

Summary of main results

Livestock pressure on the environment, expressed in terms of Livestock Units (LU), has remained fairly stable over time (from 2002 to 2008) in the Nuts-2 regions of Italy, exhibiting a roughly 70 thousand unit decrease from 9.96 to 9.89 million units. Livestock consistency measured with this unit, however, shows considerable variation across the national territory, ranging from 6 million LUs in the North to barely 1 million LUs in central Italy. The investigated time series showed the greatest increases in southern Italy, with mild decreases detected in the northwestern and island areas. Livestock pressure has remained fairly stable in northeastern and central zones, alternatively, where the indicator showed little variation.

For the national territory as a whole, the consistency of livestock burden, in terms of total number of livestock units per unit of territorial surface area, amounts to nearly 33 LUs per km². At regional level, Lombardia showed the highest livestock burden with about 112 LU per km², which is well above the national average. Four other regions exhibited higher-than-average values as well: in descending order - Veneto (54 LU per km²), Emilia Romagna (48 LU per km²), Piemonte (39 LU per km²) and Sardegna (36 LU per km²). The lowest level of livestock pressure was measured in Liguria, with about 5 LU per km².

LU variations during the investigated period revealed various trends among Italian regions. Some regions that had already (in 2002) been classified as exerting heavy livestock pressures on the environment exhibited further increases in density, including Campania, which passed from 31 to 36 LU per km² (a 10.9% difference between the 2008 value and the average LU recorded in 2002-2007) and Lombardia, which passed from 111 LU in 2002 to 112 LU per km² in 2008, showing a modest increase of 0.5%. The relatively heavy livestock pressure exerted on the environment in Sardegna and Piemonte, in contrast, showed a -1.5 LU decrease per km² from 2002 to 2008, equal to a negative change of about 3% (Sardegna) and 2% (Piemonte) versus the 2002-2007 mean.

The regions with lower livestock concentrations exhibited considerable stability over time in terms of livestock density. The province of Trento represents an exception, shifting from less than 8 LU per km² in 2002 to about 9 LU per km² in 2008, with a 2% increase in 2008 versus the 2002-2007 mean.

For further details on this issue, please refer to the volume entitled 'Agricoltura e ambiente' (Salvati e Ramberti 2010, Collana Informazioni), which is scheduled to be released shortly. This volume will include a cd-rom containing all the study's statistical tables numbered by chapter of reference.

Methodological note

In the present data release, the indicator for livestock pressure on the environment is given by the consistency of Livestock Units (LU) in a regional-level time series from 2002 to 2008.

The indicator represents the territory's overall livestock pressure on the environment, especially in terms of its potential impact on soil and water quality, by using a weighted standardization to calculate livestock density and generate an expression of livestock burden in terms of LU per unit of surface area. LUs are obtained by applying a system of weighted coefficients in order to convert the consistencies measured for different livestock species, which are surveyed annually, into values that are homogeneous and comparable over time.

Livestock density may be calculated in relation to different types of surface area variables. By the present release it was decided to enhance the knowledge base of the annual time series using Nuts-2 regions as standard territorial units, thus obtaining an livestock density measure per sq. km of regional surface area. To do this, the survey on bovine, buffalo, porcine livestock population was used to calculate LUs at regional level.

This sample-based survey measures the consistency of pigs heads (subdivided into: piglets, fattened pigs and pigs suitable for reproduction) and cattle heads (subdivided into: calves, one to two year old steers and bullocks over two) as of December 01st and June 01st. On December 01st, the consistency of sheep and goats heads is also surveyed. LUs were then calculated using the December 01st estimate for each year from 2002 to 2008.

As mentioned above, the LUs calculation applied a system of weights to generate a standardized expression for livestock consistency, both in absolute terms and by unit of surface area. Please note that absolute LU values per region and total value for Italy may show slight differences versus data collected through the Survey on agricultural holdings structure and output (2003, 2005, 2007). This study surveys other livestock-related categories of interest with relatively minor impact, in terms of LU, on the concept of livestock pressure on the environment and supplies additional indicators of livestock burden, such as livestock density per hectare of Utilized agricultural area (Uaa).