

# **Green Living Index 2022**

The Green Living Index is a comparative piece of data analysis based on official EU data. The aim of the index is to assess how countries in Europe are responding to the different challenges of moving towards a more sustainable way of living.

## What is sustainable living?

A sustainable, future-oriented form of housing combines climate neutrality and environmental protection with long-term benefits for residents. Ideally, the idea of sustainability starts at the construction planning stage and is then reflected in all aspects of the building: from the use of renewable energies for electricity and heating to intelligent waste management. Even second-hand furnishings or furniture made from recycled materials can make an important contribution to living greener.

## The role of temporary furnished housing

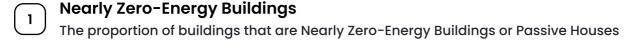
Temporary furnished housing can play an important role in sustainable living. As part of the sharing economy, companies like Wunderflats help optimise the use of living space. For example, furniture and other important everyday items are shared more often and a new purchase is avoided in many cases.

## **The Green Living Index 2022**

Wunderflats examined data from all EU member states as well as the United Kingdom. The result is the Green Living Index 2022, which analyses important criteria of sustainable living.\*

FIELDS OF INVESTIGATION:





## Energy Consumption Average energy consumption of residential buildings per square metre per year

- Renewable Energy

  The proportion of energy consumption powered by renewable sources
- Solar Energy

  Power per capita fed into the grid by photovoltaic systems
- Sustainable Heating / Cooling

  The proportion of energy consumed for heating and cooling that comes from renewable sources
- 6 Recycling
  The proportion of waste that is recycled

## Sustainability & Engagement

- Second Hand Furniture
  Google search volume for keywords such as "used furniture"
- Type of Housing

  The proportion of the population living in a flat
- Household Size
  The average number of people living in a household
- Climate Change Sentiment

  The proportion of respondents who consider climate change to be the biggest problem of our time
- Active Climate Protection

  The proportion of respondents who are actively engaged in combating climate change

<sup>\*</sup>A standardisation procedure based on a points system was used to calculate the comparative list. Find out more about our methodology at the end of this report.



## **Key findings**

#### 1. Portugal, Sweden and Germany score highly.

Portugal places top of the Green Living Index, which in part is due to the low levels of private energy consumption (70 kWh/m² per year). On average, European households consume far more than twice the consumption of Portugal, at 188 kWh/m² per year. Households in Romania have the highest energy consumption at 308 kWh/m² per year. Romania ranks last in the Green Living Index.

Along with Portugal and Sweden, Germany is currently one of the top countries in Europe when it comes to sustainable living. Among other things, Germany is a pioneer in solar energy: German photovoltaic systems feed 590 watts per capita into the energy grid. The European average for this is 168 watts per capita.

#### 2. The United Kingdom lags behind its European neighbours.

The UK ranks 23rd out of 28 countries in the list. Its poor score is largely due to low scores for renewable energy and sustainability: only 12% of UK household energy comes from renewable sources, and just 8% of energy used for heating and cooling comes from renewable sources. However, the United Kingdom performed better in the household recycling category, with 44% of waste being converted into something else.

## 3. There is still a lot to do to reach climate neutrality in housing.

With the European Green Deal, the European Union has set itself the goal of climate neutrality by 2050. For the housing sector, the results of the Green Living Index show that even the greenest countries still have a lot of improvements to make in many areas.



Rank 1 Rank 28



|      |                 | Overall<br>Result | Energy & Recycling     |                |                |                |                 |                |          |                |                       |                |            |                |                                 |
|------|-----------------|-------------------|------------------------|----------------|----------------|----------------|-----------------|----------------|----------|----------------|-----------------------|----------------|------------|----------------|---------------------------------|
| Rank | Country         | Index             | Nearly Z<br>Energy Bui |                | Ener<br>Consum |                | Renewa<br>Energ |                | Solar E  | Energy         | Sustaina<br>Heating/C |                | Recycli    | ng             | Result<br>Energy &<br>Recycling |
|      |                 | Score 0-<br>100   | Percentage             | Score<br>0-100 | in<br>kWh/m²   | Score<br>0-100 | Percentage      | Score<br>0-100 | Power    | Score<br>0-100 | Percentage            | Score<br>0-100 | Percentage | Score<br>0-100 | Score 0-<br>100                 |
| 1    | Portugal        | 100               | 0,2 %                  | 40             | 70<br>kWh/m²   | 91             | 31 %            | 48             | 88 W     | 15             | 42                    | 59             | 29         | 35             | 70                              |
| 2    | Sweden          | 93                | 0,0 %                  | 0              | 215<br>kWh/m²  | 36             | 56 %            | 100            | 68 W     | 11             | 66                    | 100            | 47         | 65             | 81                              |
| 3    | Germany         | 93                | 0,3 %                  | 60             | 200<br>kWh/m²  | 42             | 17 %            | 21             | 590<br>W | 100            | 15                    | 14             | 67         | 100            | 91                              |
| 4    | <b>A</b> ustria | 83                | 0,5 %                  | 100            | 202<br>kWh/m²  | 41             | 34 %            | 54             | 188<br>W | 32             | 34                    | 46             | 58         | 85             | 100                             |
| 5    | Denmark         | 82                | 0,2 %                  | 40             | 169<br>kWh/m²  | 53             | 37 %            | 61             | 186<br>W | 31             | 48                    | 70             | 52         | 74             | 88                              |
| 6    | Spain           | 78                | 0,1 %                  | 20             | 103<br>kWh/m²  | 78             | 18 %            | 23             | 197<br>W | 33             | 19                    | 21             | 35         | 45             | 42                              |
| 7    | <b>L</b> atvia  | 75                | 0,1 %                  | 20             | 292<br>kWh/m²  | 6              | 41 %            | 69             | 2 W      | 0              | 58                    | 86             | 41         | 56             | 49                              |
| 8    | Greece          | 69                | 0,2 %                  | 40             | 121<br>kWh/m²  | 72             | 20 %            | 26             | 261<br>W | 44             | 30                    | 40             | 21         | 21             | 51                              |
| 9    | Slovakia        | 64                | 0,2 %                  | 40             | 173<br>kWh/m²  | 52             | 17 %            | 20             | 87 W     | 14             | 20                    | 22             | 39         | 51             | 33                              |
| 10   | + Finland       | 63                | 0,2 %                  | 40             | 249<br>kWh/m²  | 23             | 43 %            | 73             | 39 W     | 6              | 57                    | 86             | 44         | 60             | 70                              |
| 11   | * Malta         | 58                | 0,0 %                  | 0              | 47<br>kWh/m²   | 100            | 8 %             | 3              | 305<br>W | 52             | 26                    | 32             | 9          | 0              | 27                              |
| 12   | Slovenia        | 57                | 0,2 %                  | 40             | 228<br>kWh/m²  | 31             | 22 %            | 30             | 107<br>W | 18             | 32                    | 43             | 59         | 87             | 54                              |
| 13   | Luxembourg      | 56                | 0,4 %                  | 80             | 205<br>kWh/m²  | 39             | 7 %             | 0              | 229<br>W | 39             | 9                     | 4              | 49         | 69             | 46                              |
| 14   | ■ Italy         | 55                | 0,2 %                  | 40             | 175<br>kWh/m²  | 51             | 18 %            | 23             | 346<br>W | 58             | 20                    | 22             | 51         | 74             | 62                              |
| 15   | Netherlands     | 50                | 0,2 %                  | 40             | 153<br>kWh/m²  | 60             | 9 %             | 4              | 401<br>W | 68             | 7                     | 1              | 57         | 83             | 56                              |



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|      |                   | Overall<br>Result | Energy & Recycling    |                |                 |                |                 |                |          |                |                       |                |            |                |                                 |
|------|-------------------|-------------------|-----------------------|----------------|-----------------|----------------|-----------------|----------------|----------|----------------|-----------------------|----------------|------------|----------------|---------------------------------|
| Rank | Country           | Index             | Nearly 2<br>Energy Bu |                | Energ<br>Consum |                | Renewa<br>Energ |                | Solar E  | Energy         | Sustaina<br>Heating/C |                | Recycli    | ng             | Result<br>Energy &<br>Recycling |
|      |                   | Score 0-<br>100   | Percentage            | Score<br>0-100 | in<br>kWh/m²    | Score<br>0-100 | Percentage      | Score<br>0-100 | Power    | Score<br>0-100 | Percentage            | Score<br>0-100 | Percentage | Score<br>0-100 | Score 0-<br>100                 |
| 16   | <b>Lithuania</b>  | 49                | 0,2 %                 | 40             | 204<br>kWh/m²   | 40             | 25 %            | 37             | 30 W     | 5              | 47                    | 69             | 50         | 71             | 59                              |
| 17   | France            | 49                | 0,2 %                 | 40             | 190<br>kWh/m²   | 45             | 17 %            | 21             | 158<br>W | 27             | 22                    | 27             | 46         | 65             | 43                              |
| 18   | Cyprus            | 47                | 0,2 %                 | 40             | 69<br>kWh/m²    | 91             | 14 %            | 14             | 147<br>W | 25             | 35                    | 48             | 15         | 11             | 45                              |
| 19   | Hungary           | 47                | 0,2 %                 | 40             | 150<br>kWh/m²   | 61             | 13 %            | 11             | 131<br>W | 22             | 18                    | 20             | 36         | 47             | 33                              |
| 20   | <b>■</b> Ireland  | 45                | 0,1 %                 | 20             | 166<br>kWh/m²   | 55             | 12 %            | 10             | 7 W      | 1              | 6                     | 0              | 38         | 50             | 5                               |
| 21   | <b>Belgium</b>    | 39                | 0,2 %                 | 40             | 263<br>kWh/m²   | 17             | 10 %            | 6              | 396<br>W | 67             | 8                     | 3              | 55         | 79             | 38                              |
| 22   | Estonia           | 39                | 0,2 %                 | 40             | 290<br>kWh/m²   | 7              | 32 %            | 50             | 81 W     | 14             | 52                    | 77             | 31         | 38             | 44                              |
| 23   | United<br>Kingdom | 36                | 0,1 %                 | 20             | 182<br>kWh/m²   | 48             | 12 %            | 11             | 204<br>W | 34             | 8                     | 3              | 44         | 61             | 23                              |
| 24   | Bulgaria          | 32                | 0,1 %                 | 20             | 121<br>kWh/m²   | 72             | 22 %            | 29             | 152<br>W | 26             | 36                    | 49             | 32         | 39             | 48                              |
| 25   | Czech<br>Republic | 32                | 0,2 %                 | 40             | 234<br>kWh/m²   | 28             | 16 %            | 19             | 197<br>W | 33             | 23                    | 27             | 33         | 42             | 29                              |
| 26   | Croatia           | 32                | 0,1 %                 | 20             | 250<br>kWh/m²   | 22             | 28 %            | 43             | 17 W     | 3              | 37                    | 51             | 30         | 37             | 23                              |
| 27   | Poland            | 28                | 0,1 %                 | 20             | 238<br>kWh/m²   | 27             | 12 %            | 10             | 35 W     | 6              | 16                    | 16             | 34         | 44             | 0                               |
| 28   | Romania           | 0                 | 0,2 %                 | 40             | 308<br>kWh/m²   | 0              | 24 % %          | 35             | 71 W     | 12             | 26                    | 33             | 12         | 5              | 1                               |



|      |             | Overall<br>Result |                  |                |                      |                |         |                |                       |                |                       | -              |                          |
|------|-------------|-------------------|------------------|----------------|----------------------|----------------|---------|----------------|-----------------------|----------------|-----------------------|----------------|--------------------------|
| Rank | Country     | Index             | Second<br>Furni  |                | Type of Ho           | ousing         | Househo | old Size       | Active Cli<br>Protect |                | Active Cli<br>Protect |                | Result<br>Sustainability |
|      |             | Score 0-<br>100   | Search<br>amount | Score<br>0-100 | Percentage:<br>Flats | Score<br>0-100 | Average | Score<br>0-100 | Percentage            | Score<br>0-100 | Percentage            | Score<br>0-100 | Score 0-100              |
| 1    | Portugal    | 100               | 340              | 38             | 47                   | 67             | 3       | 56             | 22                    | 45             | 83                    | 100            | 100                      |
| 2    | Sweden      | 93                | 125              | 14             | 47                   | 67             | 2       | 0              | 43                    | 100            | 74                    | 83             | 78                       |
| 3    | Germany     | 93                | 63               | 7              | 56                   | 83             | 2       | 0              | 28                    | 61             | 79                    | 92             | 67                       |
| 4    | Austria     | 83                | 28               | 3              | 46                   | 66             | 2       | 22             | 15                    | 26             | 71                    | 77             | 41                       |
| 5    | Denmark     | 82                | 274              | 31             | 34                   | 45             | 2       | 0              | 35                    | 79             | 62                    | 60             | 52                       |
| 6    | Spain       | 78                | 146              | 16             | 66                   | 100            | 3       | 56             | 16                    | 29             | 76                    | 87             | 91                       |
| 7    | Latvia      | 75                | 898              | 100            | 65                   | 99             | 2       | 33             | 10                    | 13             | 42                    | 21             | 80                       |
| 8    | Greece      | 69                | 197              | 22             | 59                   | 87             | 3       | 67             | 10                    | 13             | 58                    | 52             | 66                       |
| 9    | Slovakia    | 64                | 2                | 0              | 46                   | 66             | 3       | 100            | 11                    | 16             | 72                    | 79             | 77                       |
| 10   | + Finland   | 63                | 36               | 4              | 36                   | 48             | 2       | 0              | 25                    | 53             | 73                    | 81             | 36                       |
| 11   | *■ Malta    | 58                | 19               | 2              | 57                   | 85             | 2       | 44             | 19                    | 37             | 74                    | 83             | 71                       |
| 12   | Slovenia    | 57                | 71               | 8              | 28                   | 34             | 3       | 56             | 11                    | 16             | 75                    | 85             | 43                       |
| 13   | Luxembourg  | 56                | 16               | 2              | 40                   | 55             | 2       | 22             | 24                    | 50             | 73                    | 81             | 49                       |
| 14   | ■ ■ Italy   | 55                | 186              | 21             | 57                   | 84             | 2       | 33             | 7                     | 5              | 48                    | 33             | 32                       |
| 15   | Netherlands | 50                | 23               | 3              | 21                   | 22             | 2       | 11             | 34                    | 76             | 61                    | 58             | 28                       |



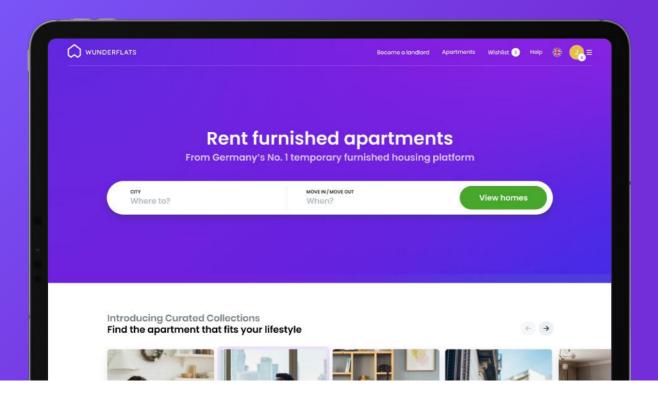
TABLE

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| GREEN LIVING INDEX 2022 | TABLE |
|-------------------------|-------|
|                         |       |

|      |                   | Overall<br>Result |                  | Sustainability & Engagement |                      |                |         |                |                       |                |                      |                |                          |
|------|-------------------|-------------------|------------------|-----------------------------|----------------------|----------------|---------|----------------|-----------------------|----------------|----------------------|----------------|--------------------------|
| Rank | Country           | Index             | Second<br>Furni  |                             | Type of Ho           | ousing         | Househo | old Size       | Active Cli<br>Protect |                | Active Cl<br>Protect |                | Result<br>Sustainability |
|      |                   | Score 0-<br>100   | Search<br>amount | Score<br>0-100              | Percentage:<br>Flats | Score<br>0-100 | Average | Score<br>0-100 | Percentage            | Score<br>0-100 | Percentage           | Score<br>0-100 | Score 0-100              |
| 16   | Lithuania         | 49                | 4                | 0                           | 59                   | 87             | 2       | 22             | 13                    | 21             | 48                   | 33             | 25                       |
| 17   | <b>■</b> France   | 49                | 70               | 8                           | 34                   | 45             | 2       | 33             | 18                    | 34             | 69                   | 73             | 41                       |
| 18   | Cyprus            | 47                | 56               | 6                           | 26                   | 30             | 3       | 67             | 11                    | 16             | 65                   | 65             | 36                       |
| 19   | Hungary           | 47                | 555              | 62                          | 27                   | 32             | 2       | 33             | 8                     | 8              | 67                   | 69             | 46                       |
| 20   | ■ Ireland         | 45                | 320              | 36                          | 8                    | 0              | 3       | 67             | 31                    | 68             | 72                   | 79             | 71                       |
| 21   | Belgium           | 39                | 7                | 1                           | 22                   | 24             | 2       | 33             | 25                    | 53             | 62                   | 60             | 29                       |
| 22   | Estonia           | 39                | 23               | 2                           | 61                   | 92             | 2       | 11             | 14                    | 24             | 47                   | 31             | 23                       |
| 23   | United<br>Kingdom | 36                | 463              | 52                          | 15                   | 11             | 2       | 33             | 18                    | 34             | 62                   | 60             | 39                       |
| 24   | Bulgaria          | 32                | 72               | 8                           | 46                   | 65             | 2       | 44             | 5                     | 0              | 38                   | 14             | 8                        |
| 25   | Czech<br>Republic | 32                | 28               | 3                           | 51                   | 75             | 2       | 33             | 12                    | 18             | 50                   | 37             | 26                       |
| 26   | Croatia           | 32                | 74               | 8                           | 22                   | 23             | 3       | 78             | 9                     | 11             | 60                   | 56             | 31                       |
| 27   | Poland            | 28                | 1                | 0                           | 44                   | 62             | 3       | 89             | 11                    | 16             | 52                   | 40             | 48                       |
| 28   | Romania           | 0                 | 2                | 0                           | 34                   | 45             | 3       | 67             | 7                     | 5              | 31                   | 0              | 0                        |





## **About Wunderflats**

Wunderflats is the market leader for temporary furnished housing in Germany. The Berlin-based company was founded in 2015 by Jan Hase and Arkadi Jampolski and has over 100 employees. Wunderflats connects tenants, property owners and companies with the mission to enable everyone to live and work anywhere. For more information, visit <u>wunderflats.com</u>.

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Methodology "Green Living Index" by Wunderflats

The Green Living Index is a comparative piece of data analysis that aims to evaluate countries on how sustainable their housing practices are.

In the context of this report, green living is understood as a particularly sustainable form of housing that relies on the use of renewable energy for electricity consumption as well as for heating and cooling, feeds energy into the grid itself from solar systems if necessary, and operates sustainable waste management. The concept only works if as many people as possible show interest in the fight against climate change and in a sustainable lifestyle. The report covers all EU member states and the United Kingdom.

For the report, all countries were examined in the two fields of investigation "Energy & Recycling" and "Sustainability & Engagement". A total of eleven influencing factors, which are described below, contribute to the final result. The result is a ranking of countries in which the concept of green living is more widespread than in others.

# Fields of investigation, influencing factors, sources

#### FIELD OF INVESTIGATION 1

### **Energy & Recycling**



#### **Nearly Zero-Energy Buildings:**

The information on the percentage of residential buildings that are so-called Nearly Zero-Energy Buildings or Passive Houses was taken from <u>eurostat</u> data. The higher the percentage, the better the score.



#### **Energy Consumption**

The data on the annual average energy consumption of residential buildings per m<sup>2</sup> was taken from <u>eurostat</u>. The lower the consumption, the better the score.



#### Renewable Energy

Information on the percentage of energy consumed that is supplied from renewable sources was taken from <u>eurostat</u> data. The higher the share, the better the score.



#### **Solar Energy**

Data on the amount of power fed into the electricity grid by photovoltaic systems was taken from the <u>photovoltaic barometer</u> of the organisation EurObserv'ER. In order to be able to compare countries, a value per inhabitant was used to calculate the Green Living Index. The higher the performance, the better the score.



#### FIELD OF INVESTIGATION 1

## **Energy & Recycling**



#### Sustainable Heating and Cooling

The information on the percentage of energy used for heating or cooling that comes from renewable sources was taken from <u>eurostat</u> data. The higher the percentage, the better the score.



#### Recycling

The data on the percentage of municipal waste that is recycled was taken from <u>eurostat</u>. The higher the share, the better the score.

#### **FIELD OF INVESTIGATION 2**

### Sustainability & Engagement



#### **Second-hand Furniture**

Buying second-hand instead of new is considered particularly sustainable. Therefore, the interest in used furniture or second-hand furnishings was investigated. As an indicator, the Google search volume for the keywords "used furniture" and "second-hand furnishings" was analysed in the respective national language. The data comes from the analysis tool Ahrefs. The higher the interest, the better the score.



#### Type of Housing

A building made up of flats in which several households live produces fewer emissions in the long term than a house where only one family lives. This is pointed out by the "Emissions Gap Report 2019" (p. 58f.) of the UN Environment Programme. Information on the percentage of the population living in a multi-family house, i.e. in a flat, was taken from eurostat data. The higher the percentage, the better the score.



#### **Household Size**

A household where several people live produces fewer emissions in the long term than a home with one or a few people. This is stated in the article "Household Sharing for Carbon and Energy Reductions: The Case of EU Countries" by Diana Ivanova and Milena Büchs of the University of Leeds (UK). Information on average household size was taken from eurostat data. The higher the household size, the better the score.



#### **Climate Change Sentiment**

The data on the proportion of the population who consider climate change to be the most serious problem of our time was taken from a survey in the European Commission's Climate Change report (Special Eurobarometer 513, p. 10). The higher the proportion, the better the score.



#### **Active Climate Protection**

Information on the percentage of the population that states that they have recently been actively engaged in combating climate change was taken from a survey in the "Climate Change" report (Special Eurobarometer 513, p. 35) of the European Commission. The higher the proportion, the better the score.



## Calculation and points

A standardisation procedure based on a point system was used to calculate the comparison list. This means that the results of the individual influencing factors were standardised on a scale between 0-100. The country that performed best in the selected factor of influence received a score of 100. The country that performed worst in the selected factor of influence received a score of 0. All other countries were ranked in between according to their results and received a score between 0 and 100.

Subsequently, all points from all factors of influence of each field were added together. The sum resulted in the survey field result. Finally, both study field results were added and this final result was also standardised on a point scale between 0 and 100.

The calculation was done using the following normalisation formula:

$$x new = \frac{x - x min}{x max - x min}$$



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