LUCAS
THE EU’S LAND USE AND LAND COVER SURVEY
2017 edition
LUCAS Survey — land use and land cover across the European Union:
Monitoring socio-environmental challenges, such as: land take, soil degradation and environmental impact of agriculture.

**Land cover:**
BIOPHYSICAL COVERAGE OF LAND
LUCAS: 76 subclasses

- Artificial land
- Woodland
- Grassland
- Water areas

**Land use:**
SOCIO-ECONOMIC USAGE MADE OF LAND
LUCAS: 33 subclasses

- Cropland
- Shrubland
- Bare land
- Wetlands

- Primary sector:
  (for example, agriculture and forestry)

- Secondary sector
  (industry)

- Tertiary sector
  (services)

- Other uses
  (for example, residential use and abandoned areas)
LUCAS Survey:

- On-site data collection
- Land use / land cover
- Environmental information
- EU-wide

Standard survey methodology:

Two phase sampling, classifications, data collection processes.

Adapted to policy needs:

Flexible, ad-hoc modules.

Reduced statistical burden:

No questionnaires for farmers, land owners.

Information collected:

- Current land cover and land use;
- Environmental information (e.g. irrigation, grazing, burned areas);
- Photos (e.g. landscape, crop);
- Topsoil sample;
- Grassland survey.

LUCAS Survey 2015: Field work

- 28 countries;
- over 270,000 points;
- over 26,000 soil points;
- 750 surveyors;
- March – September 2015.

Point distribution

Soil sample
**LUCAS Survey 2015: Results**

**Land cover in the EU-28**

(% of total surface area in 2015)

- Artificial land: 22.2%
- Cropland: 37.8%
- Woodland: 7.1%
- Shrubland: 3.3%
- Grassland: 4.2%
- Water areas: 20.7%
- Wetlands: 1.7%
- Bare land: 1.0%

Source: Eurostat (online data code: lan_lcv_ovw)

**Share of artificial land in total land cover, 2015**

(% of total)

Source: Eurostat (online data code: lan_lcv_art)

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**Ground document**

Land Use/Cover Area Frame Statistical Survey 2015

Punto: 29101782

Provincia: SEVILLA

Región Biogeográfica: MED

E = 1:5,000

Forma tripleta con 29081796 y 29041784

Parque Natural

Latitud ___,____________ º

Longitud |_| W/E ___,_____________ º

Título de la zona _________ m

PI( C10 )PI

PI( C10 )PI

PI( C10 )PI

Punto cedido por © Instituto Geográfico Nacional de España

2013-05-05

Forma tripleta con 29081796 y 29041784

Provincia:

SEVILLA

Región Biogeográfica: MED

E = 1:50,000

E = 1:1,400

E = 1:50,000

E = 1:50,000
What is LUCAS used for?

Land, a limited resource

Man-made surfaces are an important source of water, soil and air pollution, and the soil sealing by these surfaces can impact upon the water balance, thereby increasing the risk and intensity of flooding. This process of ‘land take’ also reduces the area available for natural habitats and ecosystems, with the fragmentation of wildlife habitats being a major concern.

Land cover and land use data from LUCAS are used to monitor the increase of urban areas and the productivity of artificial areas (in relation to GDP). Both of these indicators are included in the resource efficiency scoreboard. This scoreboard has been designed to assess the progress towards a resource-efficient, low-carbon economy — one of the key objectives of the Europe 2020 strategy.

LUCAS Survey 2015 — NUTS 3 average number of linear elements per transect with agriculture as main land cover

LUCAS Use Cases — more information and further examples of how LUCAS is used can be found at:

http://ec.europa.eu/eurostat/web/lucas/publications/use-cases
**Soil, an essential element for agriculture**

Soil is a key agricultural resource and of prime interest to Common Agricultural Policy.

The LUCAS 2009 and 2015 exercises collected soil samples which allowed soil quality (organic carbon content) and other parameters such as soil texture, structure and permeability to be measured. These parameters contributed to the evaluation of soil erosion.

**Soil erodibility in Europe**

Soil Erodibility (K-Factor) for Europe

<table>
<thead>
<tr>
<th>K-factor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 0.01</td>
<td>Very Low</td>
</tr>
<tr>
<td>0.01 - 0.02</td>
<td>Low</td>
</tr>
<tr>
<td>0.02 - 0.028</td>
<td>Moderate</td>
</tr>
<tr>
<td>0.028 - 0.033</td>
<td>High</td>
</tr>
<tr>
<td>0.033 - 0.038</td>
<td>Very High</td>
</tr>
<tr>
<td>0.038 - 0.046</td>
<td>Extremely High</td>
</tr>
<tr>
<td>0.046 - 0.055</td>
<td>Very High</td>
</tr>
<tr>
<td>&gt; 0.055</td>
<td>Extremely High</td>
</tr>
</tbody>
</table>

| No data | No data |

**Policy areas:**

Data from LUCAS can be used to help analyse and contribute to the development of various EU policy areas:

**Common Agricultural Policy**

Integrating environmental concerns in the Common Agricultural Policy;

**Soil thematic strategy**

Protecting the soil, as detailed in the soil thematic strategy;

**EU biodiversity strategy**

Promoting biodiversity and conservation, through the EU’s biodiversity strategy;

**Europe 2020**

Encouraging the efficient use of resources for sustainable growth, as in the resource-efficient Europe initiative;

**Copernicus**

Land monitoring, spatial planning and resource management, as carried out by the Copernicus earth observation programme;

**Climate change**

Tackling climate change, through monitoring conducted by the European Environment Agency, as well as actions under the European climate change programme.

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Did you know?

- Approximately 15% of the EU’s territory is affected by moderate to high soil erosion.
- Main causes of soil erosion are: inappropriate agricultural practices, deforestation, over-grazing and construction activities.
- LUCAS soil data contributes to European erosion mapping (see LUCAS use cases).
- Annual increase of artificial land cover in the EU is 1.3% (LUCAS 2012-2015).