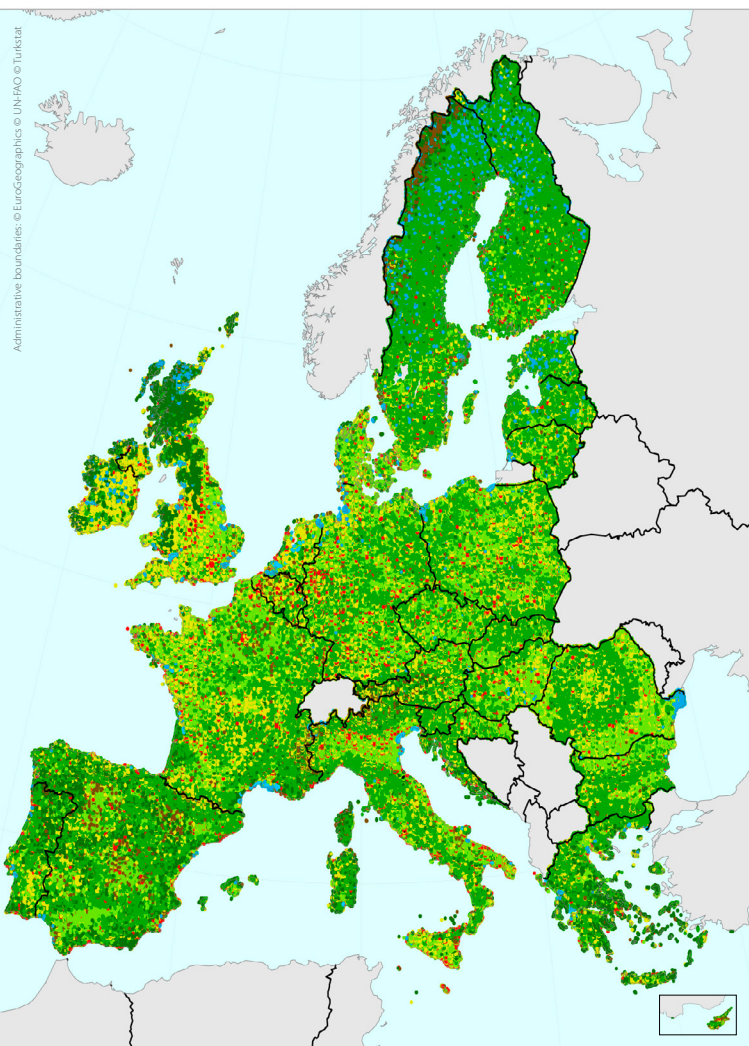


LUCAS

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:

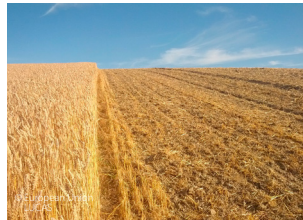
BIOPHYSICAL COVERAGE OF LAND

LUCAS: 76 subclasses

Artificial land



Cropland



Woodland



Shrubland



Grassland



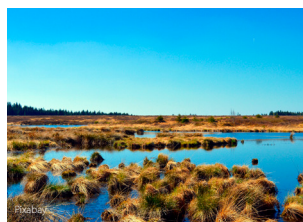
Bare land



Water areas



Wetlands



Land use:

SOCIO-ECONOMIC USAGE MADE OF LAND

LUCAS: 33 subclasses

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.

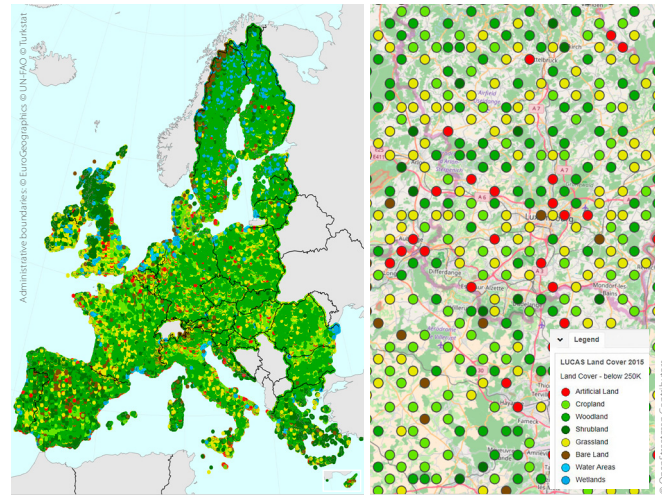
LUCAS point and pictures to the north, south, east and west



LUCAS Survey 2015: Field work

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

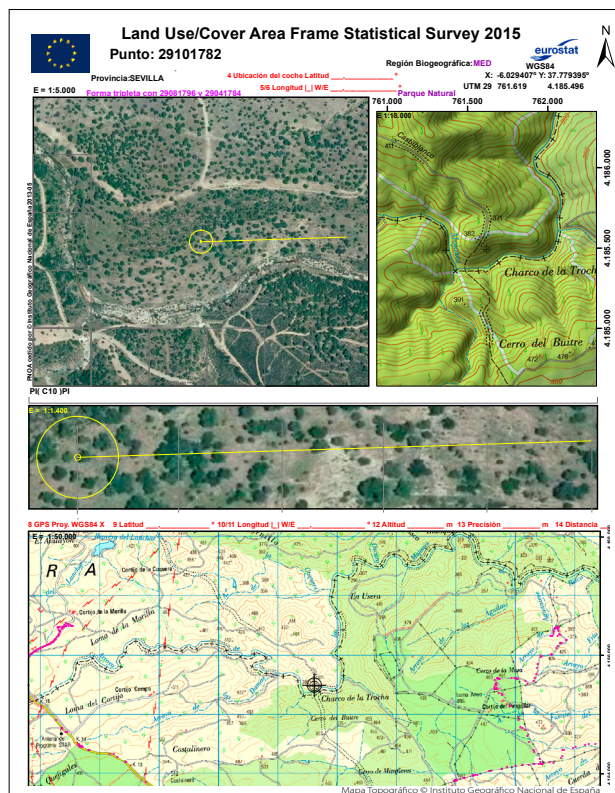
Point distribution



Soil sample



Ground document



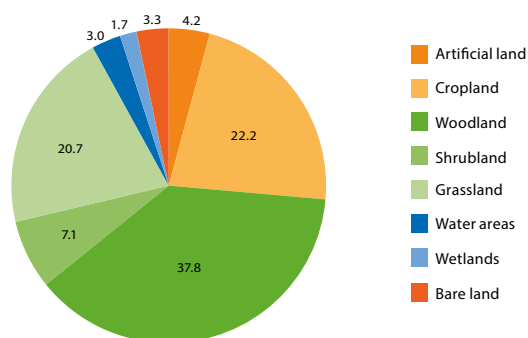
Field form (extract)

22	Percentage of land coverage (%) LC1: <input type="checkbox"/> %LC1 < 5 <input type="checkbox"/> 5 ≤ %LC1 < 10 <input type="checkbox"/> 10 ≤ %LC1 < 25 <input type="checkbox"/> 25 ≤ %LC1 < 50 <input type="checkbox"/> 50 ≤ %LC1 < 75 <input type="checkbox"/> 75 ≤ %LC1 < 90 <input type="checkbox"/> %LC1 ≥ 90 <input type="checkbox"/> N.R.	23	Percentage of land coverage (%) LC2: <input type="checkbox"/> %LC2 < 5 <input type="checkbox"/> 5 ≤ %LC2 < 10 <input type="checkbox"/> 10 ≤ %LC2 < 25 <input type="checkbox"/> 25 ≤ %LC2 < 50 <input type="checkbox"/> 50 ≤ %LC2 < 75 <input type="checkbox"/> 75 ≤ %LC2 < 90 <input type="checkbox"/> %LC2 ≥ 90 <input type="checkbox"/> N.R.	31	Percentage of land use (%) LU1: <input type="checkbox"/> %LU1 < 5 <input type="checkbox"/> 5 ≤ %LU1 < 10 <input type="checkbox"/> 10 ≤ %LU1 < 25 <input type="checkbox"/> 25 ≤ %LU1 < 50 <input type="checkbox"/> 50 ≤ %LU1 < 75 <input type="checkbox"/> 75 ≤ %LU1 < 90 <input type="checkbox"/> %LU1 ≥ 90 <input type="checkbox"/> N.R.	30	Percentage of land use (%) LU2: <input type="checkbox"/> %LU2 < 5 <input type="checkbox"/> 5 ≤ %LU2 < 10 <input type="checkbox"/> 10 ≤ %LU2 < 25 <input type="checkbox"/> 25 ≤ %LU2 < 50 <input type="checkbox"/> 50 ≤ %LU2 < 75 <input type="checkbox"/> 75 ≤ %LU2 < 90 <input type="checkbox"/> %LU2 ≥ 90 <input type="checkbox"/> N.R.
If LC CXX, or D10 or E10 & area size ≥ 0.5 ha				If height of trees at maturity above 5 m			
25		27		28			
Height of trees at the moment of survey <input type="checkbox"/> < 5 m <input type="checkbox"/> ≥ 5 m <input type="checkbox"/> N.R.		Height of trees at maturity <input type="checkbox"/> < 5 m <input type="checkbox"/> ≥ 5 m <input type="checkbox"/> N.R.		Width of feature: <input type="checkbox"/> < 20 m <input type="checkbox"/> ≥ 20 m <input type="checkbox"/> N.R.			
35		36		37			
Land management: <input type="checkbox"/> Visible signs of grazing <input type="checkbox"/> No signs of grazing <input type="checkbox"/> N.R.		Special status: <input type="checkbox"/> Protected <input type="checkbox"/> Hunting <input type="checkbox"/> Protected and Hunting <input type="checkbox"/> No special status <input type="checkbox"/> N.R.		Special remark on land cover/use: <input type="checkbox"/> Tilled and/or sowed <input type="checkbox"/> Harvested field <input type="checkbox"/> Clear cut <input type="checkbox"/> Burnt area <input type="checkbox"/> Fire break <input type="checkbox"/> Nursery <input type="checkbox"/> No Remark <input type="checkbox"/> N.R. <input type="checkbox"/> Temporarily dry (river bed / lake) <input type="checkbox"/> Temporarily flooded			

LUCAS Survey 2015: Results

Land cover in the EU-28

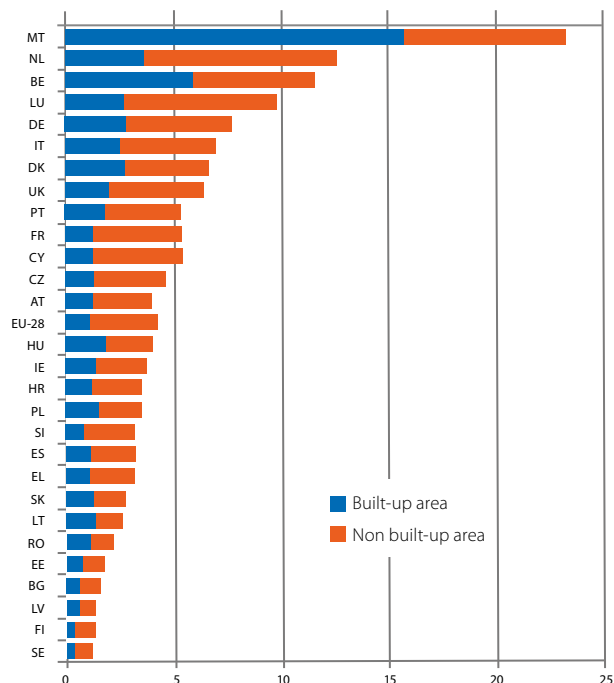
(% of total surface area in 2015)



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](#))

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.

An example of land take between the 2009 and 2012 surveys

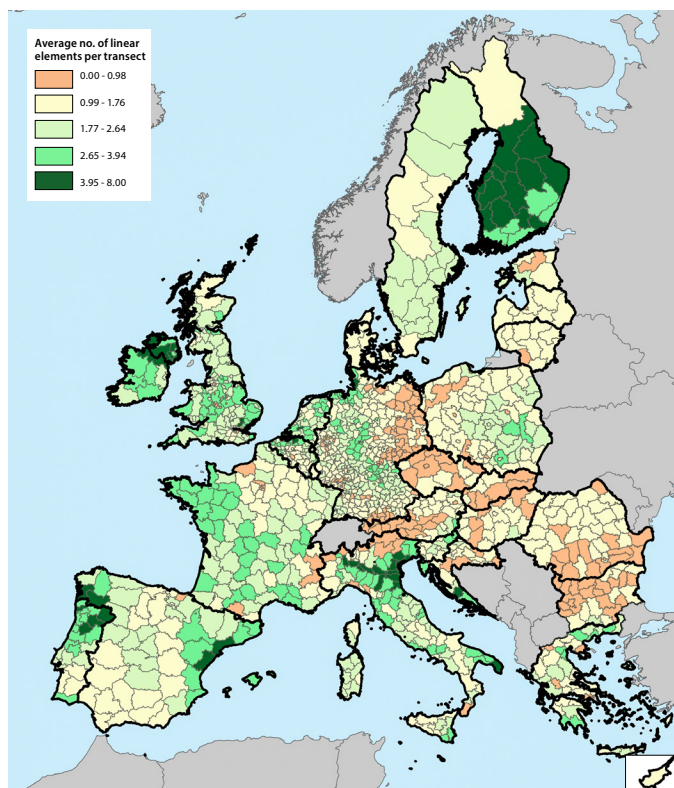


Landscape and ecosystem services

The presence of grass verges, hedges, dry stone walls, ditches and other semi-natural linear elements is considered to be of fundamental importance to help promote biodiversity and habitats, providing ecosystem services such as pollination or pest control.

The LUCAS 'transect' provides information on the presence and evolution of such linear elements and allows to assess them at a regional level.

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



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Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat

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>

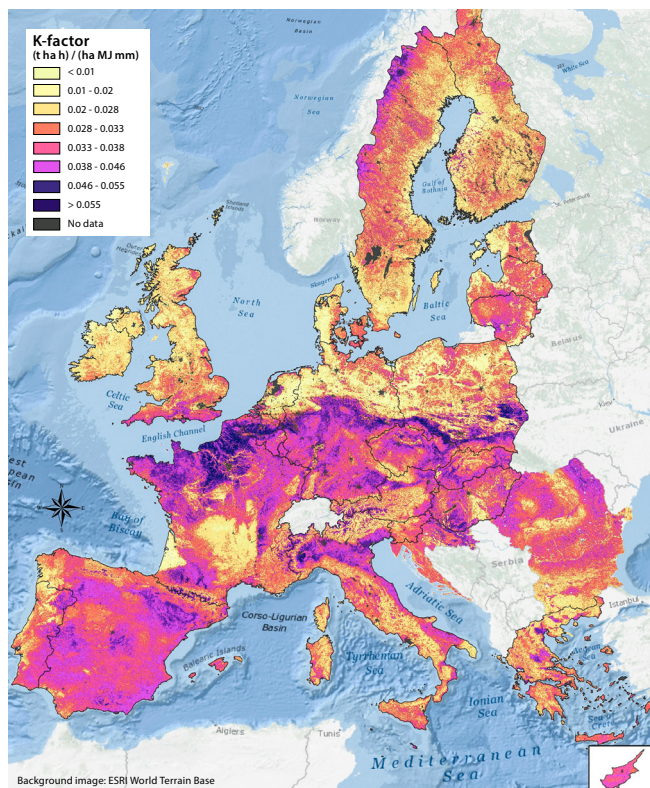
Soil, an essential element for agriculture

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



© European Union, Joint Research centre (2014)

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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.

Agricultural landscape



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LUCAS

Additional information on LUCAS:

LUCAS website:

<http://ec.europa.eu/eurostat/web/lucas/overview>

LAND COVER/USE STATISTICS (LUCAS)	LUCAS PRIMARY DATA 2015
Overview	LUCAS micro data 2015
Data	The LUCAS micro data 2015 can be downloaded below. Each file contains the data for one country. The explanations and instructions can be downloaded from the column on the right.
Database	
LUCAS Grid	
Primary data	
2018	
2015	
2012	
2009	
2006	
Order form	
Lucas photo viewer	
Maps	
Methodology	
Publications	
Use cases	
Statistics illustrated	

Belgium	Bulgaria	Czech Republic	Denmark
Germany	Estonia	Ireland	Greece
Spain	France	Croatia	Italy
Cyprus	Latvia	Lithuania	Luxembourg
Hungary	Malta	Netherlands	Austria
Poland	Portugal	Romania	Slovenia
Slovakia	Finland	Sweden	United Kingdom

The file with the data for all the 28 countries can be downloaded here:
 EU-28

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).

Printed by Imprimerie centrale in Luxembourg

Luxembourg, Publications Office of the European Union, 2017

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Publications Office

PDF: ISBN 978-92-79-65362-9 doi:10.2785/550346

Print: ISBN 978-92-79-65370-4 doi:10.2785/001102