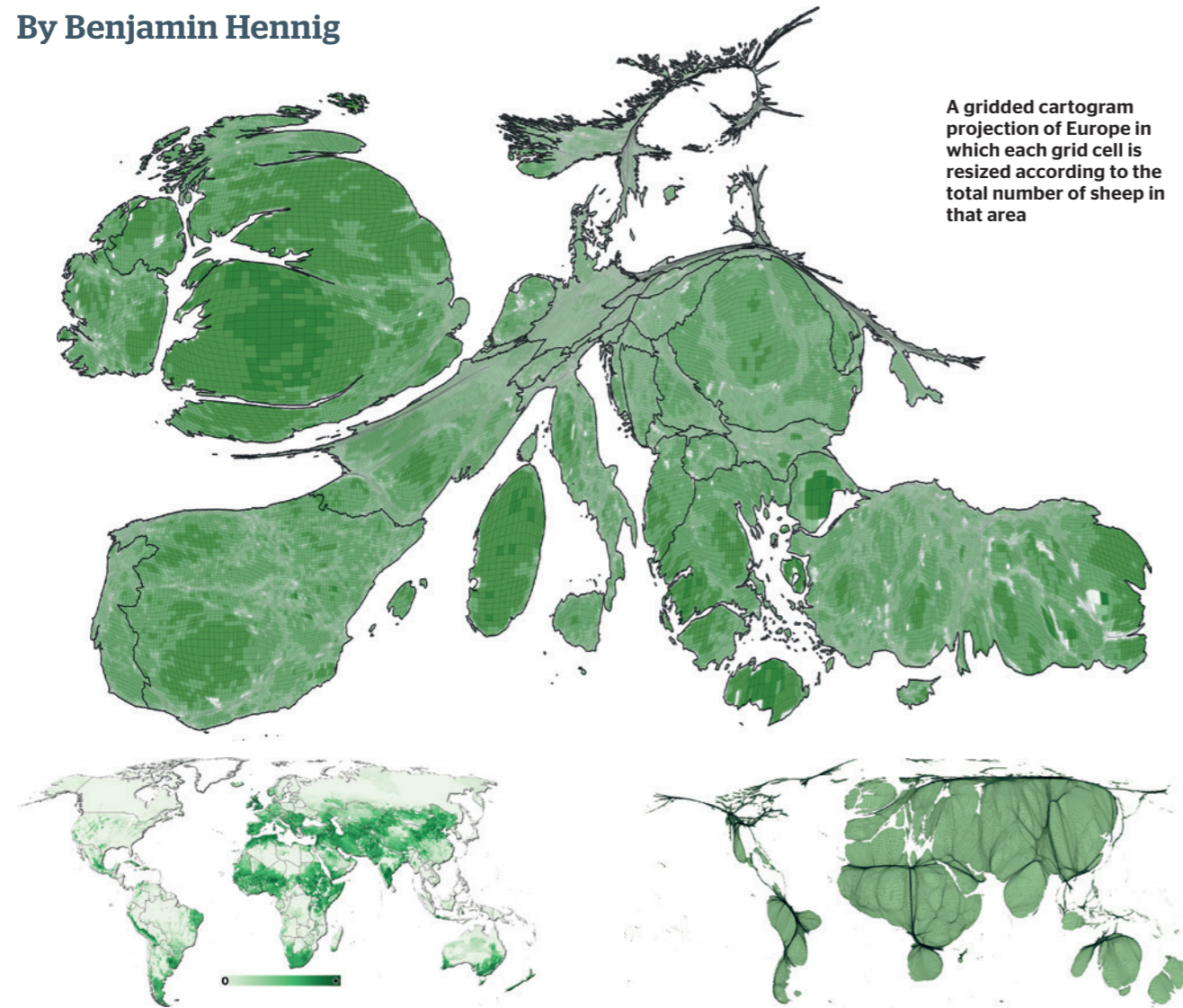


# Where the Animals Graze

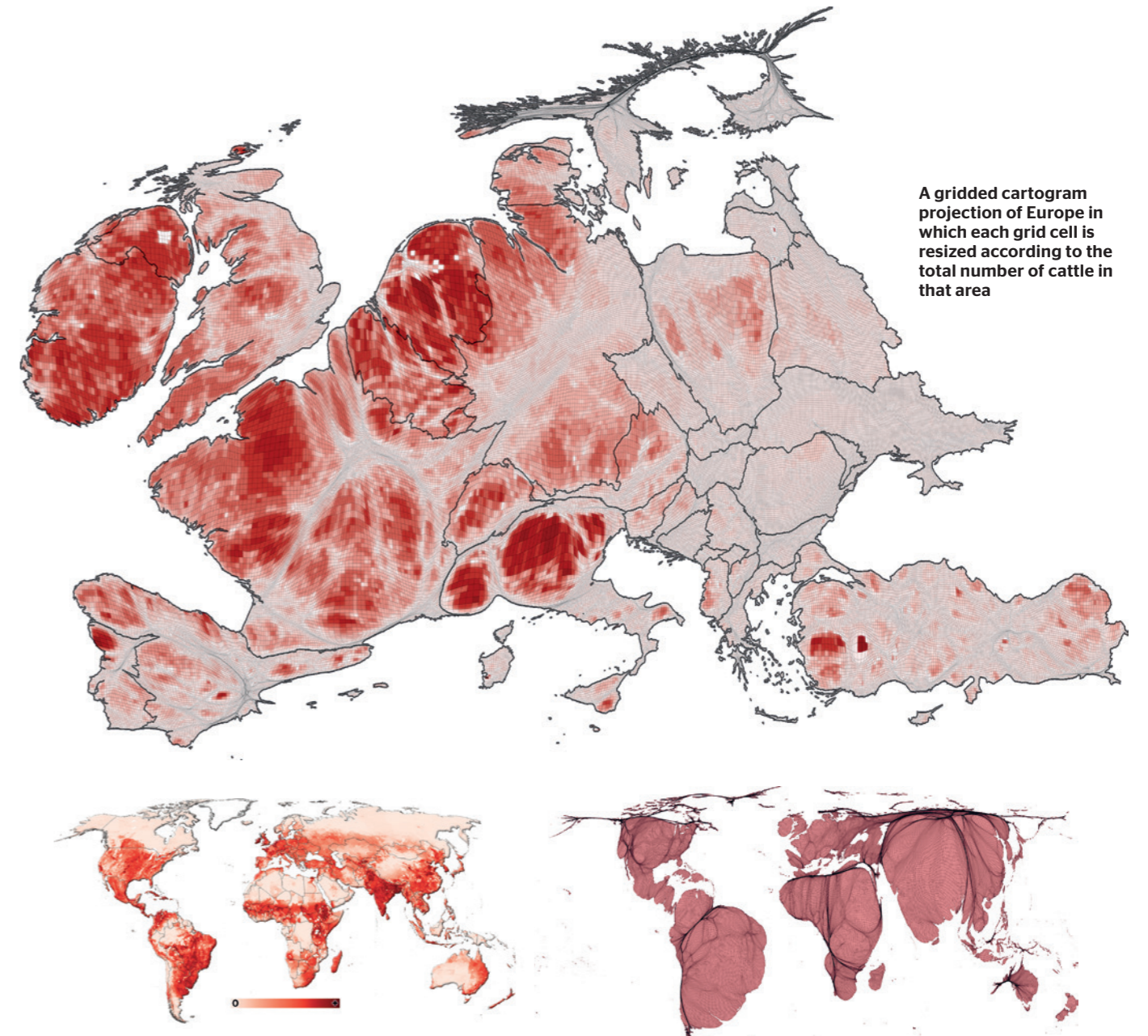
By Benjamin Hennig



A gridded cartogram projection of Europe in which each grid cell is resized according to the total number of sheep in that area

Density of sheep at a global level

Global gridded cartogram showing relative sheep populations



A gridded cartogram projection of Europe in which each grid cell is resized according to the total number of cattle in that area

Density of cattle at a global level

Global gridded cartogram showing relative cattle populations

**T**he domestication of animals for food, secondary products, labour and companionship over the past 11,000 years has led to a global distribution of domesticated species with distinct geographical patterns.

By total number of animals, pigs provide the largest animal population of livestock in Europe: according to Eurostat there were 147 million in the EU-28 in 2016, followed by bovine animals (cattle) with 89 million, and sheep with 87 million. Though there are similar numbers of sheep and cattle across Europe they show very different spatial distributions, as shown by the two main cartograms here. These are both gridded cartogram projections where each grid cell is resized according to the total number of livestock for each of the two species in that area.

According to the Food and Agricultural Organization (FAO), the domestic sheep (*Ovis aries*) is raised primarily for its 'wool, meat, milk and hides. The species has been developed into a multitude of breeds, adapted to serve different purposes in diverse environments.' The United Kingdom is one of the most green and pleasant lands when it comes to grazing sheep, being home to an estimated 24 million sheep in 2016. At a European level, this is only surpassed by Turkey's 31 million. But the gridded cartograms also show the internal variation of the species. In the UK, Wales and the north of England are the most densely populated regions, at least from the perspective of sheep. In the Mediterranean, islands such as Sardinia and Crete also stand out for their high populations.

The FAO states that cattle (*Bos indicus* and *B. taurus*) are the most common and widespread species of large ruminant livestock and are 'raised primarily to produce milk, meat and hides and to provide draft power.' The

largest populations of cattle are found in France which is home to an estimated 19 million bovine animals, followed by 12.5 million in Germany and the United Kingdom with 9.8 million. Of Italy's more than six million bovine animals, the highest density is found in the north of the country. Other regions that stand out are Ireland (6.6 million) and the Netherlands (4.3 million) which have a very high cattle density considering the relatively small size of these countries.

The cartograms use the Gridded Livestock of the World (GLW) dataset published by the FAO. The data estimates the global distribution and abundance of livestock species at a spatial resolution of five arc minutes (equivalent to approximately 10 kilometres at the equator) across the planet. The smaller reference maps for each cartogram show this global distribution in their varying densities, with the darkest colours indicating the highest densities. Next to the conventional maps are the respective global gridded

cartograms for both species, showing that at a global level there are very distinct differences as well.

With 1.4 billion cattle and 1.1 billion sheep in the world, their global populations are very similar in their total numbers. But, while cattle is a dominant domestic livestock species on all continents, sheep are much less common in the Americas.

Global livestock systems are an important element in understanding all aspects of the supply and use of livestock commodities. This matters not only for issues of food security and peoples' livelihoods, but has also received increasing attention in the debate about the impact of domestic animals on climate change. ●

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