1. Name of the indicator			
NDVI vegetation index			
Last updated:	21/10/2021	**Version:**	1.2

2. Area	
Main area	Environment and surroundings
Sub-area	Healthy environment

3. Definition

The NDVI (*Normalised Difference Vegetation Index*) is a vegetation index used to estimate the quantity, quality and development of vegetation by measuring the intensity of radiation from certain bands of the electromagnetic spectrum emitted or reflected by vegetation.

4. Calculation formula

This index is calculated from differences in radiation between the visible and near-red radiation reflected by plants as follows:

$$NDVI = \left(\frac{NIR - VIS}{NIR + VIS}\right)$$

Where:

- NIR corresponds to reflectance in the near infrared region.

VIS is reflectance in the visible red region.

5. Description

This index indicates the extent to which vegetation is present and determines its general status.

The results of the NDVI calculation range from -1 to 1. In general terms, negative values usually correspond to water surfaces, man-made structures, rocks, clouds, snow, etc. Bare soil will generally have values ranging from 0.1 to 0.2; and presence of vegetation will have positive values ranging from 0.2 to 1. Where vegetation is dense and healthy, values above 0.5 are common, while for more sparse vegetation values generally range between 0.2 and 0.5.

In short, the higher the value of the index, the more abundant the vegetation will be, reaching values close to 1.

6. Periodicity

Annual

7. Source

Institut Cartogràfic i Geològic de Catalunya (ICGC)

Amb el suport de:

Diputació de Girona
Generalitat de Catalunya
Unió Europea
Fons Europeu de Desenvolupament Regional

8. Constraints

Indicator contact point to process these data.

Geographical ☐	Time ☐	Statistical confidentiality ☐

Description of constraints
Not applicable

9. SDGs

Mark the SDGs that can be related to this indicator.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒	☐	☐

Mark the sub-SDGs that can be related to this indicator.

11.7; 15.3; 15.13

10. Comments and observations

In terms of multispectral analysis, the information of this index is reflected through of raster images in which each pixel has a reflection value of the object and that has been captured by a sensor. Thus, the image will show, for example, high values of infrared reflection in those areas where there Is vegetation.