

Maps reveal the truth about population density across Europe

January 24 2018, by Alasdair Rae



Credit: Alasdair Rae, Author provided

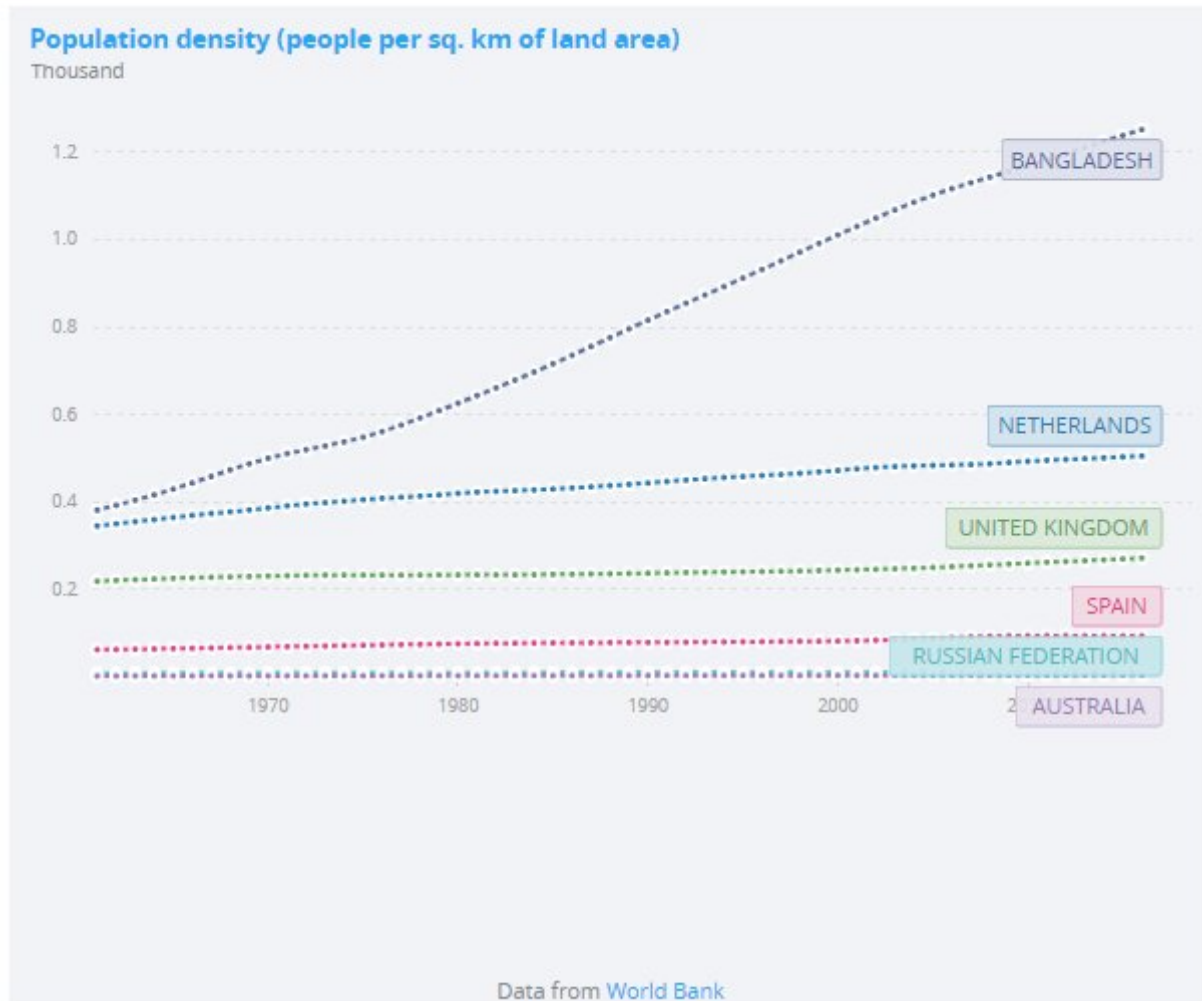
It's often said that England is the [most densely populated](#) large country in Europe – typically in discussions about the nation's rising population, and the growing strain on public services. But it's not true.

With 426 [people](#) per km², as of 2016, England is densely populated when compared to most other European countries. But it's not as densely populated as the Netherlands, where there were 505 people per km², or a

much poorer country such as Bangladesh, where there were 1,252 per km².

Yet simply dividing the number of people by the land area of a country is not always the best way to understand population [density](#). Consider a country such as Russia, where [urban density](#) is high, but there are vast swathes of empty land. The figures will tell you density is very low (eight people per km²); but this is not what most people in Russia experience in their daily lives. The same is true of Australia, Canada and other large, [highly urbanised](#) nations.

That's why I set out to understand the topic in more depth, using alternative measures of population density. I looked at 39 countries across Europe and came up with a set of statistics to help us understand settlement patterns in a more nuanced way. If you are interested in looking at this issue globally, I recommend Duncan Smith's [World Population Density](#) interactive map, or the World Bank's [data comparison tool](#).



A bird's eye view

To begin with, I took Eurostat's population density [grid data](#) for 2011 and mapped it. This divides Europe into [areas](#) of 1km², and then gives a population count for each area, so that we can compare like-with-like across Europe. As you can see from the map, it provides a good overview of where people live, and where they don't live: notice the

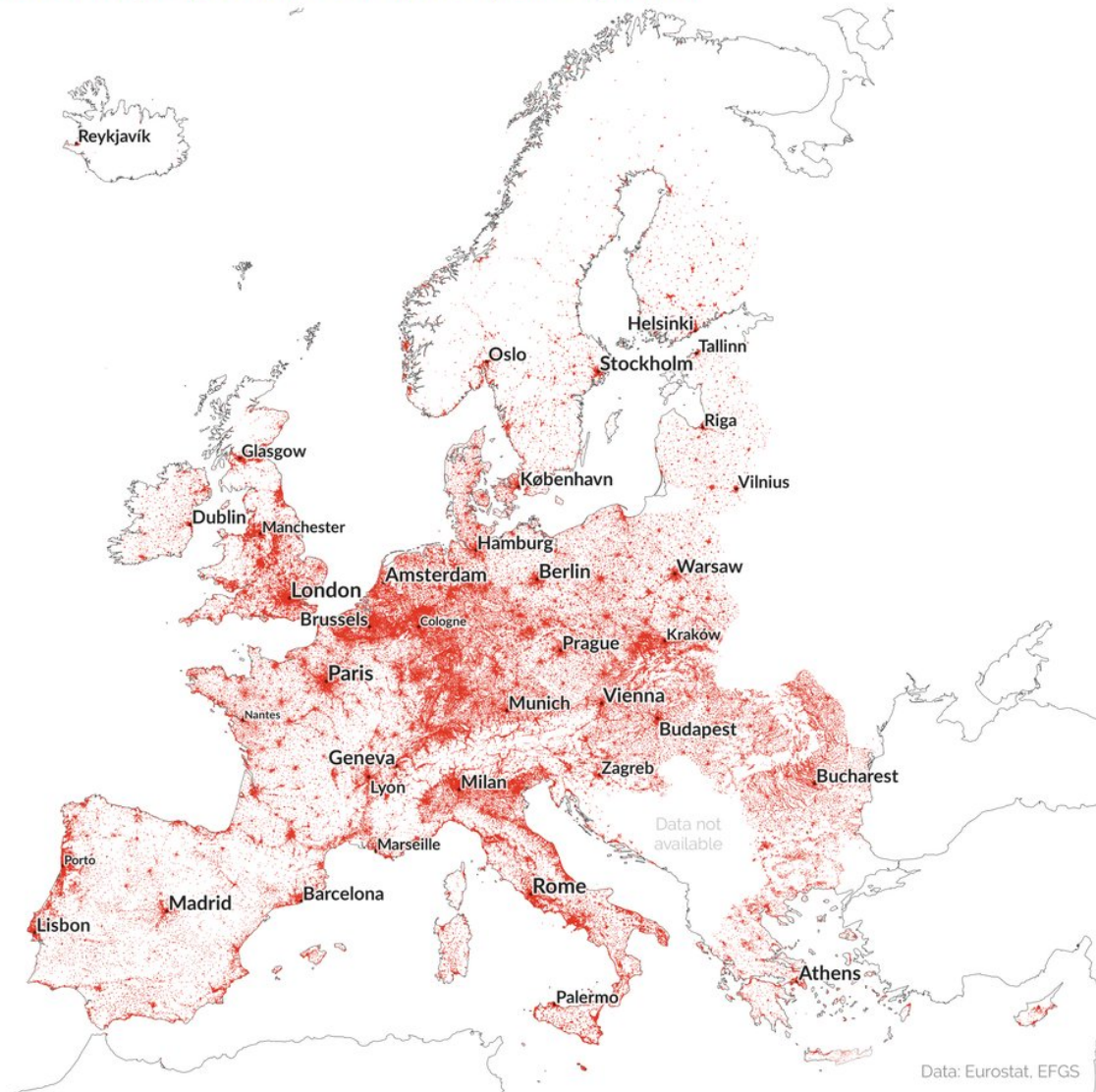
sparse settlement pattern in the Alps or northern Scandinavia, or indeed much of Spain.

This bird's eye view helps us to understand the wider context. For example, we can see an area of high population density extending in a rough arc from north-west England down to Milan, with a little break in the Alps. This is the so-called "[blue banana](#)", or dorsale européenne (European backbone), identified by French geographer Roger Brunet in 1989, and it is home to more than 110m people.

But we can get further clarity still by honing in on "built-up" density, which takes into account only those 1km^2 areas with people living in them. I call this figure "lived density", since it provides a way of seeing the kinds of [population densities](#) that people experience in their day-to-day lives, within built-up areas.

POPULATION DENSITY IN EUROPE

Areas with 250 people or more, per sq. km.



European population density. Data: Eurostat

The Spanish distribution

A good way to understand this measure is to look at Spain. It has a

population density of 93 people per km², giving the impression of a sparsely populated country. This is borne out in the map, where much of Spain appears to be empty; much more so than any other large European country.

The reasons for this date back to Medieval times, as Daniel Oto-Peralías at the University of St Andrews [has explained](#). Yet characterising Spain as a sparsely populated country does not reflect the experience on the ground – as anyone who knows Barcelona or Madrid can tell you.

Spain contains within it more than 505,000 1km squares. But only 13% of them are lived in. This means that the "lived density" for Spain is in fact 737 people per km², rather than 93. So even though the settlement pattern appears sparse, people are actually quite tightly packed together.



Barcelona from above: possibly the most densely populated km^2 in Europe.

In fact, Spain could claim to be the most densely populated major European country by this measure, despite its appearance on the map. This also helps explain why Spain has the most densely populated km^2 in Europe; more than 53,000 people inhabit a single 1km^2 area in

Barcelona. France also has an area with more than 50,000 people in a single km^2 , in Paris.

There are 33 1km^2 areas across Europe with a population of 40,000 or more: 23 are in Spain, and ten are in France. England's most densely populated km^2 , in West London, has just over 20,000 people in it. Globally, the highest figure is close to 200,000, in Dhaka, Bangladesh.

See for yourself

When we look at "lived density" across Europe, it's fair to say that England is a densely populated country – but it still sits behind Spain and the Netherlands on the list of major European nations, and below the microstates of Monaco, Andorra and Malta. The lived density figure for the Netherlands is 546 people per km^2 , compared to 531 for England, 204 for Wales, 200 for Scotland and 160 for Northern Ireland.

Country	Land Area (Sq Km)	Arithmetic Density	Built-up Density ('Lived Density')	Max 1km population	Population 2011	% of 1km cells populated
Monaco	2	18,067	18,067	12,564	36,133	100.0
Andorra	468	182	1,525	9,300	85,406	12.0
Malta	316	1,316	1,382	11,421	415,891	95.3
Spain	505,634	93	737	53,119	46,814,568	12.6
Netherlands	37,321	446	546	23,485	16,627,680	81.6
England	130,279	405	531	20,477	52,697,866	76.2
San Marino	61	420	493	2,034	25,629	85.2
Italy	301,289	197	453	22,113	59,369,049	43.5
Liechtenstein	160	223	447	1,947	35,775	49.8
Belgium	30,544	358	434	29,100	10,939,956	82.5
Romania	238,262	90	402	19,179	21,387,361	22.3
Switzerland	41,289	191	385	21,456	7,899,058	49.6
Greece	129,639	83	379	28,880	10,801,047	22.0
Germany	357,473	224	376	23,379	80,004,386	59.5
Hungary	93,067	107	368	10,451	9,923,425	29.0
Slovakia	49,134	110	358	15,379	5,391,770	30.7
Cyprus	9,487	88	319	5,439	839,063	27.8
Bulgaria	111,073	66	312	23,934	7,364,570	21.3
Luxembourg	2,634	192	308	7,213	505,682	62.3
Portugal	91,632	115	255	21,823	10,560,578	45.2
Czech Republic	78,970	132	236	23,249	10,420,401	55.8
Austria	83,911	100	220	16,984	8,385,332	45.5
Isle of Man	572	147	212	4,654	84,293	69.4
Wales	20,735	147	204	11,291	3,038,049	71.8
Scotland	80,077	63	200	11,069	5,044,291	31.4
Poland	312,101	123	196	32,752	38,497,929	63.0
France	551,695	114	195	52,218	62,744,459	58.4
Iceland	102,285	3	187	5,738	318,700	1.7
Denmark	43,282	128	183	22,381	5,530,902	69.7
Croatia	55,443	77	161	10,202	4,271,221	47.9
Northern Ireland	14,130	128	160	8,555	1,803,600	79.6
Slovenia	20,340	99	153	10,504	2,021,380	65.1
Latvia	64,659	32	116	10,123	2,061,100	27.5
Norway	334,778	15	89	15,673	4,906,148	16.5
Lithuania	64,915	47	85	16,166	3,022,087	54.9
Sweden	450,133	21	84	26,120	9,539,483	25.2
Ireland	70,728	65	81	12,176	4,573,374	80.0
Estonia	45,445	28	62	17,375	1,290,520	45.5
Finland	336,751	16	53	14,933	5,338,841	30.1

Population density metrics. Note: the final column shows how many 1km cells have people in them, but within that the level of density also varies, so this is not a “percent urbanised” measure.

Although these population numbers are a little dated now (they are based on 2011 data), they can still demonstrate how population density figures might differ from what we experience in our day-to-day lives.

Arithmetic [population](#) density measures can be useful, but on their own they don't always help inform public debate, or match up with our perceptions of urban density.

I have provided the data for all 39 countries, where available, so you can compare the figures for yourself. By using a more sophisticated measure, we can gain a more nuanced perspective of settlement patterns and relative densities and, hopefully, better capture the reality on the ground in towns and cities.

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