on scrubland, as a result of the reduction of the number of trees in order to minimize the risk of wildfires spreading. Usually located around residential areas and roads in forest areas.

**Stone pine plantations:**
Areas of land occupied by plantations of *Pinus pinea* (stone pine) regardless of the state of development of trees, and with a well-defined plantation frame.

**Maritime pine plantations:**
Areas of land occupied by plantations of *Pinus pinaster* (maritime pine) regardless of the state of development of trees, and with a well-defined plantation frame.

**Aleppo pine plantations:**
Areas of land occupied by plantations of *Pinus halepensis* (Aleppo pine) regardless of the state of development of trees, and with a well-defined plantation frame.

**Austrian pine plantations:**
Areas of land occupied by plantations of *Pinus nigra* (Austrian pine) regardless of the state of development of trees, and with a well-defined plantation frame.

**Scots pine plantations:**
Areas of land occupied by plantations of *Pinus sylvestris* (scots pine) regardless of the state of development of trees, and with a well-defined plantation frame.

**Mountain pine plantations:**
Areas of land occupied by plantations of *Pinus mugo* subsp *uncinata* (mountain pine) regardless of the state of development of trees, and with a well-defined plantation frame.

**Silver fir plantations:**
Areas of land occupied by plantations of *Abies alba* (silver fir) regardless of the state of development of trees, and with a well-defined plantation frame.

**Forest nurseries:**
Area dedicated to the cultivation of young trees of forestry species, mainly with a view to a later plantation. In our country, are mostly coniferous species.

**Non-native conifer plantations:**
Areas of land occupied by plantations of non-native conifers regardless of the state of development of trees, and with a well-defined plantation frame.

**Cork oak plantations:**
Areas of land occupied by plantations of *Quercus suber* (cork oak) regardless of the state of development of trees, and with a well-defined plantation frame.

**Spanish chestnut plantations:**
Areas of land occupied by plantations of *Castanea sativa* (Spanish chestnut) regardless of the state of development of trees, and with a well-defined plantation frame.

**Other deciduous trees plantations:**
Areas of land occupied by plantations of deciduous trees (northern red oak, maple, nettle tree,...) different from other deciduous species listed in the legend of the Land Cover Map, regardless of the state of development of trees, and with a well-defined plantation frame.

**Eucalyptus plantations:**
Areas of land occupied by plantations of trees from the genus *Eucalyptus* (eucalyptus) regardless of the state of development of trees, and with a well-defined plantation frame.

**Poplar plantations:**

Areas of land occupied by plantations of trees from the genus *Populus* (poplar) regardless of the state of development of trees, and with a well-defined plantation frame.

**Plane tree plantations:**
Areas of land occupied by plantations of trees from the genus *Platanus* (plane tree) regardless of the state of development of trees, and with a well-defined plantation frame.

**Aleppo pine regeneration:**
Areas of land occupied by the extension of a tree mass by natural means or human intervention, where the main tree specie is the Aleppo pine. The trees are very young and occupy areas affected by any disturbance, most likely fires, but also landslides or other causes of natural origin, or abandonment of human activities (crops, pastures,...).

**Maritime pine regeneration:**
Areas of land occupied by the extension of a tree mass by natural means or human intervention, where the main tree specie is the maritime pine. The trees are very young and occupy areas affected by any disturbance, most likely fires, but also landslides or other causes of natural origin, or abandonment of human activities (crops, pastures,...).

**Austrian pine regeneration:**
Areas of land occupied by the extension of a tree mass by natural means or human intervention, where the main tree specie is the Austrian pine. The trees are very young and occupy areas affected by any disturbance, most likely fires, but also landslides or other causes of natural origin, or abandonment of human activities (crops, pastures,...).

**Scots pine regeneration:**
Areas of land occupied by the extension of a tree mass by natural means or human intervention, where the main tree specie is the scots pine. The trees are very young and occupy areas affected by any disturbance, most likely fires, but also landslides or other causes of natural origin, or abandonment of human activities (crops, pastures,...).

**Mountain pine regeneration:**
Areas of land occupied by the extension of a tree mass by natural means or human intervention, where the main tree specie is the mountain pine. The trees are very young and occupy areas affected by any disturbance, most likely fires, but also landslides or other causes of natural origin, or abandonment of human activities (crops, pastures, ...).

**Silver fir regeneration:**
Areas of land occupied by the extension of a tree mass by natural means or human intervention, where the main tree specie is silver fir. The trees are very young and occupy areas affected by any disturbance, most likely fires, but also landslides or other causes of natural origin, or abandonment of human activities (crops, pastures,...).

**Evergreen oak regeneration:**
Areas of land occupied by the extension of a tree mass by natural means or human intervention, where the main tree specie is the evergreen oak. The trees are very young and occupy areas affected by any disturbance, most likely fires, but also landslides or other causes of natural origin, or abandonment of human activities (crops, pastures,...).

**Silver birch regeneration:**
Areas of land occupied by the extension of a tree mass by natural means or human intervention, where the main tree specie is the silver birch. The trees are very young and occupy areas affected by any disturbance, most likely fires, but also landslides or other causes of natural origin, or abandonment of human activities (crops, pastures, ...).

**European beech regeneration:**
Areas of land occupied by the extension of a tree mass by natural means or human intervention, where the main tree specie is the European beech. The trees are very young and occupy areas affected by any disturbance, most likely fires, but also landslides or other causes of natural origin, or abandonment of human activities (crops, pastures, ...).

**Pubescent oak regeneration:**
Areas of land occupied by the extension of a tree mass by natural means or human intervention, where the main tree specie is the pubescent oak. The trees are very young and occupy areas affected by any disturbance, most likely fires, but also landslides or other causes of natural origin, or abandonment of human activities (crops, pastures, ...).

**Portuguese oak regeneration:**
Areas of land occupied by the extension of a tree mass by natural means or human intervention, where the main tree specie is the Portuguese oak. The trees are very young and occupy areas affected by any disturbance, most likely fires, but also landslides or other causes of natural origin, or abandonment of human activities (crops, pastures, ...).

**Shrublands:**
Formations with a significant covering of shrubs or shrubby trees, as long as the tree cover is less than 5%.

**Shrublands under electric lines:**
Shrublands located under the electric lines where the vegetal density has been reduced as safety measures against forest fires.

**Buffer strip of shrublands:**
Areas where the vegetal density has been reduced leaving a shrubland as a majority formation. Located around roads and residential areas, can be distinguished from other vegetal coverings by its maintenance and its growth limitation as a tool in the prevention of forest fires.

**Shrublands on firewalls:**
Discontinuity opened in the forest mass inhabited by shrubs, used to stop and control the spreading of wildfires or as a support lines for its extinction.

**Shrublands coming from clearcutting:**
Scrublands that occupy a homogeneous parcel very different from the surrounding forest, as a result of the clearcutting of the trees that were previously in the same area, and that could be seen in images from previous years.

**Shrublands in riparian vegetation:**
Shrubby formations of riparian species installed on the edges of rivers, streams and ravines. This category includes the formations of shrub species distributed in the form of one or two bands at the bottom of a valley or a trough, differing from the surrounding plant communities from a point of view physiognomic or floristic.

**Reed beds:**
Vegetal grouping characterized by the abundance and dominance of reeds (*Arundo donax*). Usually found following a water course in riverbanks of rivers, creeks, streams, ravines or valleys where the phreatic water is little depth.

**Coastal wetlands vegetation:**
Areas with a morphology that causes the accumulation of water, which are flooded or tending to be flooded during great part of the year by more or less brackish waters, with specific vegetation consisting of small shrubs, semi-woody or herbaceous species, located in areas near the coast.

**Inland wetlands vegetation:**
Areas with a morphology that causes the accumulation of water, which are flooded or tending to be flooded during great part of the year by, in general, fresh waters, and with a specific vegetation consisting of small shrubs, semi-woody or herbaceous species

**High mountain peat bogs:**
Very plain areas, nearly permanently flooded, which favour peat formation processes. In Catalonia are always very small and relatively frequent in the Pyrenees. Typically we observe many small streams with meanders in these areas

**Salt works:**
Areas where salt is obtained.

**Meadows and grasslands:**
Formations with a significant herbaceous coverage, whenever the tree covering is less than 5% and the shrub covering of little significance. In mountain areas, we distinguish grasslands from high mountain grasslands, because of its geographical distribution and its composition of herbaceous species characteristic of colder climates. We also find dry meadows or grasslands in areas with Mediterranean vegetation. Do not include wetlands or peat lands.

**Meadows and grasslands under electric lines:**
Meadows and grasslands as a product of the reduction of plant density under the electric lines, made as security measures against forest fires.

**Buffer strip of meadows and grasslands:**
Areas where the vegetal density has been reduced remaining a meadow or grassland as majority formation. Located around roads and residential areas, can be distinguished from other vegetal coverings for a maintenance and a limitation of their growth as a tool in the prevention of forest fires.

**High mountain meadows and grasslands:**
Areas covered by spontaneous herbaceous communities typical of high mountain areas usually located above 1,500 meters, which remain green during the summer. Usually remain under snow for much of the winter.

**High mountain meadows and grasslands under electric lines:**
High mountain meadows and grasslands as a product of the reduction of plant density under the electric lines, made as security measures against forest fires.

**Meadows and grasslands on firewalls:**
Discontinuity opened in the forest mass covered by meadows or grasslands, used to stop or control the spreading of forest fires or as lines of support in the extinction.

**Meadows and grasslands coming from clearcutting:**
Meadows and grasslands that occupy a homogeneous parcel very different from the surrounding forest, as a result of the clearcutting of the trees that were previously in the same area, and that could be seen in images from previous years.

**High mountain meadows and grasslands coming from clearcutting:**
High mountain meadows and grasslands that occupy a homogeneous parcel very different from the surrounding forest, as a result of the clearcutting of the trees that were previously in the same area, and that could be seen in images from previous years.

**Shrub vegetation of dunes and sandy areas:**
Dunes and sandy areas with significant presence of shrubs.

**Herbaceous vegetation of dunes and sandy areas:**
Dunes and sandy areas with significant presence of herbaceous vegetation.

**Burned areas:**
Recently burned forest land, clearly distinguishable by the colours in the image of the burned vegetation as black, gray or brown.

**Sea cliffs:**
Rocky cliff on the line of contact between land and sea.

**Rocky outcrops:**
Compact rock formations without falling into the sea.

**Screes:**
Surface where there is an accumulation of boulders and edgy pebbles located in the flanks of a mountain. It is a dry and arid area with sparse vegetation.

**Naturals riverbeds:**
Lands lacking of vegetation by the action of a river course.

**Bare soil in firewalls:**
Discontinuity opened in the forest mass lacking of vegetation (usually, temporarily) used to stop and control the spreading of wildfires or as a support lines for its extinction.

**Eroded soil by natural agents:**
Areas with little or no vegetation as a result of the action of erosive agents or natural disturbances.

**Bare soil by anthropic action:**
Bare soil located in natural areas as a result of some kind of anthropogenic disturbance more or less maintained. For example, areas where there is a natural passage or parking of vehicles continued. Also abandoned stretches of roads.

**Bare soil under electric lines:**
Bare soils as a result of the removal of vegetation (usually, temporarily), made under electric lines for security measures against forest fires.

**Beaches:**
Portion of coast consisting of sandy areas.

**Glaciers and snowdrifts:**
Areas covered in snow or ice masses that assume more or less permanent.

**Lakes and inland lagoons:**
Natural sheets of fresh water that occupy a land depression, located within the basins.

**Coastal lagoons:**
Natural sheet of, more or less, brackish water that occupy a land depression, situated near the coastal area.

**Rivers:**
Natural water streams that drain the basins. We fotointerpret the water surface visible in the image.

**Reservoirs:**
Artificial water sheets caused by the interruption of the course of a river or a lake made by re-grow, usually by a dam. The area considered refers to the limit set by the vegetation at the edges of it, indicating the maximum capacity of stored water.

**Sea:**
Area occupied by seawater. Generally corresponds to marine waters located within urbanized areas.

**Citrus:**
Plantations of orange trees, mandarin trees and other citruses.

**Non-citric fruit trees:**
Plantations of any shrub or tree species other than citrus, olive trees, vine and carob trees.

**Non-citric fruit trees - irrigated:**
Plantations of any shrub or tree species other than citrus, olive trees, vine and carob trees, with an irrigation system.

**Agricultural nurseries:**
Land surfaces destined to the breeding young fruit trees for a later transplanting to the crop field.

**Vineyards:**
Fields planted with vines.

**Olive groves:**
Olive plantations.

**Olive groves - irrigated:**
Olive plantations with an irrigation system. Trees are smaller than dry land olive trees and arranged in rows to allow the passage of harvesting machinery.

**Carob groves:**
Carob trees plantations.

**Carob groves - irrigated:**
Carob trees plantations with an irrigation system.

**Rice crops:**
Fields planted with rice. In these areas the presence of channels is very characteristic (which controls the water level of the fields) making a characteristic reticular structure.

**Other herbaceous crops:**
Herbaceous crops other than rice (cereals, potatoes, ...)

**Other herbaceous crops - irrigated:**
Herbaceous crops other than rice (cereals, potatoes, ...) with an irrigation system.

**Mowing meadows:**
Cultivation of plants used for feeding stabled livestock, maintaining their state as a result of mowing and irrigation.

**Crops under transformation:**
Agricultural terrains where, by means of agricultural actions, the type of crops are changing, but in the basis image, it is impossible to determine what it will be.

**Agricultural breaking up:**
Denuded soils in forest areas, as a result of the removing the original cover in order to implement some type of crop.

**Greenhouses:**
Constructions with transparent walls and roof (plastic or glass) over metal structures, where plants are cultivated in the most favourable conditions for them to grow.

**Garden crops under plastic:**
Crops developed under surfaces usually covered by some kind of plastic, situated near the ground, clearly smaller sized than greenhouses, which allows a considerable number of annual harvests.

**Citrus on terraces:**
Crops of various tree species of citrus in terraced land.

**Non-citrus on terraces:**
Plantations of any shrub or tree species other than citrus, olive and carob trees or vines situated on terraced land.

**Non-citrus on terraces - irrigated:**

Plantations of any shrub or tree species other than citrus, olive and carob trees or vines situated on terraced land, with an irrigation system.

**Vineyards on terraces:**
Fields of vines situated on terraced land.

**Olive groves on terraces:**
Olive plantations situated on terraced land.

**Olive groves on terraces - irrigated:**
Olive plantations situated on terraced land, with an irrigation system.

**Carob groves on terraces:**
Carob trees plantations located on terraced land.

**Other herbaceous crops on terraces:**
Herbaceous crops other than rice (cereals, potatoes, ...) located on terraced land.

**Other herbaceous crops on terraces - irrigated:**
Herbaceous crops other than rice (cereals, potatoes, ...) located on terraced land, with an irrigation system.

**Abandoned crops - forests:**
Abandoned fields covered with an incipient forest tree species.

**Abandoned crops - shrublands:**
Abandoned fields covered with an incipient forest shrub species.

**Abandoned crops - grasslands in forest areas:**
Abandoned fields with an incipient forest cover of herbaceous species. They are immersed or in contact with a forest area of more than 2 hectares.

**Abandoned crops - high mountain grasslands in forest areas:**
Abandoned fields with an incipient forest cover of high mountain herbaceous species. They are immersed or in contact with a forest area of more than 2 hectares.

**Abandoned citrus - grasslands in agricultural areas:**
Citrus plantations of various species which are abandoned, and the majority of the cover consist of forest herbaceous species. They are located within an agricultural surrounding , without any contact to forest areas.

**Abandoned citrus - grasslands in agricultural areas on terraces:**
Citrus plantations of various species located in terraced land, which are abandoned, and the majority of the cover consist of forest herbaceous species. They are located within an agricultural surrounding , without any contact to forest areas.

**Abandoned non-citrus - grasslands in agricultural areas:**
Plantations of any shrub or tree species other than citrus, olive trees, vines and carob trees which are abandoned, and the majority of the cover consist of forest herbaceous species. They are located within an agricultural surrounding , without any contact to forest areas.

**Abandoned non-citrus - irrigated - non-watered - grasslands in agricultural areas:**
Plantations of any shrub or tree species other than citrus, olive trees, vines and carob trees which have an irrigation system, but they are abandoned, and the majority of the cover consists of forest herbaceous species. They are located within an agricultural surrounding, without any contact to forest areas.

**Abandoned non-citrus - grasslands in agricultural areas on terraces:**
Plantations of any shrub or tree species other than citrus, olive trees, vines and carob trees, located on terraced lands, and are abandoned. The main cover consist on forest herbaceous

species. They are located within an agricultural surrounding , without any contact to forest areas.

**Abandoned non-citrus - irrigated - non-watered - grasslands in agricultural areas on terraces:**
Plantations of any shrub or tree species other than citrus, olive trees, vines and carob trees, located on terraced lands, with an irrigation system, but they are abandoned. The main cover consist on forest herbaceous species. They are located within an agricultural surrounding , without any contact to forest areas.

**Abandoned vineyards - grasslands in agricultural areas:**
Fields of vines which are abandoned, and the main cover consists on forest herbaceous species. They are located within an agricultural surrounding, without any contact to forest areas.

**Abandoned olive groves - grasslands in agricultural areas:**
Olive plantations which are abandoned and the main cover consists on forest herbaceous species. They are located within an agricultural surrounding , without any contact to forest areas.

**Abandoned olive groves - irrigated - non-watered - grasslands in agricultural areas:**
Olive plantations with an irrigation system, but they are abandoned, and the main cover consists on forest herbaceous species. They are located within agricultural surroundings, without any contact to forest areas.

**Abandoned carob groves - grasslands in agricultural areas:**
Carob trees plantations which are abandoned and the main cover consists on forest herbaceous species. They are located within an agricultural surrounding , without any contact to forest areas.

**Abandoned rice crops - irrigated - non-watered - grasslands in agricultural areas:**
Rice crops which are abandoned and the main cover consists on forest herbaceous species. They are located within an agricultural surrounding , without any contact to forest areas.

**Other abandoned herbaceous crops - grasslands in agricultural areas:**
Herbaceous crops other than rice (cereals, potatoes, ...) which are abandoned and the main cover consists on forest herbaceous species. They are located within an agricultural surrounding , without any contact to forest areas.

**Other abandoned herbaceous crops - irrigated - non-watered - grasslands in agricultural areas:**
Herbaceous crops other than rice (cereals, potatoes, ...) with an irrigation system, but they are abandoned. The main cover consist on forest herbaceous species. They are located within an agricultural surrounding , without any contact to forest areas.

**Other abandoned herbaceous crops - grasslands in agricultural areas:**
Herbaceous crops other than rice (cereals, potatoes, ...) located on terraced land, and are abandoned. The main cover consists on forest herbaceous species. They are located within an agricultural surrounding , without any contact to forest areas.

**Other abandoned herbaceous crops - irrigated - non-watered - grasslands in agricultural areas on terraces:**
Herbaceous crops other than rice (cereals, potatoes, ...) located on terraced land, with an irrigation system, but they are abandoned. The main cover consists on forest herbaceous species. They are located within an agricultural surrounding , without any contact to forest areas.

**Abandoned mowing meadows - irrigated - non-watered - grasslands in agricultural areas:**
Cultivation of plants used for feeding stabled livestock, maintaining their state as a result of mowing and irrigation, but they are abandoned. The main cover consists on forest herbaceous species. They are located within an agricultural surrounding, without any contact to forest areas.

**Abandoned mowing meadows - irrigated - non watered - high mountain grasslands in agricultural areas:**
Cultivation of plants used for feeding stabled livestock, maintaining their state as a result of mowing and irrigation, but they are abandoned. The main cover consists on high mountain forest herbaceous species. They are located within an agricultural surrounding, without any contact to forest areas.

**Abandoned vineyards - grasslands in agricultural areas on terraces:**
Fields of vines located in terraced lands, which are abandoned, and the main cover consists on forest herbaceous species.

**Abandoned olive groves - grasslands in agricultural areas on terraces:**
Olive plantations located in terraced lands, which are abandoned, and the main cover consists on forest herbaceous species.

**Abandoned olive groves - irrigated - non-watered - grasslands in agricultural areas on terraces:**
Olive plantations located in terraced lands, with an irrigation system, but they are abandoned. The main cover consists on forest herbaceous species. They are located within an agricultural surrounding, without any contact to forest areas.

**Abandoned carob groves - grasslands in agricultural areas:**
Carob trees plantations located on terraced land and they are abandoned. The main cover consists on forest herbaceous species.

**Greenhouses on terraces:**
Constructions with transparent walls and roof (plastic or glass) over metal structures, where plants are cultivated in the most favourable conditions for them to grow., and located on terraced lands.

**Market and kitchen garden:**
Fundamentally agricultural areas, with mosaic structure of small parcels, predominantly vegetables and some scattered fruit trees or other woody crops. Usually areas with an intensive irrigation, which its production is mainly engaged in own consumption. The size of the parcels is small. Accompanied by small houses or buildings. Usually located on the banks of rivers or in the vicinity of villages or towns. There may also be some kind of tree vegetation or artificial cover.

**Residential agricultural settlement:**
Areas where there is a clear and main residential use of the land, characterized by a dispersed population of buildings or small groups of houses. Around these settlements coexist cultivated plots of vegetables and woody crops, resulting a secondary occupation of land destined to the own consumption. In some cases these cultivated plots can be juxtaposed with areas of natural vegetation.

**Mainland fish farms and aquacultural crops:**
Areas occupied by artificial surfaces that are used for activities related to the primary sector of production, in this case the fish farming. The main cover are the ponds, but there may be buildings and other associated categories.

**Fish farms and aquacultural crops into the sea:**
Floating structures located within the sea for breeding fish and mussels.

**Artificial channels:**
Infrastructures (conductions and channels along with its associated facilities and land) designed to drive masses of water from rivers, reservoirs, etc.. Includes irrigation channels. The routes (roads and trails) that usually accompany these pipes are considered to be associated land.

**Agricultural ponds:**

Structure constructed in order to store water in agricultural surroundings, located in farms or between the fields.

**Residential area:**
Sets of houses, both isolated and detached, located outside urban centres, usually at a distance from them. May include small amounts of other types of buildings. Typically include a significant portion of private gardens. Especially abundant in forest environments and coastal areas and mountains.

**City centre:**
Urban area characterized by having a dense and irregular pattern of streets, the buildings are generally between dividing and there are few green and parking areas.

**City expansion:**
Urban zone constructed on the basis of a defined urban planning. It is characterized by a more regular pattern, wider roads and more parkland areas than the City Centre. The buildings can be apartment blocks between dividing or isolated edifications.

**Single family houses:**
Type of city expansion where the buildings are single-family houses, that can be terraced or detached. It is characterized by a largest area of parkland than the category City Expansion and, therefore, less building density.

**Colonies and isolated urban cores:**
The colonies are an urban area with a regular pattern. They are product of a defined urban planning, and it is distinguishable from the City Expansion, mainly because its connection or contact with the plot City Centre-City Expansion is through a tranport route.
They are formed by the repetition of the same architectural features and almost always the same age. The nuclei are small isolated groups of houses but the size is too small to be considered a village.

**Detached houses:**
Buildings destined to housing for persons, located outside of any urban centre, and usually have a garden or spaces attached to the building itself.

**Industrial polygon - ordered:**
Group of buildings, streets and parking areas, formed exclusively to develop an industrial-type activity. The sorted polygons respond to an urban planning and therefore have a defined structure, they have green areas and facilities and services. Include logistics centres.

**Industrial polygon - unordered:**
Groups of industries generated without apparent planning, without a clear structure of streets, the facilities and services are of difficult location, and the absence of artificial green areas is frequent.

**Isolated industries:**
Areas of artificial surfaces with facilities dedicated to the production, preparation, processing, repair, storage and distribution of products. These are groups of buildings, streets and parking areas, where there is a type of industrial activity, usually located on the outskirts of urban centres and close tranport networks.

**Sawmills:**
Space dedicated to transform the forest products such as trunks or bark at other useful materials for construction, handicraft or other purposes in the commercial market. Includes buildings and outdoor areas used for storage of materials.

**Commercial and office complexes:**
Group of buildings used for commercial purposes. Constructions may have a form of warehouses or buildings, and are usually accompanied by parking facilities and sometimes small landscaped parkland.

**Plant nurseries:**
Space dedicated to the commercialization of plants with an ornamental purpose. Includes both ornamental and gardening herbaceous plants; and ornamental, fruit and forest trees. Consist of artificial covers related to this activity, such as warehouses, buildings, and parking lots, which can be associated with areas intended for planting, as greenhouses and growing areas.

**Hotel complexes:**
Land occupied by artificial surfaces destined to the accommodation of persons usually temporary way. It consists of one or more buildings and annexes related activity, such as parking facilities, gardens, sports areas, etc.. Includes various types, such as hotels, hostels, residences, holiday homes, mountain huts, etc..

**Other constructions:**
Buildings not destined to accommodate people or animals, such as water tanks or other small buildings, usually do not correspond to any of the other urban categories defined in the legend of the Land Cover Map of Catalunya.

**Warehouses for agricultural use:**
Constructions destined to save or store equipment, tools or products related to agricultural activity.

**Farms:**
Site dedicated to the breeding of livestock or poultry, contains buildings and associated areas.

**Dams:**
Wall built in the course of a river to interrupt its flow and allow an accumulation of water.

**Cemeteries:**
Places to bury the dead. They have a very characteristic structure although they may be very different in size. Include green areas and buildings destined to funeral services such as chapels, funeral wakes or funeral parlors.

**Big avenues:**
Asphalted or paved areas that are not strictly part of roads as they have no direct connection with them.

**Parking areas:**
Areas for vehicle parking; generally are paved surfaces.

**Urban parks:**
Landscaped areas typically located in urban areas that are composed of several green areas, water sheet and sometimes annex constructions or car parkings.

**Urban ponds:**
Structure constructed in order to store water. Differ from farm ponds that are located in urban environment so that their uses are different.

**Motorways and dual carriageways:**
Asphalted surface where there is car circulation by two or more lanes in each direction of traffic.

**Roads:**
Asphalted surface where there is car circulation by one lane in each direction of traffic.

**Airports:**
Space destined to the air traffic. This includes buildings for passengers and workers, aircraft hangars and landscaped areas, landing strips and takeoff, plus parking areas.

**Railroad tracks:**

Areas equipped with tracks for the trains circulation. Includes stations and associated warehouses.

**Port areas:**
Areas where there are artificial embankments on a coast or shore of a river that allow the embankment and disembarkment of boats. Include roads, warehouses, loading and unloading areas and other buildings. Includes breakwaters that go inside the water.

**Road green areas:**
Vegetation with an appearance more or less gardened, located around the tranport routes, that are the subject of some maintenance (mowing, irrigation, ...). Located mainly in roundabouts, tranport knots and taluses of major roads. This vegetation can have a more or less natural origin.

**Railroad green areas:**
Vegetation with an appearance more or less gardened, located around the railways, that are subject of some maintenance. This vegetation can have a more or less natural origin.

**Areas of service in road network:**
Spaces associated to the road network and highways designed to offer a service to its users. Can have buildings, car parking and green areas.

**Bus stations:**
Spaces intended for the entry, exit and parking of buses and coaches for public transport of the passengers. This category only includes large spaces destined to this affection with a minimum area of 0.5 ha.

**Sport areas:**
Areas destined to sport such as soccer fields, tennis courts, swimming pools and sports facilities, located outdoors as well as within sports facilities; except the golf courses that have their own category . Within the grounds also include areas designed specifically to sports, parking areas, small buildings, terraces and gardens. Within this category are incorporated ski resorts (but not the slopes), and small airports sports (with unpaved runways).

**Recreational parks:**
Surfaces including buildings, spaces and facilities where the primary use of which is the realization of recreation, leisure and recreational activities, in adapted spaces. This category includes amusement parks, theme parks, zoos and other leisure areas.

**Campsites:**
Land equipped with installations at the service of campers. Typically include buildings, trees for shade, gardens, parks, swimming pools and other
sports facilities. Not included in this class the natural camping areas without the presence of artificial elements.

**Golf courses:**
Areas for golf practice. Inside the enclosure, are included small buildings, large gardens, ponds and car parks.

**Administrative complexes:**
Areas which include administrative complexes and defense and security complexes (buildings fire, police, local councils, etc ...). Not understood as such, any areas of camps, maneuvers or training or shooting practice. Within the urban area can be differentiated only those located in an area distinct from other urban buildings.

**Health facilities:**
Major hospitals. Usually includes buildings, gardens, parkings, heliports, etc.. This category contains only large hospitals, which can be isolated from other covers or are included in urban areas but not include other smaller health centres in urban areas, because their differentiation is difficult.

**Educational facilities:**
Buildings and associated terrains destined to education, including schools which for their size or incidence in the territorial structure deserve its definition, such as colleges, institutes, university campuses, etc..

**Prisons:**
Buildings and associated terrains used for rehabilitation of prisoners. Recognized by their characteristic plant types with polygonal perimeter wall. The most modern have little or no relation to the adjacent urban areas (only in terms of infrastructure).

**Religious centres:**
Buildings or complexes dedicated to religion that can be easily isolated from the urban plot or are separated from it and therefore can be easily recognized. They include churches, monasteries, mosques, seminaries, cathedrals, monasteries and their associated terrains as gardens, car parks and pedestrian areas.

**Cultural centres:**
Urban areas earmarked for promoting of culture. Includes theatres, libraries, showrooms, etc.. And also other places of historic or patrimonial interest, distributed to non-urban areas such as castles, archaeological sites, etc..

**Wind power plants:**
Installations for the generation of electricity from draughts caused by wind turbines. It may include tracks or paths and bare areas related to that purpose.

**Solar power plants:**
Installations of solar photovoltaic panels for the production of electricity and its associated terrains.

**Nuclear power plants:**
Areas with installations for the production of nuclear energy and its associated terrains.

**Thermal power plants:**
Areas with installations for the production of electricity, from thermal origin, and its associated terrains.

**Electrical infrastructures:**
Areas with installations destined to the storage or distribution of electric energy. It excludes energy-producing plants.

**Water treatment plants:**
Areas with installations destined to purify wastewater. They are formed by dams, buildings and sometimes small gardens.

**Desalination plants:**
Installations destined to remove excess salt and other minerals from water from the sea.

**Telecommunications:**
Areas with installations destined to provide coverage for the communications services of television, radio, telephone, telegraph, radiotelegraph and other analogous, and its associated terrains, such as transmitter stations and repeaters for radio and television antennas, radar stations etc..

**Mining extraction areas:**
Any extraction or deposit of mineral or rock open pit, except the salt flats. They are generally of considerable size, where the most common cover is the land movements, although there may be bare areas, rocky areas, and areas with an apparent recovery of vegetation resulting of the restoration work. In some cases you can find lagoons resulting from the natural processes of excavation of the ground.

**Dumps:**
Sites destined indefinitely in time to pour garbage and other waste. Include public garbage dumps, the industrial dumps, wastewater ponds, liquid spills from chemical processes, agricultural waste, etc..

**Seawage treatment and water purification plants:**
Surfaces destined to the waste treatment, can have buildings. This category includes composting plants, sorting plants, incinerators, dumps and areas for storing used materials from several sources, for a later use or a new destination (not including the garbage dumps or wastewater treatment plants) .

**Non-built urban bare soils:**
Urban areas without vegetation or buildings. Usually they are temporary extensions related to future construction works, which we unknown their future use.

**Urban areas under construction:**
Urban areas where there are construction work of buildings and land movements, associated with the construction of future spaces of urban use that are not yet defined.

**Earthworks:**
Bare soils in natural areas regardless of the original cover, as a result of broken up or land movements, for example due to the construction of roads, highways or railroads. Not included here bare soils in artificial areas. Such covers are markedly temporal. Once the construction that causes the temporary situation is finished, part of the terrains will recover their original covers (farming, forestry, etc.).